AN EVALUATION OF INFLATION TARGETING IN SOUTH AFRICA

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DECLARATION

This research has not been previously accepted for any degree and is not being currently submitted in candidature for any degree.

Signed…

Date…07/09/2007

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I the undersigned hereby declare that I have supervised the research conducted by **Makgopa Freddy Mabelane** entitled **Evaluation of inflation targeting in South Africa**. I am satisfied that the student has made an attempt to follow my guidelines and in my opinion, the work is adequate enough to be examined.

Signature:

Date:

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ABSTRACT

This research was conducted to evaluate the adoption of inflation targeting in South Africa as a strategy to maintain price stability. The research was based on the period prior to inflation targeting and the period of inflation targeting. The comparison was done to determine if the Reserve Bank was on the right track in adopting inflation targeting.
The research was conducted to determine if there is any correlation between CPIX inflation and other factors affecting inflation. The factors investigated were: food inflation, transport inflation, housing inflation, exchange rate, Brent crude oil, money supply, and the current account deficit to the GDP.
The correlation studies were conducted during the same period and when the factors were lagged up to eight quarters. The correlations were statistically tested at 5% significant level.
The results show that the period of inflation targeting has a strong correlation compared to the period prior to inflation targeting, when compared during the same time period and lagged time period.

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LIST OF SYMBOLS

API: Administered Price Inflation

CPI: Consumer Price Index

CPIX: Consumer Price Index excluding mortgage

GDP: Gross Domestic Product

M3: Money supply

OPEC: Organization of the Petroleum Exporting Countries

n.d: no date

R^2*: Regression coefficient*

SARB: South African Reserve Bank

V3: Velocity of money

CHAPTER 1 INTRODUCTION

1.1 Introduction

The primary objective of monetary policy is low inflation and ultimately price stability. The objective of achieving and maintaining price stability is based on the proposition that inflation is bad for economic growth, employment creation and distribution of income (Mboweni 2002).

The South African Reserve Bank (SARB) maintains that long-term growth is stimulated by low inflation. SARB argues that high rates of inflation are likely to undermine savings and investment which will constrain the potential for long-term growth. In addition, high inflation would distort the price signaling mechanisms so that producers would not be sure if price increases reflect an increase in demand for a particular product (whether they should raise production levels or they should not change output levels). This uncertainty leads to producers frequently not responding to price increases. As a result, the potential for long-term increases in production is limited.

The inflation targeting framework in South Africa involves communication between the government (Treasury) and the SARB in setting a target or band for the rate of inflation over a period of time. The SARB has the duty to protect the value of the domestic currency while maintaining price stability. The target band is set by the government and if this inflation target band is not met, the Reserve bank has to explain to the government why the target was not met.

Since 2000, SARB adopted an inflation targeting framework in line with other developed countries like New Zealand and the United Kingdom. SARB currently adopts an average annual inflation target of between 3% and 6% (it used to be between 3% and 5%). In predetermining the inflation target, SARB ensures that the framework for monetary policy is transparent, well communicated and the authorities have a definite and measurable aim in their monetary policy.

This eases the difficulty of businesses having to guess certain decisions and they would be able to plan effectively for future expansions and investments. It also provides an anchor for inflation expectations by providing guidance for employers and employees when undertaking wage negotiations.

Successful inflation targeting requires the support of labour, business, private sector and other sectors of the economy to entrench confidence in the monetary policy procedures.

1.2. Objectives and research questions to be investigated

The overall aim of this research is to conduct a detailed assessment of an inflation targeting framework. The following specific areas will be addressed:

- Overview of the recent trends in inflation in South Africa with particular emphasis on the sources of inflation.
- Outline of the workings of inflation targeting with particular attention to the role of managing expectations in the inflationary process.
- Evaluation of the merits of inflation targeting for South Africa.

1.3. The importance and motivation for the study

Inflation is associated with an increase in the general price level over a period of time. Inflation is generally perceived as being harmful to the economy because it discourages consumer spending and productive investment. For example when the rand depreciates against major currencies, it becomes expensive to import products and cheaper to export. This can lead to a higher deficit on the current account and higher inflation.

Inflation is measured by an annual percentage change in the consumer price index (CPI). This is based on the calculation done by Statistics SA.

Essentially it determines what out of every R100 is spent by average South African consumer on a given basket of goods and services, including housing, food, and transport.

Prices of various goods and services are collected monthly from retailers and service providers to determine the CPI.

Since interest payments on mortgage bonds make up a large portion of household expenses and also it is a variable controlled by the authorities, it is not included in the inflation calculations (if the SARB increases interest rates to reduce inflation, the cost of housing increases and in turn inflation increases). CPIX (Consumer Price Index Excluding interest rates on mortgage bonds) is therefore a better indicator of inflation than the CPI.

1.4. Problem statement

There has been a lot of discussion in the press and in the economic circles that inflation is mainly affected by:

- food prices, housing prices,
- transport prices,
- Brent crude oil price,
- exchange rate,
- money supply, and
- current account deficit to the GDP.

There is also a claim that the impact of inflation on the economy could take up to 2 years (for an example an increase in food prices could still have a negative impact on inflation in the long run). This study will investigate if there is a correlation between CPIX inflation and the above mentioned factors. The study will also investigate the impact of the lag of these variables on inflation.

1.5. Limitations of the research

The following limitations will affect this research:

- The data collected by Statistics SA might not be representative enough for comparative study between the period before inflation targeting and the period of inflation targeting. Statistics SA has made many changes in the assumptions underlying inflation and the items included in the inflation basket.
- Comparing inflation before the inflation targeting regime and during the inflation targeting regime may lead to a bias. The period prior to inflation targeting was characterized by many changes in the monetary policy regime and the focus was mostly on money supply targeting instead of inflation targeting.

1.6. Structure of the research

The first chapter outlines the background of the research, the research problem and objectives of conducting this research, importance and motivation of the study and its limitations.

The next chapter will outline the current literature review on the subject. This chapter will review concepts of inflation and inflation targeting. It will also give a direction on the approach to be followed in addressing the research questions or the objectives.

Chapter 3 will describe the research methodology. The sample population, the sample size, the sample selection procedure, data selection and collection methods, and the data analysis will be discussed.

Chapter 4 will summarize research results while Chapter 5 will cover detail analysis and interpretation of these results.

Chapter 6 will draw conclusions from the research and it will make suggestions for future research on this subject.

1.7. Summary

This chapter has introduced the research topic and the research questions to be addressed. The chapter highlighted the fact that inflation targeting is about maintaining and achieving price stability in the country. SARB has adopted an average annual inflation target of between 3% and 6% for South Africa. To maintain inflation within this target range, the chapter highlighted that there are factors such as food prices that affects inflation. SARB measures inflation in terms of CPIX. The chapter also highlighted the claim that the impact of inflation on the economy could take up to 2 years.

In order to address the research questions, the current literature review on inflation targeting will be discussed in the next chapter.

CHAPTER 2 LITERATURE REVIEW

2.1. Introduction

The main aim of any central banks' policy is low inflation. Low inflation is associated with slow deterioration of the value of money and more buying power of everyone in the society including the poor. This will cause prices of goods and services to drop to a level that it would no longer influence the decisions of consumers and producers.
South Africa adopted inflation targeting in 2000 departing from "eclectic" or informal inflation targeting monetary policy approach in which intermediate objectives such as growth in money supply, was influential in monetary decisions (Aron et al. 2004). SARB decided to do away with this type of money-supply as it created uncertainties about Reserve Bank decisions and actions which were at times conflicting with the stated guidelines for growth in money supply and bank credit extension (Mboweni 1999).

Inflation targeting encourages the central banks to be committed in maintaining price stability in the country. According to Meyer (2002), price stability should be the main objective of monetary policy and the central bank should be held accountable for any variability in inflation. Price stability leads to low inflation. By pursuing price stability, the central bank recognizes that high and volatile inflation is harmful to the economy as it reduces the buying power of the consumer. This idea of price stability as a single objective for monetary policy is supported by Sherwin (2000), of the Bank of New Zealand, who believes that a single price stability objective provides clarity on accountability of monetary framework. Meyer (2002) argues that households and businesses prefer low and stable inflation. On the other hand deflation (negative inflation due to sustained fall in overall price levels) presents an economic risk in that it might subject borrowers to rates higher than the official interest rates. Most of the inflation targeting economies, therefore avoid targeting a zero inflation rate (Parliamentary library 2002).
Inflation is measured by the consumer price index for metropolitan and other urban areas excluding interest rate cost on mortgages. The main advantage of using CPI as a measure of inflation is that it is easily understood by the public.

CPI is measured monthly with a lag and it is not revised (Petursson 2000). Statistics SA releases CPI inflation of the previous month on a monthly basis.

2.2. Causes of inflation

According to Nattrass et al. (2002), there are two primary sources of inflation. The first source of inflation is the cost-push factors that are acting on the supply side of the market. These factors include rapid wage and salary increases, food prices, the depreciation or appreciation of the exchange rate of the domestic currency and the administered price inflation. The second source of inflation is the demand-pull factors such as an increase in the money supply and excessive credit extension that put upward pressure on prices through the demand side of the economy (by fuelling consumer spending).

Hubbard (1994) explains the causes of inflation in terms of the following exchange equation:

$$M V = P Y \qquad (2.1)$$

The above equation links the movements in the nominal money supply M, with price level P, and output Y. V is the velocity of money.

The equation of exchange expressed in percentage terms can be written as:

$m' + v' = p' + y'$, where

m' is the percentage change in the nominal money supply

v' is the percentage change in the velocity of money

y' percentage change in output

p' the inflation rate

The above equation can be rearranged as follows:

$p' = m' + v' - y'$ (2.2)

The above equation implies that inflation p', is equal to the rate of growth of nominal money supply m', plus the rate of growth of velocity v', less the rate of growth of real output y' (Hubbard 1994).

In terms of the aggregate demand (AD) – aggregate supply (AS) model, if the growth rate of aggregate supply or the growth rate of the output, y', is less than the growth rate of the nominal aggregate demand (the sum of the growth rate of nominal money supply, m', and velocity, v'), then inflation must occur (Hubbard 1994).

Hubbard (1994) explains short-term inflation in terms of equation 2.2 as follows:

- nominal aggregate demand could rise in response to an increase in the nominal money supply;
- nominal aggregate demand could rise because of short-term increases in velocity due to an increase in government spending, consumer spending, or investment spending;
- even if nominal aggregate demand does not change, the growth rate of aggregate supply could fall.

2.2.1. Response to monetary policy

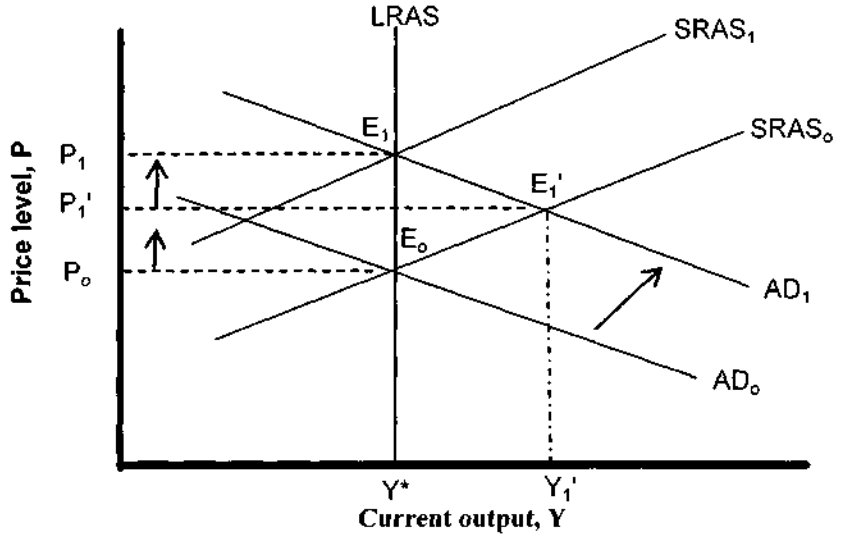

Figure 2.2.1 Short-term inflation due to monetary supply change
(Source: Hubbard 1994)

The impact on short-term inflation due to money supply can be explained by interpreting figure 2.2.1 above as follows (Hubbard 1994):

- A shift in AD curve to the right, from AD_0 to AD_1 causes the economy to move from initial equilibrium, E_0, to a new short-run equilibrium, E_1. This new equilibrium represents both higher price levels and increased output. Short-run reaction to an unexpected increase in aggregate demand leads to an increase in both output and inflation.
- An unexpected increase in nominal money supply shifts the AD curve from AD_0 to AD_1, moving equilibrium from E_0 to E_1. In the short-run, the actual output, Y_1' exceeds full employment output, Y^*. This leads to upward pressure on prices which move the SRAS curve from $SRAS_0$ to $SRAS_1$, to intersect the AD_1 curve at E_1. This upward pressure in prices is mainly due to a rise in nominal wages.

A one-time increase in money supply produces inflation in the short-run (price level increases from P_0 to P_1). However, in the long-run only price level is affected (rising from P_0 to P_1).

2.2.2. Response to supply shocks

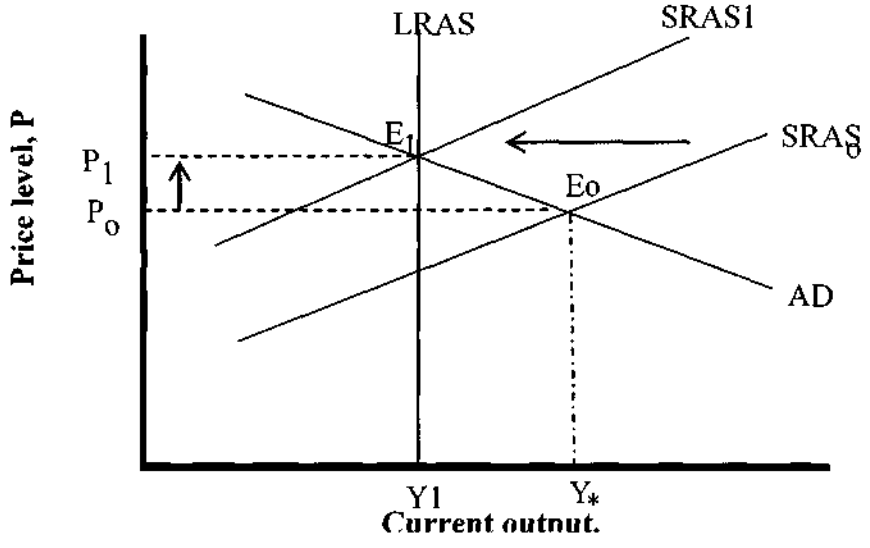

Figure 2.2.2 Short-term inflation from supply shocks
(Source: Hubbard 1994)

Figure 2.2.2 above will be used to explain the effect of short-term supply shocks on inflation. Hubbard (1994) interprets short-term inflation due to supply shocks as follows:

- Supply shocks such as workers' wage demand can lead to short-term inflation.
- Adverse supply shocks such as increase in the oil price could raise input prices. It could also shift aggregate supply curve from $SRAS_0$ to $SRAS_1$. The aggregate demand curve will not be affected if the money supply and the government taxes or spending do not change. The economy's equilibrium shifts from E_0 to E_1. Price level rises from P_0 to P_1, resulting in inflation in the short-run. At E_1, output Y_1 is below full employment level of output of Y*. Prices will fall over some time and SRAS curve will shift back from $SRAS_1$ to $SRAS_0$. Thus maintaining the original equilibrium position, E_0.

- The supply shocks affect the price level in the short-run. This can, therefore, lead to short-term inflation, but it will not cause long-run inflation.

2.3. Prerequisites for inflation targeting

According to Debelle et al. (1998), inflation targeting requires two things. Firstly the central bank must be able to conduct monetary policy without the interference from the government or any entity. This does not however, mean that the bank must be completely independent of the government influence, but it must be free to choose the instruments that will enable it to achieve the rate of inflation that the government deems appropriate. Complying with this requirement will mean that the bank is free from government fiscal policy. The government should not rely on the central bank for funding or borrowing money to uplift other projects or functions.

The second requirement for inflation targeting to work is that the authorities should refrain from targeting other indicators such as wages, the level of unemployment, or the exchange rate of the domestic currency. For an example, using a fixed exchange rate system will subject the monetary policy to an exchange rate objective. This will make inflation targeting very difficult considering that capital moves freely in and out of the country. The public will therefore not have an assurance that the authorities will give the inflation target a high priority over the exchange rate target. This will affect the credibility of the central bank.

Satisfying these two requirements means that monetary policy based on inflation targeting can be safely conducted. To conduct inflation targeting, the central bank needs to establish explicit quantitative targets for inflation for the same periods ahead (Debelle et al. 1998). The central bank is required to set up a model for inflation forecasting. The reliability of this model is tested by using a number of indicators containing information on future inflation. This requires a forward looking operating procedure to adjust the monetary policy instruments to meet the chosen target (Debelle et al., 1998).

Loayza and Soto (2000) caution that a change in the structure of the economy is likely going to affect inflation forecast. This means that the forecasting model should be adapted to a change in economic structure. Forecasting that ignores this factor might lead to errors and this again will affect the credibility of the central bank. Gottschalk and Moore (2001) emphasize that a success of any inflation targeting strategy is dependent on the understanding of the links between the instruments that are used to control inflation and inflation outcomes. Inflation outcomes are dependent on the forecasts. It must be understood that if the central bank increases interest rates as an anchor to control inflation, the effect of this might take any period from 12 to 24 months lags.

2.4. Advantages and disadvantages of inflation targeting

The primary advantage of inflation targeting has been to protect the value of the currency in order to obtain a balanced and sustainable economic growth in the country. However, one of the limitations of inflation targeting is that it relies on forecasts, and when inaccurate forecasts are made public, it can obscure the central bank's objectives and reduce its credibility.

According to Mboweni (1999), the foremost advantage of inflation targeting for South Africa is that it can improve the co-ordination between monetary policy and other macroeconomic policies. He stresses that it is dependent on the way the target is being set and the consistency of the target with other policy objectives. The setting of the target is done by the government and the Reserve bank. However, once the target has been set, the Reserve Bank should be free to use any instrument to achieve the target. For example, the Reserve Bank raises interest rates when future inflation threatens to exceed the target for the protracted period, and lowers them when inflation looks likely to fall below the target (Bisseker 2006, p.22). The target will only work if other stakeholders such as business and trade unions are consulted. The trade unions will negotiate the wage demands for the workforce in line with inflation and the business will forecast their projections in line with inflation.

The following further advantages of inflation targeting are outlined by Mishkin (2000, p.2):

- "In contrast to exchange rate targeting, inflation targeting enables monetary policy to focus on the domestic considerations and to respond to shocks to the domestic economy".
- "In contrast to money targeting, inflation targeting has an advantage that a stable relationship between money and inflation is not critical to its success. The strategy does not depend on such relationship; instead it uses available information to determine the best settings for instruments of monetary policy".
- "Inflation targeting is easily understood by the public and it is transparent".
- "Inflation targeting helps to discipline monetary policy and increases the accountability of the Reserve bank".

Advantages of inflation targeting compared to other monetary policy framework are noted; however inflation targeting has its own limitations. According to Mboweni (1999, p.405), the following disadvantages of inflation targeting could cause inflation target to be missed:

- Inflation targeting is forward-looking and it relies on forecasts. Any inaccurate forecasts made public poses a threat to the credibility of the bank.
- In addition to the above disadvantages of inflation targeting compared to other monetary policy framework, inflation targeting could lead to variability of output levels. This could occur in the event of significant supply shocks such as a dramatic change in the price of oil.

In addition to the above disadvantages of inflation targeting, the major disadvantage of inflation targeting is when the bank continuously misses the target. SARB could use the escape clause to explain why it missed its target. The escape clause was specifically implemented to protect the credibility of the bank if there were supply shocks such as a sharp increase in the price of oil and a sudden depreciation of the exchange rate of the domestic currency beyond the control of the central bank and its monetary policy. It is expected that the bank will tighten its inflation forecast model so that it can foresee what is lying ahead and act proactively. It would not be acceptable if the bank misses the target

every year and it uses the escape clause as an excuse. Doing so will affect its credibility and it will imply that its instruments are not working.

Petursson (2000) argues that central banks do not have a control over inflation, more especially on other factors such as the fiscal policy and labour market conditions. An example would be a government spending which exceeds the tax revenue, this leads to a deficit. Deficit would discourage investment and this would have a negative effect on inflation. The labour market can have a negative impact on the economy and inflation, more especially if the wage demands exceed inflation and the labour force is engaged in strikes to force management to accept their demands. These factors can have a short-term effect on inflation and the central banks would not maintain inflation within the target range. The other thing that could cause inflation target to be missed is the misunderstanding of the price stability as an objective of inflation targeting. In their paper, Guender and Yoon Oh (2006) analyze two economies, one focuses on price level targeting and the other one focuses on inflation targeting. Price level targeting is associated with output variability and it makes monetary policy volatile (difficult to maintain the target). Price level targeting is dependent on the past, in reaction to shocks such as exchange rate movements whereas inflation targeting is forward looking as it is dependent on the forecasts. It is therefore suggested that the central bank should not lose focus on its monetary policy stance with regard to inflation targeting, regardless of how bad the supply shocks are. Woglom (2003) emphasizes the importance of targeting long-run inflation and not reacting to short-run changes in the exchange rate.

A major disadvantage of inflation targeting is the fact that there is too much focus on interest rates at an expense of economic growth and job creation. Higher interest rates lead to lower levels of investment and lower economic growth.

2.5. Success of inflation targeting in South Africa

The basis of inflation targeting is to adjust interest rates according to demand and to curb a rise in prices while encouraging savings. Interest rates are usually increased if inflation rate rises consistently. This could be due to exogenous factors such as the weakening of the domestic currency, an increase in oil prices and an increase in food prices. Lower interest rates encourage consumer spending. However, consumer spending leads to higher current account deficit. This affects the competitiveness of the economy. South Africa operates in an open economy which means that the domestic currency is subjected to market forces. Hence it is not prudent for monetary policy to focus too much attention on exchange rate movements. Too much concern about exchange rate stability can induce wrong policy decisions and it can also worsen the performance of monetary policy (Van der Merwe 2004). Inflation targeting might lead to stable exchange rate for the rand and more stable interest rates. This could be due to a reduction in the uncertainty of the market participants regarding future monetary policy and therefore investors would be encouraged to invest in the country.

The performance of the Rand is more dependent on the performance of other emerging markets with respect to the current account deficit. According to Bisseker (2006), the global markets are shifting their attention to current accounts deficits and penalize the worst performers. South Africa and Turkey came under the spotlight due to their large current account deficit and the rand weakened from R6.03/US$ at the beginning of May 2006 to R6.51/US$ by the beginning of June 2006 (Bisseker 2006).

Favourable exogenous factors such as lower oil prices, lower food prices and stronger Rand resulted in low inflation in 2001. However, a weaker rand, high oil prices and high food prices resulted in higher inflation in 2002. The Rand recovered in 2005 in spite of the high oil prices and inflation rate was within the target band of 3% - 6%.

2.6. *Merits of inflation targeting in South Africa*

A number of industrial countries such as New Zealand, Canada, the United Kingdom, Sweden, Finland, Australia and Spain, have adopted inflation targeting framework during the 1990s and South Africa has followed this framework since 2000. The motives for inflation targeting have varied from country to country. In some countries like the United Kingdom and Sweden, the collapse of their exchange rate led to inflation targeting with the aim of assuring the public that monetary policy would remain disciplined (Mboweni 1999). The motive for inflation targeting is to achieve price stability and maintain the competitiveness of the country. Traditionally, the SARB used intermediate targets such as money aggregates or the exchange rate to achieve price stability. The money supply targeting did not work well because the velocity of circulation of M3 fluctuates considerably. This is evident from figure 2.6.3 (CPI vs. V3) below and figure 2.6.1 (CPI vs M3) below. During period 1974-1990, CPI inflation and the velocity of M3 were trending together in a lagged form. However, this trend was fluctuating considerably during the 1990s period. During the period 1986-1990, the SARB was using upper and lower limit targets for M3 as part of its money supply growth rate targeting strategy. The target was mostly set in the range of 6%-10% (Nattrass et al. 2002). If M3 grew faster than the upper limit, the SARB would raise interest rates in an effort to depress the rate of bank credit extension and money supply growth (Nattrass et al. 2002). The target was rarely met and this affected the credibility of the bank. This is further confirmed by (Bernanke et al. 1999), who argues that targeting money is useful if there is a reliable relationship between money growth and inflation. Clearly this was not the case during the 1990s and the SARB adopted an eclectic approach for its monetary policy. This was considered after acknowledging that money growth targeting was no longer reliable in controlling inflation. In addition to money supply targeting, the SARB considered other factors that pose threat to inflation. These factors were (Nattrass et al. 2002):

- Bank credit extension,
- The capital and the current account of balance of payments,
- Changes to the gold and foreign exchange reserve,
- The rand exchange rate, and

- The actual and expected inflation rates.

This approach was, however, abandoned due to its lack of transparency and there was no clear goal or commitment to inflation rate.

Figure 2.6.2 below shows the trends of CPIX as a measure of inflation and the interest rates. During the period 1974 - 1991, CPIX was more than 10% most of the time, with the highest value of 18.8% in 1986. Interest rates were also high during the 1980s, the highest being 22% in 1985. The 1990s were characterized by a lower CPI inflation but higher interest rates (22% in 1998). Higher interest rates were due to the fluctuation of the M3 and the SARB was trying to control its limits on M3 target.

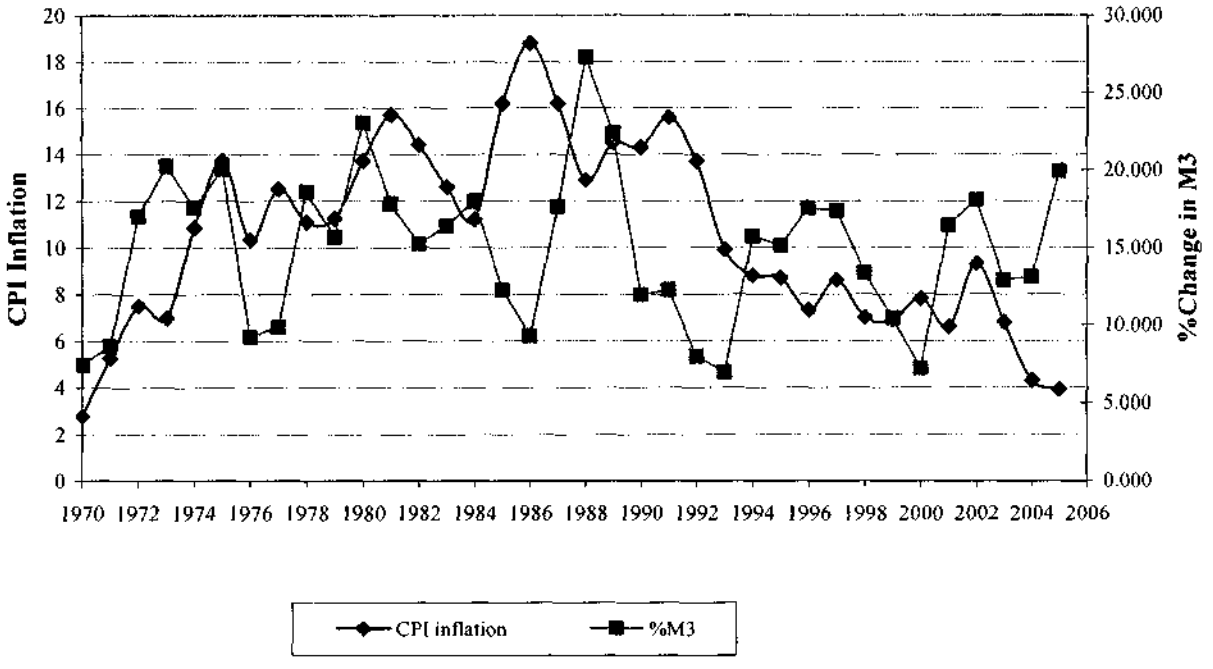

Figure 2.6.1 Trend of CPI inflation and % change in Money supply, M3
(Data Source: Statistics SA and SARB)

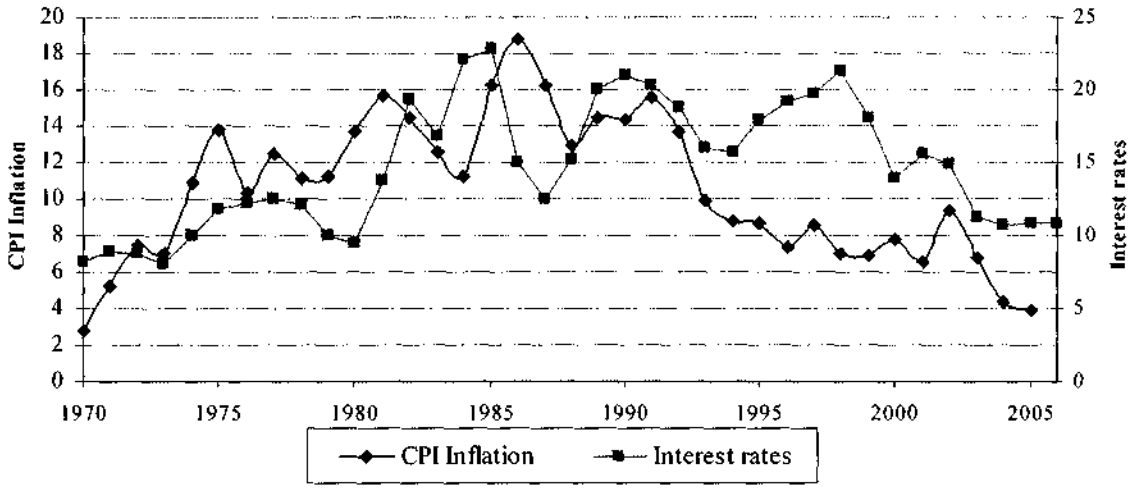

Figure 2.6.2 Trend of CPI inflation and Interest rates
(Source: Statistics SA and SARB)

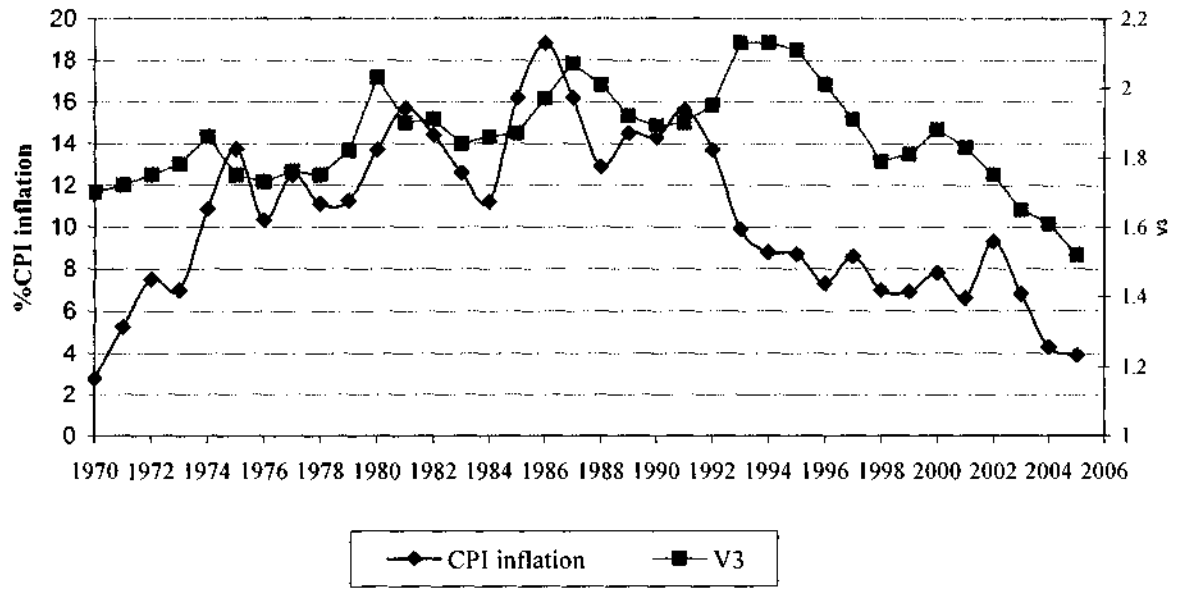

Figure 2.6.3 Trend of CPI inflation and % change in Money velocity, V3
(Data Source: Statistics SA and SARB)

The SARB has adopted a goal of setting the average rate of inflation in keeping with the average of international trading economies to ensure competitiveness. The target band of between 3% and 6% was in line with international standards.

The SARB has adopted a fully flexible exchange rate policy implying that there is no specific target for the exchange rate and the central bank will not interfere or control the currency.

2.7. Trends in inflation

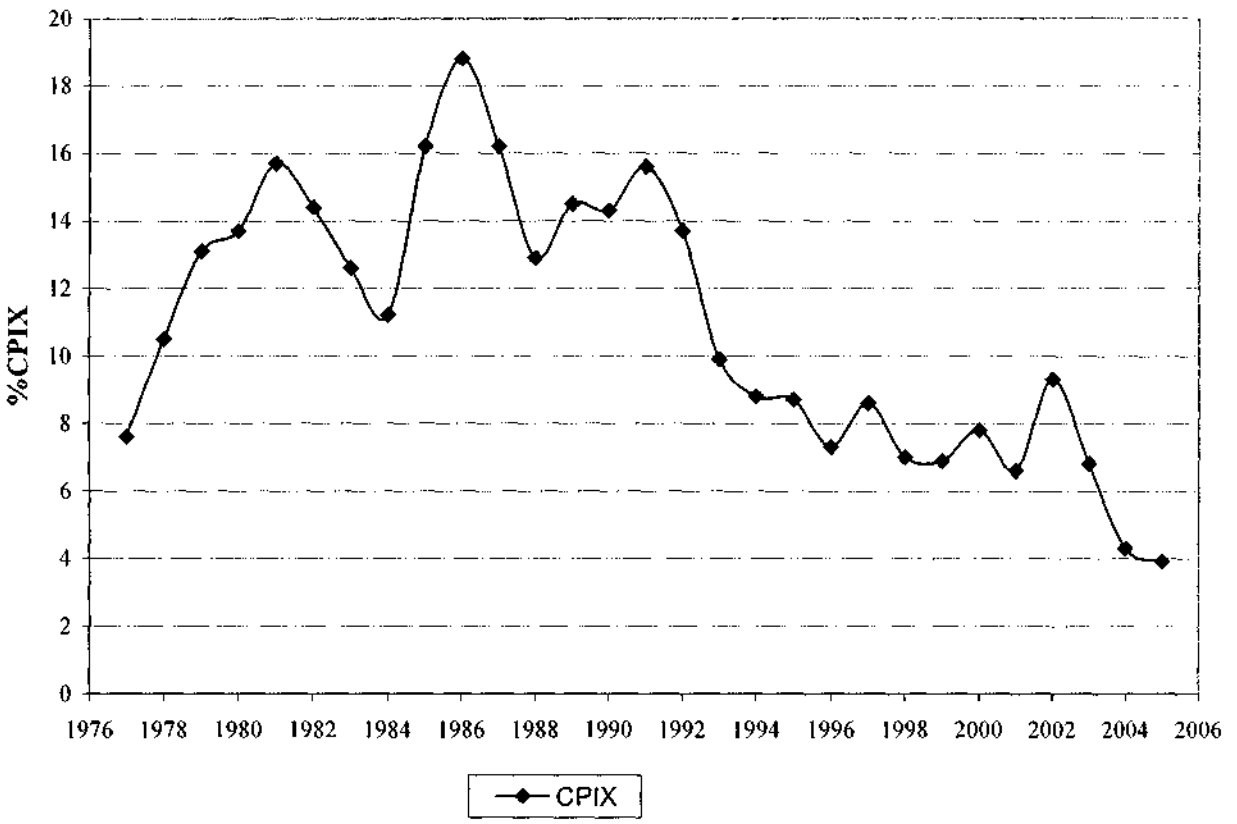

Figure 2.7.1 Trend of Consumer Price Inflation in South Africa
(Data Source: Statistics SA 2006)

Figure 2.7.1 above shows the trends of CPIX inflation (expressed as the annual percentage change in consumer price index). During the 1970s, the average inflation rate was 10.3%. The 1980s were characterized by high and relatively stable rates of inflation, with an average rate of 14.6% for the decade. The 1990s saw a gradual decrease in the inflation rate, with an average inflation rate of 9.3% for the decade.

This gradual decrease in inflation rate could be attributed to the consistent application of conservative monetary policy since the late 1980s and the impact of the recession of 1989-1993 on inflation expectations and wage settlements (Akinboade et al. 2001).

The 2000s have been characterized by a credible monetary policy based on inflation targeting framework with an aim of price stability. The target band was set between 3 and 6 percent, with the midpoint target of 4.5 percent. During this period the target was missed once, in 2002, at 9.2%. This was mainly due to the 34 percent depreciation of the nominal effective exchange rate during 2001. Since the inflation rate has a lag of 12 to 24 months, the impact was felt by the consumers in 2002.

Table 2.7.1 Contributions to CPIX inflation

	2005			2006			
	September	October	November	December	January	February	March
Total	**4.7**	**4.4**	**3.7**	**4**	**4.3**	**4.5**	**3.8**
Food	0.7	0.6	0.5	1.1	1.1	1.2	1.2
Housing	0.6	0.6	0.5	0.5	0.5	0.5	0.5
Medical care and health expenses	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Transport	1.3	1.3	0.9	0.8	1.2	1.3	0.7
Education	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Other	1.1	0.9	0.8	0.6	0.5	0.5	0.4

Source: SARB (2006)

Recent trends in CPIX inflation shows that food prices which have a weight of 23.7% in the index contribute significantly towards the overall CPIX (SARB 2006). Table 2.7.1 above shows that food inflation was relatively lower during the period September-November 2005 and it took a steep change from 0.5% in November 2005 to 1.1% in December 2005. The contribution of food inflation to the overall inflation is also evident from figure 2.7.2 below (food inflation). Food inflation during 1991 period was about 25% and the overall CPIX was about 15%. There was a decrease in food inflation and overall CPIX during the period 1991-2001. Food inflation decreased from 25% to 5.4% and CPIX decreased from 15% to 5.7%. The year 2002 was characterized by higher food inflation of 15.7% and higher CPIX of 9.3%. CPIX decreased to 4.3% in 2004 and food inflation decreased to 2.3% in 2004. It is also evident from figure 2.7.2 below that there is a lag between CPI inflation and CPI food.

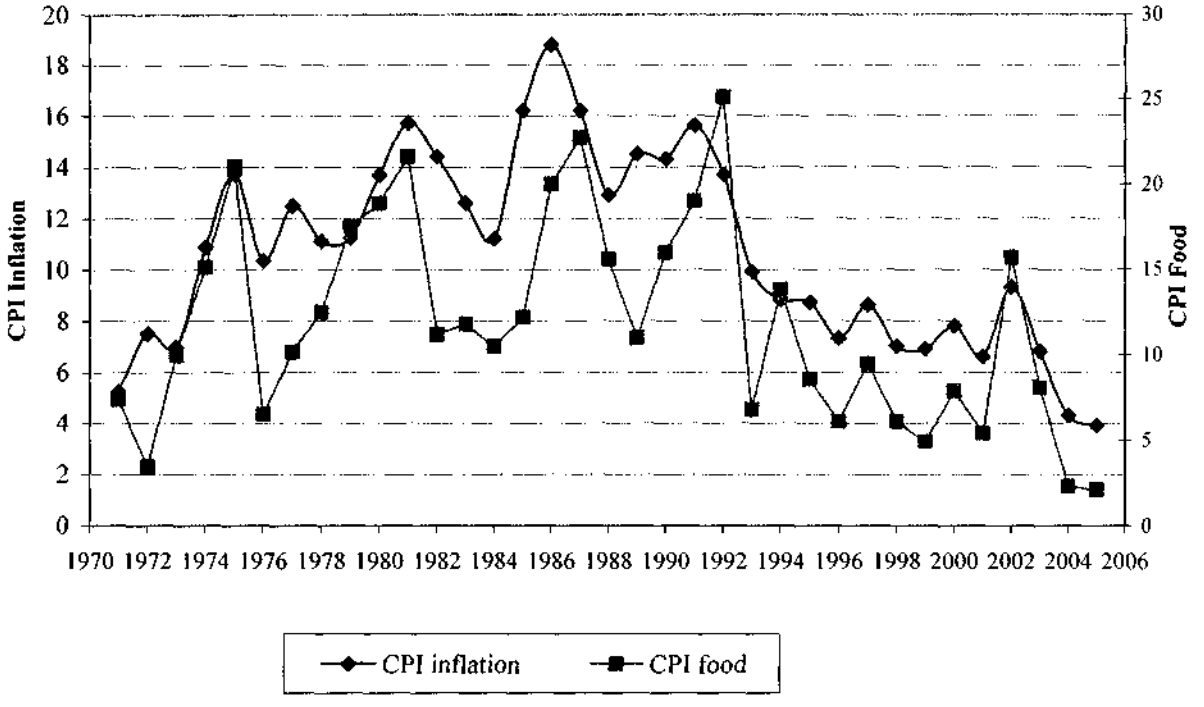

Figure 2.7.2 Trend of CPI inflation and Food Inflation
(Data Source: Statistics SA 2006)

The CPIX inflation is also sensitive to oil prices which are reflected in the transport inflation figures (see figure 2.7.4 below). Figure 2.7.3 shows that the movement in the price of oil has a direct effect on inflation. For the period before 2003 there was an increase in oil price that led to an increase in inflation. However, the period 2003 – 2006 was associated with higher oil prices and lower inflation. This could be explained by the fact that other inflation drivers such as food prices (lower) and currency (appreciation) were favourable. The variation in the transport inflation is due to petrol prices, for example in January 2006 and February 2006 there were a series of petrol price increases and in March 2006 the petrol price was decreased. These petrol price changes are attributed to the movements in the Brent crude oil prices (see figure 2.7.3 below). Petrol price was reduced in November 2005 (see figure 2.7.4 below) due to lower oil prices in October 2005. However the petrol price was increased in January and February 2006 because of the higher oil prices in December 2005.

The impact of the petrol prices is also evident from the administered price inflation (API). Table 2.7.2 below shows that during September 2005 and October 2005, petrol price contributed to about 7% of the API. This figure dropped in November 2005 (4.2%) and December 2005 (3.8%), mainly due to a decrease in petrol price during the same periods. Fluctuations in oil prices have a significant effect on the overall inflation of the country. This is evident from the contribution of petrol price to API. Petrol price has a weight of 25.4% in the API basket (SARB 2006).

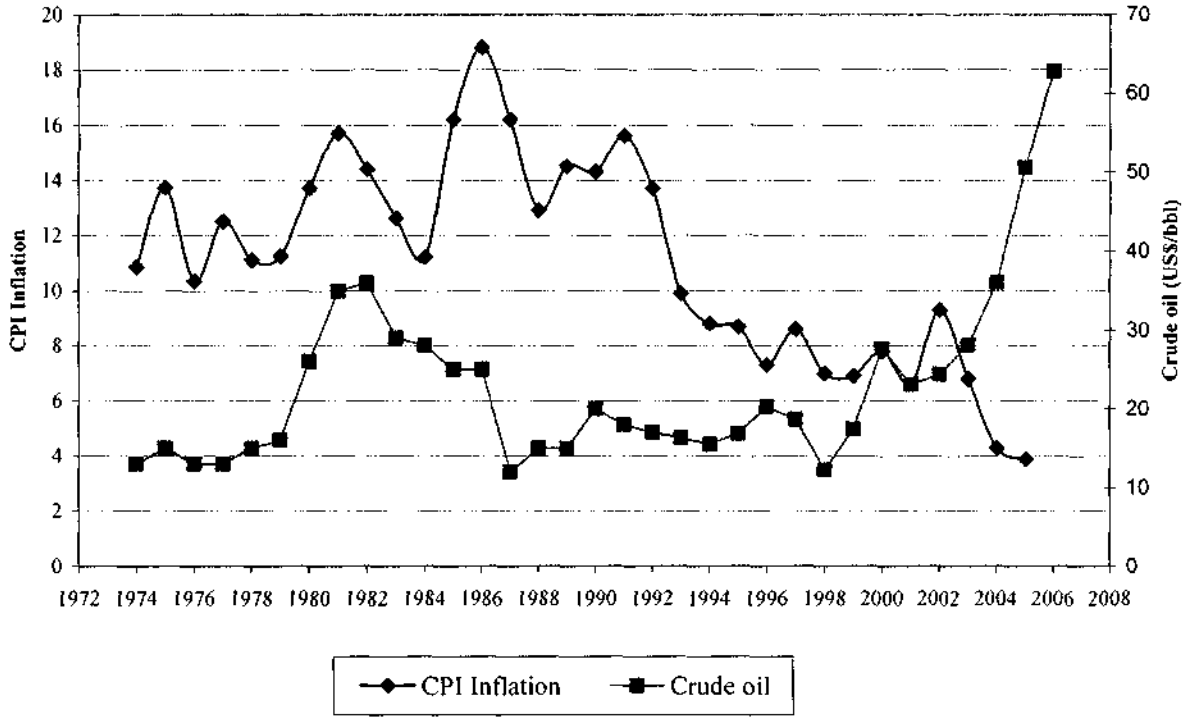

Figure 2.7.3 Trend of CPI inflation and Brent Crude oil
(Data Source: SARB & OPEC 2006)

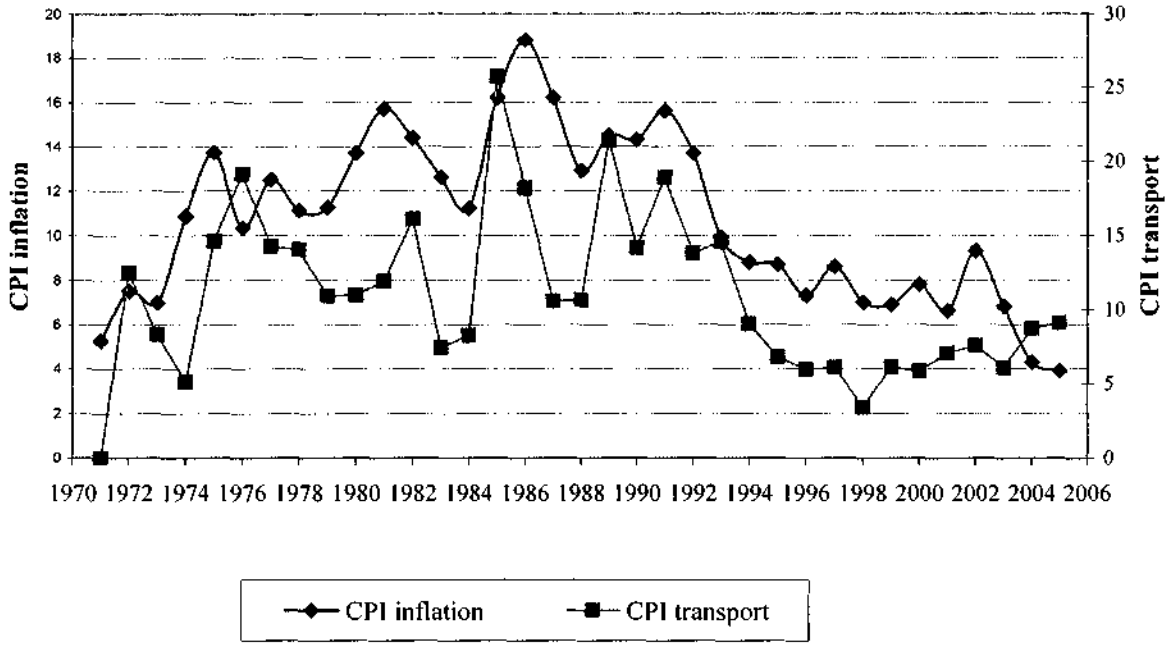

Figure 2.7.4 Trend of CPI inflation and CPI transport
(Data Source: Statistics SA 2006)

Figure 2.7.4 above shows the impact of transport inflation to CPI inflation. The graph shows that there is lag relationship between transport inflation and the overall CPI inflation.

Table 2.7.2 Contributions to administered price inflation

	2005			2006			
	Sept	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**March**
Total	10.3	10	7.5	7	8.6	9.3	6.2
Petrol	7	6.7	4.2	3.8	6.2	7.1	3.8
Electricity	0.5	0.3	0.3	0.3	0.2	0.1	0
Assessment rates	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Education and services	1.2	1.2	1.2	1.2	1.2	1.2	1.1
Medical services	0.1	0.1	0.1	0	0	-0.1	-0.1
Communication	0	0	0	0	-0.4	-0.4	-0.4
Other	1	1.2	1.2	1.2	0.9	0.9	1.3

Source: SARB (2006)

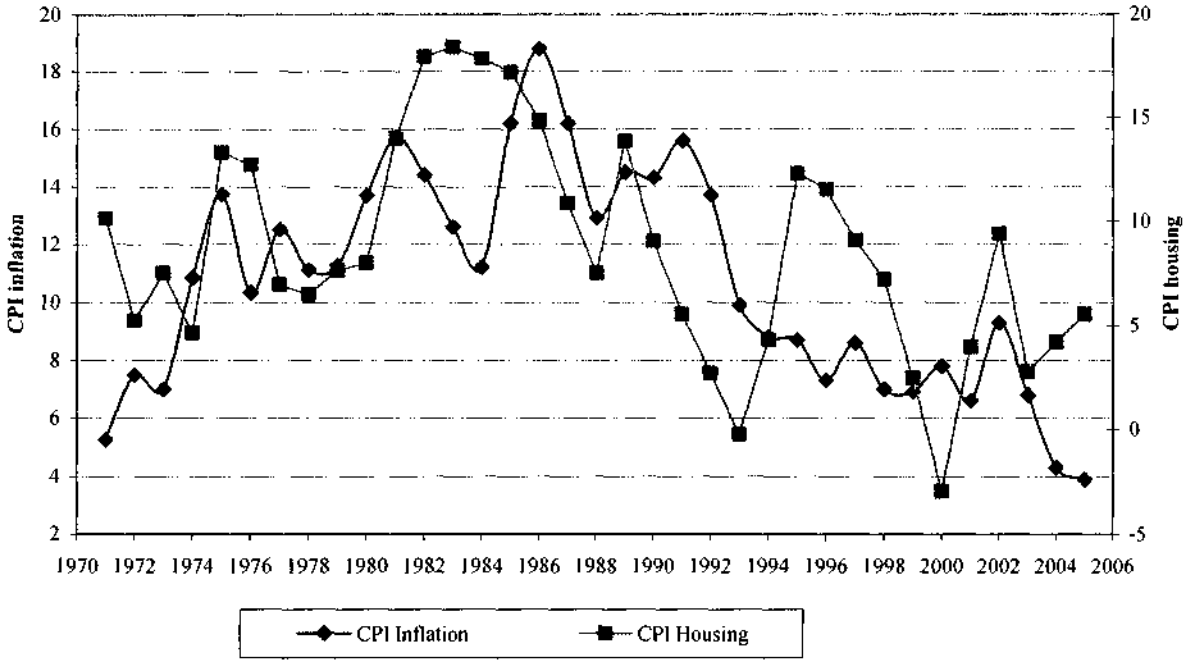

Figure 2.7.5 Trend of CPI inflation and CPI Housing
(Source: Statistics SA 2006)

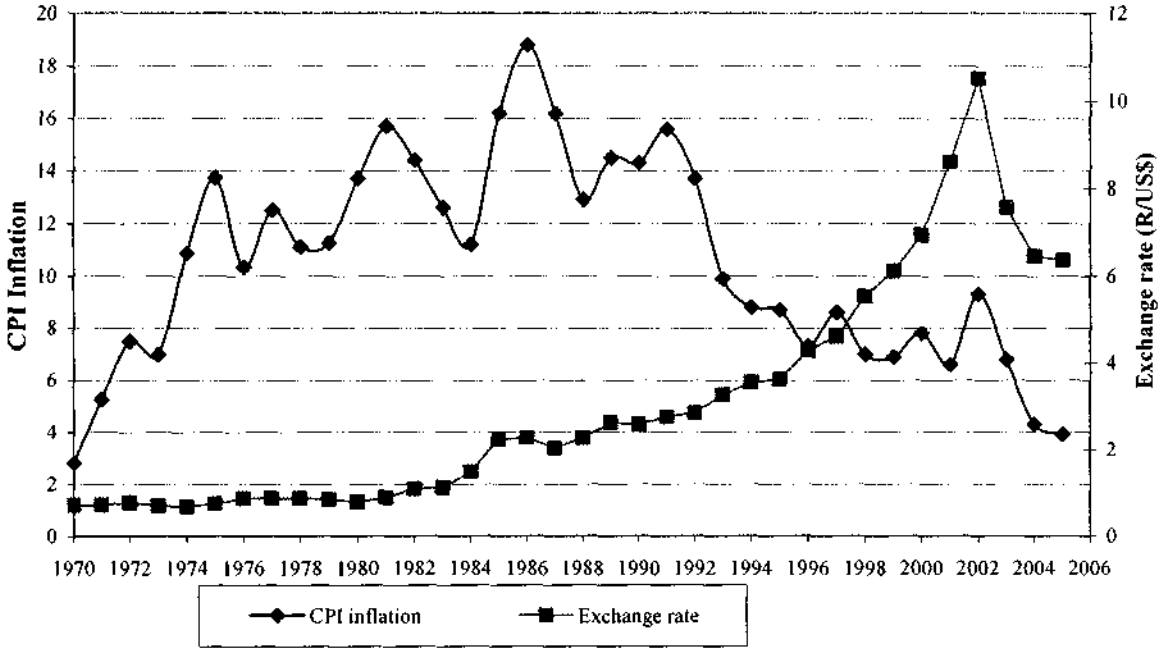

Figure 2.7.6 Trend of CPI inflation and Exchange rate
(Source: Statistics SA & SARB 2006)

An exchange rate movement is one of the external shocks affecting inflation. During the period 1970-1983, the South African currency was pegged to either the British pound or the US dollar and the exchange rate was very stable and controlled below R2/US$.

Figure 2.7.6 above shows that the exchange rate did not have any effect on inflation (1970-1983).

According to Ghosh et al. (1996), a pegged exchange rate is associated with low inflation and this can be achieved by fixing the domestic currency to that of a large low inflation country. Bernanke et al. (1999) argue that the exchange rate could be allowed to depreciate at a fixed predetermined rate that could cause domestic inflation to be higher than that of the larger country. In general exchange rate depreciation leads to higher inflation (Goujon 2006). While exchange rate peg is simplistic and clear for the public, it has the following disadvantages, Bernanke at al. (1999):

- Strengthening of the domestic currency relative to that of the trading partner will tend to depress domestic economic activity. It makes country exports less competitive in world markets.
- Shocks in the anchor country translate into another country. Pegging does not solve the problem of price stability, instead it shifts the problem to another country.

During the period, 1984-1991, the exchange rate increased slightly while inflation was fluctuating. The 1990s period was characterized by lower inflation while the exchange rate was increasing at an exponential rate. The inflation targeting regime (2000 onwards) shows that a correlation exists between the exchange rate and inflation. This relationship is due to the stance taken by the SARB when it adopted inflation targeting policy that it will not interfere or target the exchange rate. The exchange rate was left to the markets.

According to Lizondo et al. (2005, p.9), the persistent effect of exchange rate on inflation output could only happen if the exchange rate shock is serially correlated. This means inflation in the current period could be affected by inflation in the previous period. This is evident from the exchange rate shocks experienced in 2001 where inflation was severely affected (see figure 2.7.6 above).

The only instrument that the SARB use to control inflation is the curbing of the interest rates.

2.8. Credibility of the current inflation target

Inflation targeting countries have an option of targeting an inflation target point with a reasonable deviation tolerance on either side of the target point or inflation target range. The target point has an advantage in that it is clear from the public what the numerical target the central bank is aiming for. The disadvantage of the inflation target point is that it is very difficult to be attained since it is dependent on the forecasting methods. The forecasts are not accurate because there is at least a lag of 12 – 24 months in inflation target (Mboweni 2003). The use of target point with tolerance band could also affect the credibility of the bank if inflation is always above the target tolerance.

Target range allows the central banks to operate in flexible monetary policy. However, the central banks need to be more transparent to the public about how it is operating its monetary policy, especially when the inflation reaches the floor (lower target range) or the ceiling (upper target range). The target range should not be too broad as it would give an impression that the bank is not serious about attaining lower inflation. On the other hand, too narrow target range would be too hard to attain especially if there are external shocks to the economy such as a continuous rise in the oil prices. The credibility of the central bank would be affected if the bank continuously misses the target.

The SARB has adopted the target range of 3% to 6% year to year on a continuous basis. The inflation rate has been within the target band of 3% to 6% since September 2003. This was largely due to the recovery of the rand. The food prices have been relatively low while oil prices have been rising. The Reserve bank has significantly dropped the interest rate and this has encouraged consumer spending due to high disposable income. The outlook of inflation for 2006 is not looking good. This was due to weakening of the rand during the second and third quarter of the year. It occurred due to the threat in the emerging markets, the crisis in Iran which affected oil production and oil issues in Nigeria and Saudi Arabia. The food prices were also affected. This has been due to the pressure of higher oil prices. The other factor that affected the inflation outlook was the current account deficit of the country. Current account deficits are a reflection of higher consumer spending and they are not necessarily inflationary. There is however a possible

risk to the exchange rate if the deficits are unsustainable and this was evident from the recent exchange rate reaction to the higher deficit (Mboweni 2006).

The Reserve bank has subsequently decided to put a break to the consumer spending by raising interest rates in June, August and October. The inflation forecast for 2007 does not look good. It is envisaged that it will fall outside the target band in the first quarter of the 2007 and it will be just inside the target band during the second quarter of 2007 (Robbins, 2006). The bank has made it clear to the public on how the inflation forecast works and the public should not be surprised of the higher inflation rates forecasted. So far the forecast has not been off the mark.

2.9. Summary

This chapter discussed fully the concepts and requirements for inflation targeting in South Africa. The chapter started by discussing the background of inflation targeting with respect to monetary policy response and supply shocks response. The prerequisites of inflation targeting were outlined. This was followed by discussion on the advantages and disadvantages of inflation targeting. The merits and success of inflation targeting in South Africa were discussed. To understand the factors that affect inflation, the trends of inflation factors were discussed. Finally, the credibility of the current inflation target was discussed.

Three things were identified as the major causes of inflation and they are: exchange rate, oil prices and food prices. The limitation of inflation targeting is the accuracy of inflation forecasts. Continuous errors in the forecast will affect the credibility of the bank.

CHAPTER 3 RESEARCH METHODOLOGY

3.1. Introduction

The inflation rate in South Africa is measured by the CPIX. Nattrass et al. (2002) emphasize that inflation is affected by the cost-push factors (such as food, exchange rate) on the supply side of the economy and the demand side factors such as money supply and credit extension.

This study will investigate the correlation between inflation and the cost push factors on the supply side and the demand side factors. This study also seeks to determine the effect of the time lag on inflation. An example would be to fix CPIX inflation and correlate it with one factor such as food lag. In other words after how long does it take food inflation to feed into the CPIX figure?

3.2. Research hypothesis

The hypothesis to be tested will investigate the relationship between inflation and the factors affecting inflation. The factors to be investigated are food inflation, transport inflation, housing inflation, domestic exchange rate, Brent Crude oil, money supply and the current account deficit to the GDP.

The null hypothesis states that there is no relationship between inflation and the factors affecting inflation.

A two-tailed hypothesis will be used because the research attempts to determine if there is a linear relationship in the sample population.

Ho: P=0

HA: P≠ 0

Where Ho is the null-hypothesis, HA is an alternative hypothesis, and P is the probability value. Cooper & Schindler (2006, p.501), define P as the probability of observing a sample value as extreme as the value actually observed, given that the null hypothesis is true (the P value is compared to the significance level to either reject or accept the null-hypothesis).

In terms of linear regression, it is required to perform further test on R^2 to determine whether it is statistically significant from zero.

The hypothesis to be tested is sub-divided into two sub-hypotheses. The first sub-hypothesis will test the relationship between inflation at time t and the factors affecting inflation. The second sub-hypothesis will test the relationship between inflation and the factors affecting inflation lagged periods up to eight quarters. The second sub-hypothesis was formulated because the literature suggested that the effect of inflation is most likely to be felt in subsequent periods.

3.3. Research Procedure

Research procedure will discuss how the research was conducted, with respect to sample population, the sampling methodology and the sampling bias that might arise

The research will use time series data to quantify the factors that affect inflation.

3.3.1. Research methodology selection

The research design is based on a time-series, correlation research and the data will be represented by the samples in the relevant periods. The research is scientific and quantitative. The sampling population is all items listed in the inflation basket determined by Statistics SA.

3.3.2. The sampling method

Stats SA publishes CPI inflation of goods and services every month and this data is archived on their website, and it is freely available to the public. A total of South African CPI basket consists of about 1500 different consumer goods and services and this data is grouped into more than 40 groups and sub-groups, and the separate indices are constructed (Statistics SA). This information is collected through households'

budget/expenditure survey for the metropolitan areas in South African and the information supplied by the retailers on sales.

OPEC publishes data on oil price movements. SARB publishes data on exchange rate, interest rates, money supply and the current account deficit to the GDP.

The sample was drawn from these data sources for the period 1970:Q1 – 2006:Q2. Linear regression will also be used to determine the combined effect of the variables affecting inflation.

3.3.3. The sampling bias

Every effort has been made to minimize the sampling bias. Some data sets were available in monthly and some were available in quarterly, the conversion of monthly to quarterly through three monthly averages might lead to a bias. The lagged period for regression analysis has been limited to 3 to 6 monthly periods. Lag period will be limited to eight quarters (either 3 monthly periods or 6 monthly periods). Stock and Watson (2001) argue that the maximum lag period to be chosen for regression test should be limited to four periods.

3.4. Sources of data

The information used in this research (for the period: 1970-2006) was obtained from Statistics SA, SARB and OPEC.

3.5. Data analysis methods

The data was assessed to determine if inflation is correlated with factors contributing to inflation, and the degree of correlation. According to Cooper & Schindler (2006, p.536), Koop (2005, p.36), Ghauri & Gronhaug (2002, p.151), Dielman (2005, p.97) and Pallant (2005, p.121), the correlation coefficient varies over the range of +1 to -1. This correlation coefficient is used to determine the strength of the relationship between two variables and the direction of the strength (indicated by the sign of the coefficient). Negative correlation coefficient implies that one variable decreases as the other variable increases, and positive correlation coefficient implies that an increase in one variable will cause an increase in the other variable. Coefficient of less that 0.5 implies that the correlation between the two variables is weak and the coefficient of more that 0.5 implies strong correlation coefficient between the two variables.

A t-test was conducted on the data to determine if the correlations obtained were statistically significant from zero. The t-test calculated was compared with the critical t-value obtained from statistical tables. Alternatively P-test was used to compare the significance at 5% confidence level.

The null hypothesis at 5% significant level would be rejected if the calculated t-value was greater that the critical value and the hypothesis would be accepted if the t-value is less than the critical value. In terms of the P-value, the hypothesis will be rejected if the P value is less than 0.05.

In terms of multiple liner regression, multicollinearity will be detected by tolerance values and VIF (Variance inflation factor). According to Pallant (2005), tolerance and VIF is an indicator of how much the variability of the specified dependent variable is explained by other independent variables in the model. Tolerance of less than 0.10 or VIF of greater than 10 is an indication that there is a problem of multicollinearity. In other words the independent variables are highly correlated.

Evaluation of independent variable will be done by making use of standardized coefficients. Standardized values ensure that the values of different variables have been converted to the same scale (Pallant 2005). This is very helpful in comparing the contribution of each independent variable.

The data collected was processed through the SPSS to determine their statistical implications.

3.6. Summary

This chapter discussed the collection of data, data sources, and data manipulation in terms of statistical implications and the software to be used. The chapter also discussed the hypothesis to be tested. The hypothesis will investigate the correlation between inflation and factors affecting inflation. The chapter elaborated on research methodology selection, the sampling method and the sampling biased that might be experienced in this research. The following chapter will present the results obtained from the SPSS.

CHAPTER 4 PRESENTATION OF RESULTS

4.1. Introduction

This chapter evaluates and discusses the results of the same period and lagged period tests. The tests are performed for the period before inflation targeting (1970-1999) and the period of inflation targeting (2000-2006). Inflation is being compared between the two periods. Observations for the same period tests are based on monthly data (excluding the current account deficit to the GDP). The current account deficit to the GDP data was only available in quarterly, CPIX data was averaged over three months to get an estimate of quarterly data. All observations for the lagged period tests are based on quarterly data. The monthly data was lagged for three months (representing quarterly data). The current account deficit to the GDP data was not affected (except the CPIX data which was averaged for the quarter).

All data was converted to annual percentage change. Inflation is measured as an annual percentage change and it is therefore necessary for other data to be in the same scale of measurement to have an accurate comparison.

4.2. Same Period tests

The same period sub-hypothesis stated that there is no correlation between CPIX inflation and the factors affecting inflation. The tests were performed on CPIX inflation versus food inflation, transport inflation and housing inflation, CPIX inflation versus Brent crude oil, CPIX inflation versus the domestic exchange rate, CPIX inflation versus M3, and CPIX inflation versus the current account deficit to the GDP.

The results of the tests are shown in tables 4.2.1 to 4.2.5 below and in Appendix1.

Table 4.2.1 CPIX inflation versus Food, Transport, and Housing inflation

	1970-1999	2000-2006
Correlation Coefficient	0.64	0.86
Significance	0.00	0.00
Significant level	0.05	0.05
Reject or Fail to reject null hypothesis	Reject	Reject

Table 4.2.2 CPIX inflation versus Brent Crude oil

	1970-1999	2000-2006
Correlation Coefficient	0.07	0.00
Significance	0.10	0.49
Significant level	0.05	0.05
Reject or Fail to reject null hypothesis	Fail to reject	Fail to reject

Table 4.2.3 CPIX inflation versus exchange rate

	1970-1999	2000-2006
Correlation Coefficient	0.01	0.32
Significance	0.40	0.00
Significant level	0.05	0.05
Reject or Fail to reject null hypothesis	Fail to reject	Reject

Table 4.2.4 CPIX inflation versus M3

	1970-1999	2000-2006
Correlation Coefficient	0.07	0.09
Significance	0.11	0.23
Significant level	0.05	0.05
Reject or Fail to reject null hypothesis	Fail to reject	Fail to reject

Table 4.2.5 CPIX inflation versus current account deficit to the GDP

	1970-1999	2000-2006
Correlation Coefficient	0.06	0.80
Significance	0.27	0.00
Significant level	0.05	0.05
Reject or Fail to reject null hypothesis	Fail to reject	Reject

	Sum of Squares	df	Mean Square	F	Sig.
Regression	1716.20	1.00	1716.20	0.38	0.54
Residual	527876.27	118.00	4473.53		
Total	529592.47	119.00			

4.3. Lagged period tests

The second sub-hypothesis stated that there is no correlation between CPIX inflation and the factors affecting inflation in subsequent periods. The correlations are based on quarterly periods. The maximum period used was a lag of eight quarters. The results of the tests are outlined in tables 4.3.1 to 4.3.7 below and in the Appendix1.

Table 4.3.1 CPIX inflation versus Food inflation lag

	1970-1999	2000-2006
Correlation Coefficient	0.52	0.95
Significance	0.00	0.00 *
Significant level	0.05	0.05
Reject or Fail to reject null hypothesis	Reject	Reject

* Up to 4 quarters lag

Table 4.3.2 CPIX inflation versus Transport inflation lag

	1970-1999	2000-2006
Correlation Coefficient	0.41	0.71
Significance	0.00	0.00 *
Significant level	0.05	0.05
Reject or Fail to reject null hypothesis	Reject	Reject

*from 4th quarter onwards

Table 4.3.3 CPIX inflation versus Housing inflation lag

	1970-1999	2000-2006
Correlation Coefficient	0.55	0.83
Significance	0.00	>0.05
Significant level	0.05	0.05
Reject or Fail to reject null hypothesis	Reject	Fail to reject

Table 4.3.4 CPIX inflation versus Brent Crude Oil lag

	1970-1999	2000-2006
Correlation Coefficient	0.17	0.44
Significance	>0.05	<0.05 *
Significant level	0.05	0.05
Reject or Fail to reject null hypothesis	Fail to reject	Reject

*Quarters 3, 4, 5 & 6

Table 4.3.5 CPIX inflation versus exchange rate lag

	1970-1999	2000-2006
Correlation Coefficient	0.23	0.93
Significance	<0.05	0.00
Significant level	0.05	0.05
Reject or Fail to reject null hypothesis	Reject	Reject

Table 4.3.6 CPIX inflation versus M3 lag

	1970-1999	2000-2006
Correlation Coefficient	0.36	0.80
Significance	<0.05	<0.05 *
Significant level	0.05	0.05
Reject or Fail to reject null hypothesis	Reject	Reject

*Quarters 6, 7, & 8

Table 4.3.7 CPIX inflation vs current account deficit to GDP

	1970-1999	2000-2006
Correlation Coefficient	0.23	0.88
Significance	>0.05	<0.05 *
Significant level	0.05	0.05
Reject or Fail to reject null hypothesis	Fail to reject	Reject

* Lags up to 5th quarter

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.23	0.05	-0.03	70.05

4.4. Summary

This chapter has outlined the statistical findings of the correlations and the significant tests for the same periods and lagged periods. The same period hypothesis stated that there is no correlation between CPIX inflation and the factors affecting inflation. The lagged period hypothesis stated that there is no correlation between CPIX inflation and the factors affecting inflation in subsequent periods. The hypotheses were tested at 5% significant level and the data was based on quarterly periods. These statistical findings will be interpreted in the following chapter.

Chapter 5 Interpretation of results

5.1. Introduction

This chapter discusses the interpretation of the results obtained in the previous chapter. The results of the same periods are discussed first and followed by the results of the lagged periods.

5.2. Correlation during the same period

The first sub-hypothesis stated that there is no correlation between CPIX inflation and the factors affecting it, when compared in the same period.

5.2.1. CPIX inflation versus food, transport and housing inflation

The results show that there is a positive correlation between CPIX inflation and the three main inflation contributing factors (food, transport and housing inflation), when measured in the same period. The correlation was stronger (86%) during the inflation targeting period as compared to the period prior to inflation targeting (64%). This means that during the period prior to inflation targeting and the inflation targeting period, only 41% and 74%, respectively, of the variation in CPIX inflation is explained by the food inflation, transport inflation and housing inflation.

All the results were statistically significant (P-value less than 0.05) during the period of inflation targeting and the period prior to that. The sub-hypothesis (null) was rejected. Therefore CPIX inflation is affected by food inflation, transport inflation and housing inflation.

In terms of the beta coefficients (results in Appendix 1), the period prior to inflation targeting shows that food inflation is making the most contribution of 0.40 in explaining the variation of the CPIX inflation. It is followed by transport inflation and housing inflation with a contribution of 0.39 and 0.23, respectively. The beta coefficient of 10% for the food price means that increasing food price by 10% will cause CPIX inflation to

go up by 10%. The transport inflation beta coefficient means that an increase of transport price (like petrol) will cause an increase of 23% on CPIX inflation. The housing beta coefficient means that an increase of housing prices will cause an increase of 15% to the CPIX inflation.

The results of the beta coefficients for inflation targeting period show a rise in other variables in explaining the variability of CPIX inflation. Food inflation is making the biggest contribution of 0.58 in explaining this correlation. It is followed by housing inflation and transport inflation with a contribution of 0.36 and 0.16, respectively. The beta coefficients for food inflation, transport inflation and housing inflation of 0.25, 0.24 and 0.11 respectively, mean that the CPIX inflation will increase by 25%, 24% and 11%, respectively if the food prices, transport prices and housing prices increase.

5.2.2. CPIX inflation versus Brent crude oil

The results show that there is no correlation between inflation and Brent crude oil, when measured in the same period. This means that the impact of the Brent Crude oil prices does not immediately feed into the CPIX inflation.

The results are not statistically significant (P-value greater than 0.05) and the sub-hypothesis was accepted. Therefore there is no correlation between CPIX inflation and Brent crude oil when measured during the same period.

5.2.3. CPIX inflation versus Exchange rate

The results show that there is no correlation between CPIX inflation and the domestic exchange rate during the period prior to inflation targeting when measured during the same period. This could be attributed to the fact that the domestic currency was controlled by the central bank in the period prior to inflation targeting. The correlation was not statistically significant and the sub-hypothesis was accepted.

The results however, show that during inflation targeting period there is a weak positive correlation between CPIX inflation and the domestic exchange rate when measured in the same period. This could be attributed to the fact that the central bank does not interfere

with the domestic currency and it is only affected by the markets. The weak correlation could mean that the impact of the weakness of the domestic currency would not be felt by the economy in the short run. The correlation was statistically significant and the sub-hypothesis was rejected.

5.2.4. CPIX inflation versus M3

According to the theoretical equation presented in section 2.2 of this report (equation 2.2), money supply is expected to have a positive influence on the price level and inflation.

The results show that there is no correlation between CPIX inflation and M3 during the period prior to inflation targeting and during period of inflation targeting, when measured during the same period. This means that the impact of money supply does not have an immediate effect on the CPIX inflation.

The results are not statistically significant (P-value greater than 0.05) and the sub-hypothesis was accepted. Therefore there is no correlation between CPIX inflation and M3 when measured in the same period.

5.2.5. CPIX inflation versus current account deficit to GDP

The results show that during the period prior to inflation targeting, there is no correlation between CPIX inflation and the current account deficit to the GDP when measured in the same period. The correlation was not statistically significant and the sub-hypothesis was accepted.

The results, however, show that during the periods of inflation targeting, there is a strong positive correlation between CPIX inflation and the current account deficit to the GDP (80%). This means that 63% of the variation in CPIX inflation is explained by the current account deficit to the GDP (provided other factors are controlled for). The correlation was statistically significant and the sub-hypothesis was rejected.

5.3. Correlation during lagged periods

The second sub-hypothesis stated that there is no correlation between CPIX inflation and the factors affecting inflation, when compared in subsequent periods. The variables were lagged up to eight quarters.

5.3.1. CPIX inflation versus Food inflation lag

The period prior to inflation targeting shows that there is a strong positive correlation of 52% between CPIX inflation and food inflation lagged up to eight quarters. The correlation is statistically significant and the sub-hypothesis was rejected. The second quarter lag makes the most contribution of 0.31 in explaining the variation of CPIX inflation with food inflation (provided other factors are controlled for). It is followed by the first quarter with 0.23 and the third quarter with 0.01.

The period of inflation targeting shows that there is a strong positive correlation of 95% between CPIX inflation and food inflation lag of up to eight quarters. The correlation is statistically significant up to the fourth quarter lag. The sub-hypothesis was therefore rejected for the lag periods up to the fourth quarter. Food inflation is making the most contribution of 0.39 in the first quarter in explaining the variation of the CPIX inflation (provided other variables are controlled for). It is followed by the second quarter lag; the third quarter lag and the fourth quarter lag with contribution of 0.34, 0.22 and 0.23, respectively.

5.3.2. CPIX inflation versus Transport inflation lag

The period prior to inflation targeting shows that there is a medium positive correlation of 41% between CPIX inflation and the quarterly lag of transport inflation for eight quarters. The correlation is statistically significant and the sub-hypothesis was rejected.

The period of inflation targeting shows that there is a positive correlation of 71% between CPIX inflation and the quarterly lagging of transport inflation up to eight quarters. The correlation is statistically significant (P-value is less than 0.05) from fourth quarter onward. The sub-hypothesis was rejected only from fourth quarter onwards. In other words the correlation between CPIX inflation and the lag of transport inflation only exists from the fourth quarter onwards.

5.3.3. CPIX inflation versus Housing inflation lag

The periods prior to inflation targeting show that there is a strong positive correlation of 55% between CPIX inflation and housing inflation when lagged up to eight quarters. The correlation is statistically significant and the sub-hypothesis was rejected.
The periods of inflation targeting show that there is a strong positive correlation of 83% between CPIX inflation and the lagging of the housing inflation up to eight quarters. The correlation is not statistically significant (P-value is greater than 0.05) and the sub-hypothesis was accepted. Therefore there is no correlation between CPIX inflation and the lag of housing inflation during inflation targeting periods.

5.3.4. CPIX inflation versus Brent crude oil lag

The periods prior to inflation targeting show that there is a weak positive correlation of 17% between CPIX inflation and Brent crude oil when lagged up to eight quarters. The correlation is not statistically significant and the sub-hypothesis was accepted. Therefore there is no correlation between CPIX inflation and quarterly lag of Brent crude oil.

The periods of inflation targeting show that there is a moderately positive correlation of 44% between CPIX inflation and the lagging of Brent crude oil up to eight quarters. The correlation is statistically significant only during the third, fourth, fifth and sixth quarter lag and the sub-hypothesis was rejected only for quarter three to quarter six. Therefore the correlation between CPIX inflation and the lag of Brent crude oil only exists from third quarter up to sixth quarter, during inflation targeting period. The SARB should therefore keep this lag in mind when doing inflation forecast.

5.3.5. CPIX inflation versus exchange rate lag

The periods prior to inflation targeting show that there is a weak positive correlation of 23% between CPIX inflation and the exchange rate lag when lagged up to eight quarters. The correlation is statistically significant and the sub-hypothesis was rejected.
The period of inflation targeting shows that there is a strong positive correlation of 93% between CPIX inflation and the lagging of the domestic exchange rate up to eight quarters. The third quarter lag is making the most contribution of 0.42 (correlation coefficient of 84%) in explaining the variation of the CPIX inflation when correlated with the domestic exchange rate in subsequent periods. The correlation is statistically significant and the sub-hypothesis was rejected. Therefore there is a correlation between CPIX inflation and the lag of the domestic exchange rate up to eight quarters. The long-run effect of weaker domestic exchange rate leads to high inflation and price levels.

5.3.6. CPIX inflation versus M3 lag

According to the theoretical equation presented in section 2.2 of this report (equation 2.2 and figure 2.2.3), the long-run effect of sustained growth in money supply will have a sustained growth in the price level and inflation. The results of the correlation for both periods under study were found to be statistically significant. The periods prior to inflation targeting show that there is a moderately weak positive correlation of 36% between CPIX inflation and M3 when lagged up to eight quarters. The correlation is statistically significant and the sub-hypothesis was rejected.

The period of inflation targeting show that there is a strong positive correlation of 80% between CPIX inflation and the lagging of M3 up to eight quarters.

The correlation was statistically significant only from the sixth quarter to the eighth quarter. Therefore money supply growth does not have an effect on inflation in the short run.

5.3.7. CPIX inflation versus current account deficit to GDP

The periods prior to inflation targeting show that there is a weak positive correlation of 23% between CPIX inflation and the current account deficit to the GDP when lagged up to eight quarters. The correlation is not statistically significant and the sub-hypothesis was accepted. Therefore there is no correlation between CPIX inflation and the lag of the current account deficit to the GDP. This means that during the periods prior to inflation targeting, government spending was not associated with riskier environment. This was largely due to the fact that South Africa was sanctioned from international markets during these periods (up to 1994).

The periods of inflation targeting show that there is a strong positive correlation of 88% between CPIX inflation and the lagging of the current account deficit to the GDP up to eight quarters. The correlation was statistically significant only up to the fifth quarter. Therefore there is a correlation between CPIX inflation and lagging of the current account deficit to the GDP, up to the fifth quarter.

This means that higher government spending in South Africa is associated with riskier environment. Since 1994, South Africa was able to trade anywhere in the world (sanctions were lifted), and this has exposed the country to riskier markets.

5.4. Comparative analysis: Before and during inflation targeting

A comparative analysis in terms of linear regression was done on inflation and its lags. The reason for this comparison is to determine the strength of the regression on the CPIX inflation in subsequent periods.

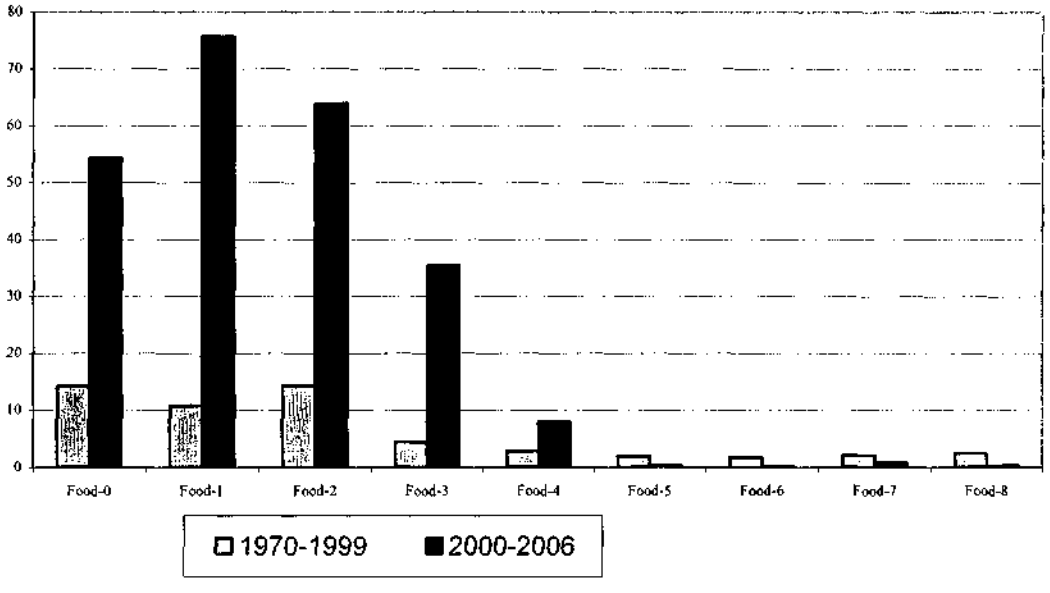

Figure 5.4.1 Regression for CPIX inflation and Food inflation

CPIX inflation and food inflation is being compared for the period before inflation targeting and the period during inflation targeting (figure 5.4.1). Before inflation targeting, the correlation between CPIX inflation and food inflation was relatively weak, with the highest R^2 of 14% in the second quarter lag. Beyond the second quarter the contribution of food inflation lag was insignificant. On the other hand, the period of inflation targeting is characterized by a strong correlation between CPIX inflation and food inflation.

The highest impact of food inflation is felt by the economy during the first quarter lag (R^2 is 76%). The impact of food prices on CPIX inflation diminishes after the third quarter.

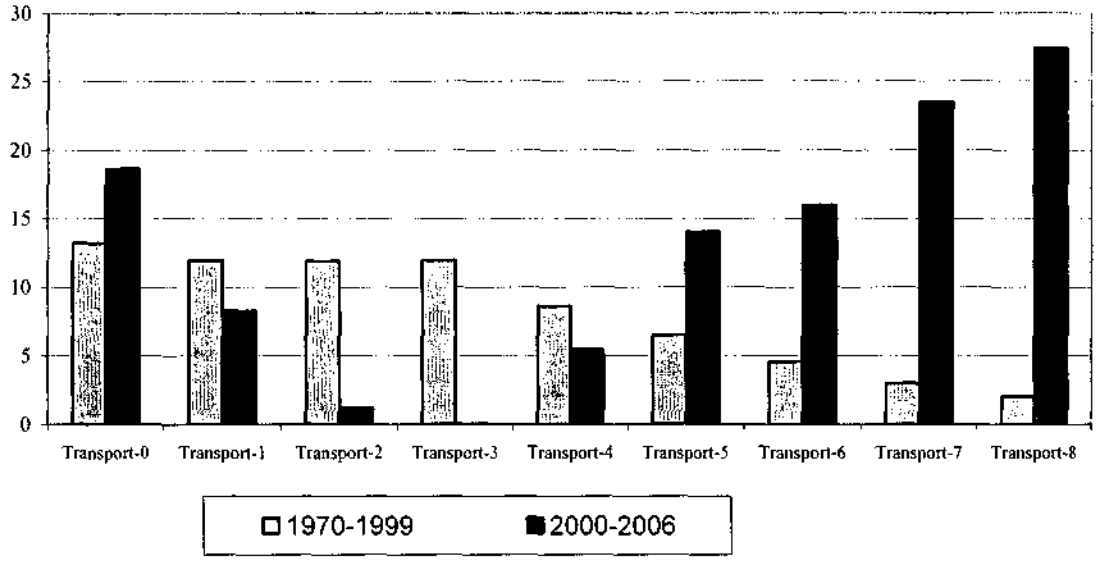

Figure 5.4.2 Regression for CPIX inflation and Transport inflation

Transport inflation is one of the biggest contributors to CPIX inflation. Figure 5.4.2 above compares the effect of transport inflation on CPIX inflation before inflation targeting and during inflation targeting. The period before inflation targeting has a conservative impact on CPIX inflation up to the third quarter lag (14% of the CPIX inflation is explained by transport lag of up third quarter).

The inflation targeting regime was not really affected by transport inflation in subsequent periods. The highest impact of transport inflation was immediately felt by the economy. For example an increase in petrol price will have immediate impact on consumer spending.

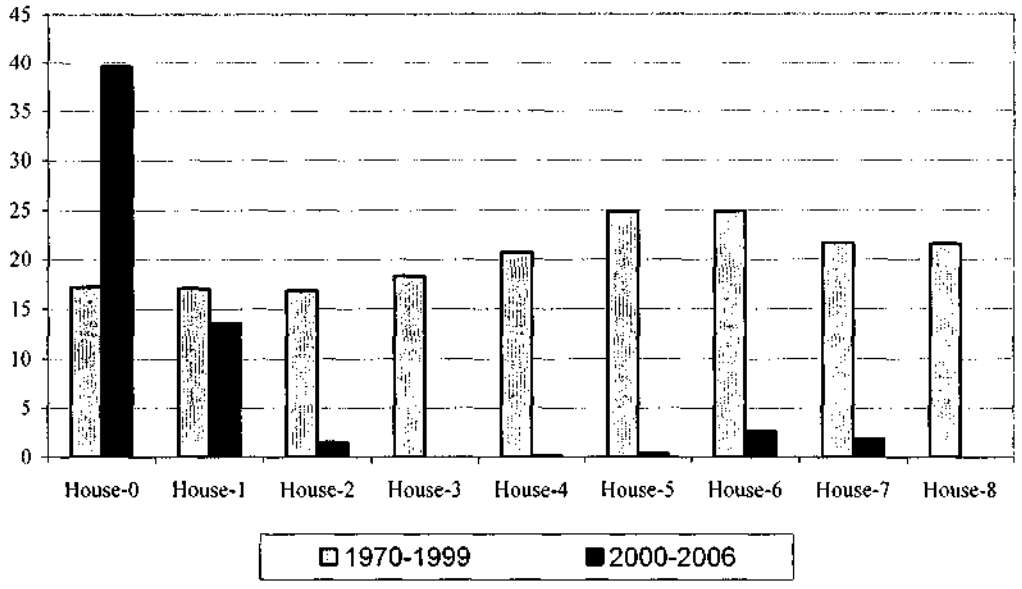

Figure 5.4.3 Regression for CPIX inflation and Housing inflation

Housing inflation before inflation targeting regime was mostly felt by the economy in subsequent periods, with highest impact during the fifth and sixth quarter lag (figure 5.4.3). However, housing inflation has immediate impact on CPIX inflation during the inflation targeting regime.

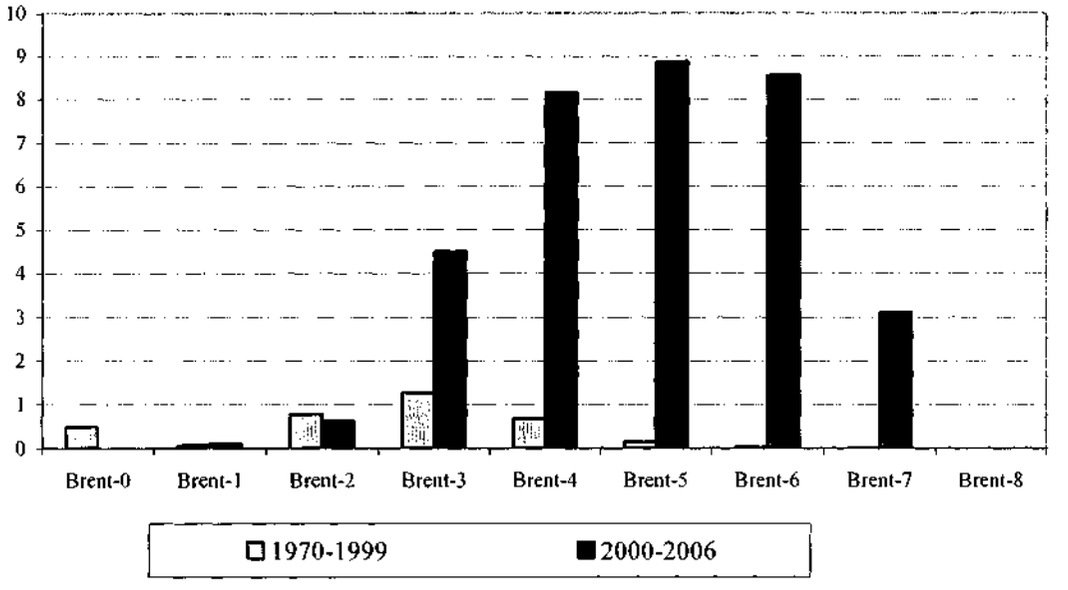

Figure 5.4.4 Regression for CPIX inflation and Brent Crude oil

Comparison between Brent crude oil and CPIX inflation is highlighted in figure 5.4.4 above. The periods prior to inflation targeting show that there is insignificant impact of Brent crude oil lags on CPIX inflation. Brent crude oil has the highest impact on CPIX inflation during the inflation targeting regime. Comparison between these periods shows that Brent Crude oil has an impact on CPIX inflation during fifth quarter. This is however a poor correlation because only 9% of the CPIX inflation is explained by lagging of Brent crude oil during the periods of inflation targeting. No conclusion should therefore be drawn on the lag of Brent crude oil in explaining the CPIX inflation.

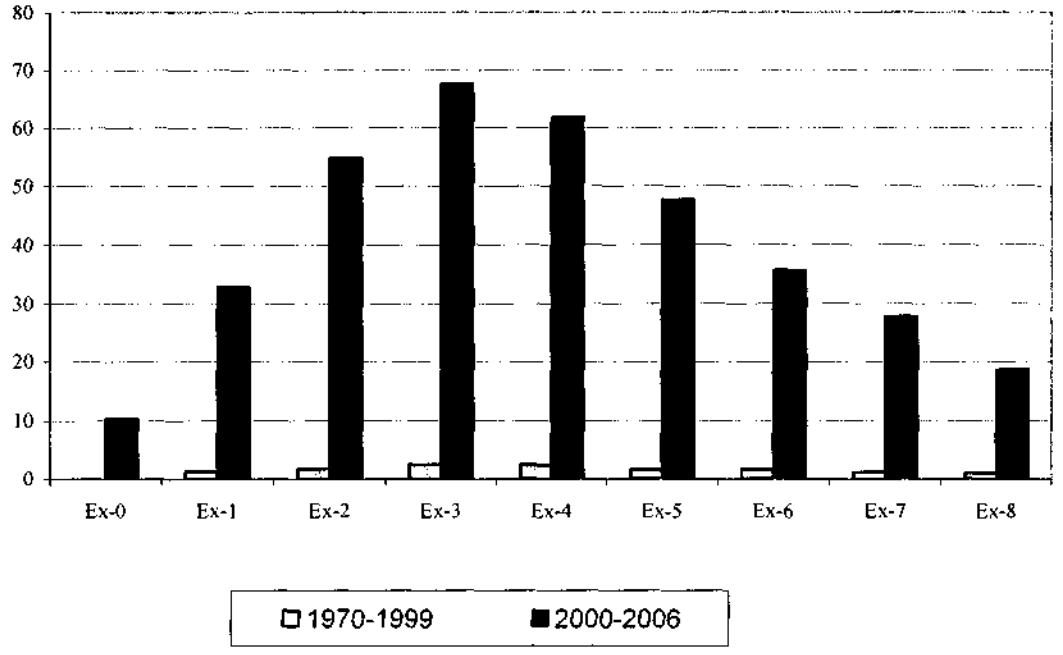

Figure 5.4.5 Regression for CPIX inflation and exchange rate

Figure 5.4.5 above shows that the domestic exchange rate did not have any significant impact on CPIX inflation before inflation targeting was adopted. However, inflation targeting regime shows that the highest impact of the domestic exchange rate could be felt by the economy during the third quarter. The domestic exchange rate would still be felt by the economy during the first quarter and the impact will be minimal after the seventh quarter.

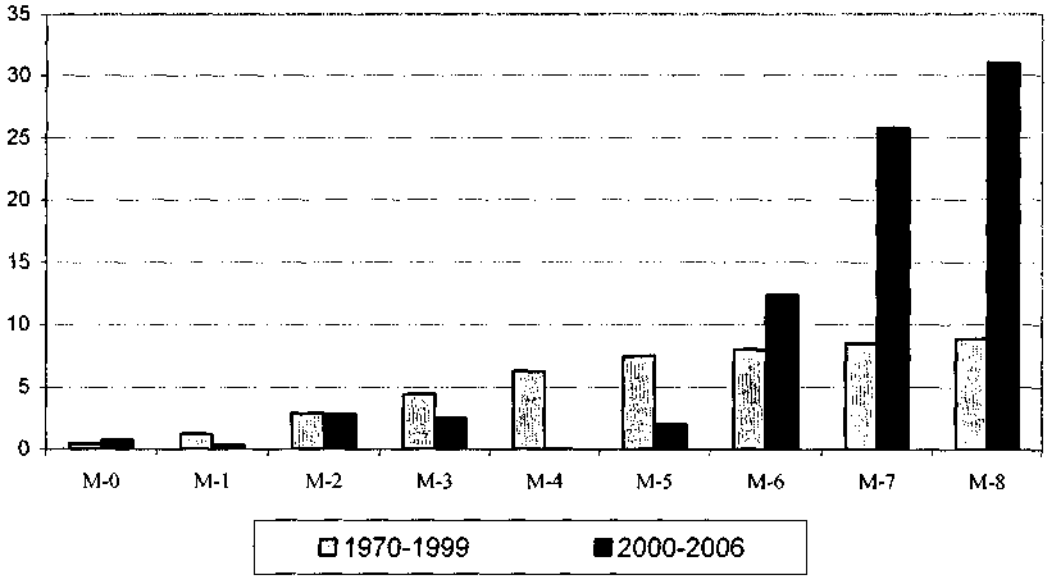

Figure 5.4.6 Regression for CPIX inflation and M3

Figure 5.4.6 above shows that, before inflation targeting regime, the lag of M3 did not have significant effect on CPIX inflation. Only less than 10% of the M3 explains the variation of CPIX inflation. This could be attributed to the fact that SARB was targeting M3 in the periods prior to inflation targeting regime.

The inflation targeting regime shows that the effect of M3 on CPIX inflation could be felt by the economy from the seventh quarter onwards.

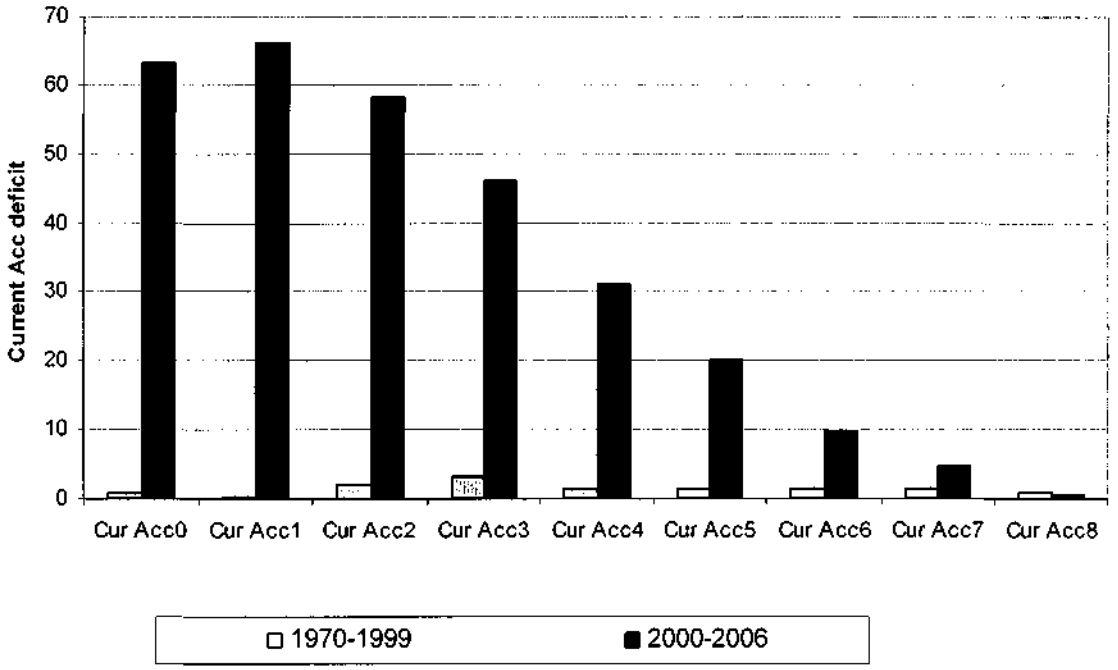

Figure 5.4.7 Regression: CPIX inflation and current account deficit to GDP

Figure 5.4.7 above shows that, before inflation targeting regime, the lag of the current account deficit to the GDP did not have significant impact on CPIX inflation. The correlation of CPIX inflation with lag of the current account deficit to the GDP is very weak.

The inflation targeting regime shows that the effect of the current account deficit to the GDP on CPIX inflation is higher during the first quarter. The correlation decreases up to the fourth quarter where R^2 is 30%. Thereafter, the regression is weaker. So the impact of the current account deficit to the GDP on the economy could take up to 12 months.

5.5. Summary

This chapter has interpreted correlations results. The following chapter will make conclusions and recommendations for further studies based on the interpretation of the results.

CHAPTER 6 CONCLUSIONS AND RECOMMENDATIONS

6.1. Research objectives

The objective of the study was to investigate whether there is a relationship between inflation and the factors affecting inflation.

Hypothesis 1

The null hypothesis states that there is no relationship between inflation and the factors affecting inflation, when compared in the same period.

Decision: reject the null hypothesis for food inflation, transport inflation and housing inflation, but accept the null hypothesis for M3, the domestic exchange rate, Brent crude oil and the current account deficit to the GDP, during the periods prior to inflation targeting. Also accept the null hypothesis for M3 and Brent crude oil during the period of inflation targeting.

Hypothesis 2

The null hypothesis states that there is no relationship between inflation and the factors affecting inflation, when compared to subsequent periods.

Decision: reject the null hypothesis (for food inflation, transport inflation, domestic exchange rate, M3, Brent crude oil and the current account deficit to the GDP) and accept the null hypothesis for housing inflation during inflation targeting period.

Accept the null hypothesis for Brent crude oil and the current account deficit to the GDP for the periods prior to inflation targeting.

6.2. Conclusions

Based on the results discussed in chapter 5, the study proved the following:

- CPIX inflation is positively and strongly correlated with food inflation, transport inflation and housing inflation when measured in the same period. The correlation was stronger during the period of inflation targeting as compared to the period prior to inflation targeting.
- The period prior to inflation targeting shows that there is no correlation between CPIX inflation and the domestic exchange rate when measured in the same period. However, there is weakly positive correlation between CPIX inflation and the domestic exchange rate during inflation targeting period.
- Prior to inflation targeting period, there is no correlation between CPIX inflation and the current account deficit to the GDP when measured in the same period. However, inflation targeting period is characterized by a strong correlation between CPIX inflation and the current account deficit to the GDP when measured in the same period.
- There is positive correlation between CPIX inflation and the individual lag of up to 2 years of food inflation, transport inflation and housing inflation. Inflation targeting regime is associated with a very strong correlation when compared to the period prior to inflation targeting.
- There is no correlation between CPIX inflation and the lag of Brent crude oil in the period prior to inflation. During inflation targeting regime, the correlation only exists from the third quarter to the sixth quarter. This could be attributed to the fact that before inflation targeting regime oil prices where lower and there was not much political influence on the production of oil as it is the case during the inflation targeting regime.
- Prior to inflation targeting regime, there is a weak positive correlation between CPIX inflation and the domestic exchange rate lag. The correlation is stronger during inflation targeting regime.

- Prior to inflation targeting regime, there is a weak positive correlation between CPIX inflation and M3 lag. The correlation is stronger from sixth quarter onwards during inflation targeting regime.
- Prior to inflation targeting regime, there is no correlation between CPIX inflation and the current account deficit to the GDP when lagged up to 2 years. However, there is a strong correlation between CPIX inflation and current account deficit to the GDP during inflation targeting regime.

The study failed to prove the correlation between CPIX inflation and Brent crude oil when measured in the same period. It also failed to prove the correlation between CPIX inflation and money supply when measured in the same period.

6.3. Recommendations

The comparative study of the effect of inflation in the period prior to inflation targeting and the inflation targeting regime clearly indicates that the correlation between CPIX inflation and the factors affecting it is not fixed. It would therefore be a good idea for SARB to determine at what level will the factors that affect inflation pose a threat to inflation outlook. Current account deficit to the GDP has a high impact on exchange rate. The current account of the balance of payment should therefore not be at levels that strongly influence the exchange rate outlook. Having a control over the current account deficit will ultimately reduce the impact of food prices and exchange rate on inflation. The current account deficit levels could be reduced by implementing stronger measures that restrict the credit extension to consumers. SARB should not allow fiscal policy to finance the balance of payment debt. This will reduce the independence of the monetary policy. Consequently the objective of maintaining price stability would not be realized. Having all these factors under control would reduce the forecasting errors often being experienced on inflation.

6.4. Suggestions for further research

6.4.1. The impact of the current account deficit to the GDP. It has been stated that the current account deficit negatively affects the exchange rate of the domestic currency. It would be interesting to explore the strength of the correlation between the current account deficit to the GDP and the exchange rate of the domestic currency. This should be done during the same periods and during the lagged periods.

6.4.2. Interest rates changes have been used by SARB as an instrument to control inflation. This research has not explicitly touched on this. A study of the effectiveness of the interest rate changes as an instrument to control inflation is required. It is further suggested that the effect of interest rate on inflation, growth and employment be determined.

6.4.3. The degree of the transparency on the conduct of monetary policy. The question that needs to be explored is the transparency of the SARB on the forecast of the inflation targeting.

6.4.4. Administered price inflation has featured prominently in the economic circles as one of the possible contributors to inflation. The correlation of this variable with the CPIX inflation was not explored because it was only introduced in 2003 by Stats SA and the data was insufficient to draw any conclusive evidence. It would be interesting to determine the strength of the correlation and its lags.

6.4.5. It has been stated that inflation targeting will work if its objectives are not conflicting with other fiscal policies such as government spending program. A study on the effectiveness of inflation on the budget deficit/GDP ratio is required. This will also provide information on the effect on inflation on economic growth and employment.

6.4.6. It is generally acknowledged that higher inflation is harmful to economic growth and employment creation. It is suggested that further work be done to determine the optimum inflation point beyond which economic growth and employment creation are severely affected.

6.4.7. SARB maintains that long-term growth is stimulated by low inflation. In conjunction with fiscal policies such as government spending, a study is required to determine the effect of lower inflation on economic growth. The study needs to explore if lower inflation encourages savings and investment, and how it translates into economic growth.

6.4.8. The labour market is characterized by supply shocks such as worker's wage demand and this can lead to short term inflation. The impact of the wage demand on inflation needs to be determined.

6.4.9. It is a well known fact that the producer price index affects inflation. A study is required to determine the strength of the relationship between producer price index and inflation (does it feed into inflation figures such as food prices?).

6.4.10. To some extend, oil prices feed into the transport inflation, a study is required to explore the relationship between the oil prices and transport inflation.

6.4.11. The effect of the fluctuation of the velocity on inflation has not been explored. A study of the fluctuation of the velocity of money could share some light on why the relationship between money supply and inflation is often weak or non-existent.

6.4.12. Banks issue credit extension to consumers to spend on goods and services. This is not a threat as long as the demand does not exceed supply (could lead to a rise in price levels), however the impact of this on inflation has not been explored in this study. It would be interesting to establish whether the effect of the credit extension on inflation is short term or long term.

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APPENDIX 1

1.1. Before inflation targeting regime (1970-1999)

Table 1.1 CPIX inflation versus Food, Transport, and House inflation

		CPIX	Food	Transport	House
Pearson Correlation	CPIX	1	0.40	0.43	0.34
	Food	0.40	1	-0.018	0.026
	Transport	0.43	-0.018	1	0.24
	House	0.34	0.026	0.24	1
Sig. (1-tailed)	CPIX	.	0.00	0.00	0.00
	Food	0.00	.	0.37	0.31
	Transport	0.00	0.37	.	0.00
	House	0.00	0.31	0.00	.

R	R^2	Adj R^2	Std. Error est
0.64	0.41	0.40	2.86

	Sum of Squares	df	Mean Square	F	Sig.
Regression	1985.06	3	661.69	81.10	0.00
Residual	2904.65	356	8.16		
Total	4889.71	359			

	Unstandardized Coefficients		Standardized Coeffi			95% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Tolerance	VIF
(Constant)	6.40	0.38		16.93	0.00	5.65	7.14		
Food	0.10	0.01	0.40	9.82	0.00	0.08	0.12	1.00	1.00
Transport	0.23	0.02	0.39	9.14	0.00	0.18	0.27	0.94	1.06
House	0.15	0.03	0.23	5.50	0.00	0.10	0.21	0.94	1.06

Table 1.2 CPIX inflation versus Brent Crude oil

Pearson Correlation	CPIX	1.00	-0.07
	Brent	-0.07	1.00
Sig. (1-tailed)	CPIX	.	0.10
	Brent	0.10	.

R	R^2	Adj R^2	Std. Error Est
0.07	0.00	0.00	3.23

	Sum of Squares	df	Mean Square	F	Sig.
Regression	16.67	1.00	16.67	1.60	0.21
Residual	3359.75	322.00	10.43		
Total	3376.43	323.00			

Table 1.3 CPIX inflation versus M3

		CPIX	M3
Pearson Correlation	CPIX	1.00	0.07
	M3	0.07	1.00
Sig. (1-tailed)	CPIX	.	0.11
	M3	0.11	.

R	R^2	Adj R^2	Std. Error Est
0.07	0.00	0.00	3.23

	Sum of Squares	df	Mean Square	F	Sig.
Regression	15.50	1.00	15.50	1.49	0.22
Residual	3360.92	322.00	10.44		
Total	3376.43	323.00			

	Unstandardized Coefficients		Standardized Coefficients			95% Confidence B		Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Lower 95	Upper 95	Tolerance	VIF
(Constant)	11.48	0.55		20.70	0.00	10.39	12.57		
M3	0.04	0.03	0.07	1.22	0.22	-0.03	0.11	1.00	1.00

Table 1.4 CPIX inflation versus Exchange rate

		CPIX	Ex
Pearson Correlation	CPIX	1.00	0.01
	Ex	0.01	1.00
Sig. (1-tailed)	CPIX	.	0.40
	Ex	0.40	.

R	R^2	Adj R^2	Std. Error Est
0.01	0.00	0.00	3.24

	Sum of Squares	df	Mean Square	F	Sig.
Regression	0.71	1.00	0.71	0.07	0.79
Residual	3375.72	322.00	10.48		
Total	3376.43	323.00			

	Unstandardized Coefficients		Standardized Coefficients			95% Confidence B		Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Lower 95	Upper 95	Tolerance	VIF
(Constant)	12.10	0.21		58.15	0.00	11.69	12.50		
Ex	0.00	0.01	0.01	0.26	0.79	-0.02	0.03	1.00	1.00

Table 1.5 CPIX inflation versus Current Account deficit as %GDP

		CPIX	Current Acc
Pearson Correlation	CPIX	1.00	-0.06
	Current Acc	-0.06	1.00
Sig. (1-tailed)	CPIX	.	0.27
	Current Acc	0.27	.

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.057	0.003	-0.005	66.88

	Sum of Squares	df	Mean Square	F	Sig.
Regression	1716.20	1.00	1716.20	0.38	0.54
Residual	527876.27	118.00	4473.53		
Total	529592.47	119.00			

	Unstandardized Coefficients		Std Coeff.		95% Confidence Interval for B		
	B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
(Constant)	17.13	6.15		2.78	0.01	4.94	29.31
Current Acc	-0.90	1.46	-0.06	-0.62	0.54	-3.80	1.99

1. Inflation targeting regime (2000-2006)

Table 2.1 CPIX inflation versus Food, Transport and housing inflation

		CPIX	Food	Transport	House
Pearson Correlation	CPIX	1	0.76	0.43	0.63
	Food	0.76	1.00	0.27	0.37
	Transport	0.43	0.27	1.00	0.32
	House	0.63	0.37	0.32	1.00
Sig. (1-tailed)	CPIX	.	0.00	0.00	0.00
	Food	0.00	.	0.01	0.00
	Transport	0.00	0.01	.	0.00
	House	0.00	0.00	0.00	.

R	R^2	Adj R^2	Std. Error est
0.86	0.74	0.73	1.140

	Sum of Squares	df	Mean Square	F	Sig.
Regression	262.085	3	87.36	67.22	0.000
Residual	93.571	72	1.30		
Total	355.656	75			

	Unstandardized Coeff		Standardized Coeff			95% Confidence		Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Tolerance	VIF
(Constant)	3.609	0.404		8.92	0.00	2.80	4.41		
Food	0.251	0.029	0.58	8.77	0.00	0.19	0.31	0.84	1.19
Transport	0.242	0.096	0.16	2.52	0.01	0.05	0.43	0.87	1.14
House	0.113	0.021	0.36	5.41	0.00	0.07	0.15	0.81	1.23

Table 2.2 CPIX inflation versus Brent Crude oil

Pearson Correlation	CPIX	1	-0.002
	Brent	-0.002	1
Sig. (1-tailed)	CPIX	.	0.49
	Brent	0.49	.

R	R^2	Adj R^2	Std. Error Est
0.00	0.00	-0.01	2.18

	Sum of Squares	df	Mean Square	F	Sig.
Regression	0.00	1.00	0.00	0.00	0.98
Residual	364.66	77.00	4.74		
Total	364.66	78.00			

	Unstandardized Coefficients		Standardized Coefficients			95% Confidence B		Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Lower 95	Upper 95	Tolerance	VIF
(Constant)	6.27	0.30		20.60	0.00	5.66	6.87		
Brent	0.00	0.01	0.00	-0.02	0.98	-0.01	0.01	1.00	1.00

Table 2.3 CPIX inflation versus money supply, M3

		CPIX	M3
Pearson Correlation	CPIX	1.00	-0.09
	M3	-0.09	1.00
Sig. (1-tailed)	CPIX	.	0.23
	M3	0.23	.

R	R^2	Adj R^2	Std. Error Est
0.09	0.01	-0.01	2.17

	Sum of Squares	df	Mean Square	F	Sig.
Regression	2.69	1.00	2.69	0.57	0.45
Residual	361.97	77.00	4.70		
Total	364.66	78			

	Unstandardized Coefficients		Standardized Coefficients			95% Confidence B		Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Lower 95	Upper 95	Tolerance	VIF
(Constant)	6.89	0.86		8.02	0.00	5.18	8.59		
M3	-0.04	0.05	-0.09	-0.76	0.45	-0.15	0.07	1.00	1.00

Table 2.4 CPIX inflation versus Exchange rate

		CPIX	Ex
Pearson Correlation	CPIX	1.00	0.32
	Ex	0.32	1.00
Sig. (1-tailed)	CPIX	.	0.00
	Ex	0.00	.

R	R^2	Adj R^2	Std. Error Est
0.32	0.10	0.09	2.08

	Sum of Squares	df	Mean Square	F	Sig.
Regression	37.17	1.00	37.17	8.62	0.00
Residual	323.39	75.00	4.31		
Total	360.56	76.00			

	Unstandardized Coefficients		Standardized Coefficients			95% Confidence B		Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Lower 95	Upper 95	Tolerance	VIF
(Constant)	6.20	0.24		25.97	0.00	5.73	6.68		
Ex	0.03	0.01	0.32	2.94	0.00	0.01	0.05	1.00	1.00

Table 2.5 CPIX inflation versus Current Account deficit as %GDP

		CPIX	Current Acc
Pearson Correlation	CPIX	1.00	0.80
	Current Acc	0.80	1.00
Sig. (1-tailed)	CPIX	.	0.00
	Current Acc	0.00	.

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.80	0.63	0.62	1.34

	Sum of Squares	df	Mean Square	F	Sig.
Regression	70.92	1.00	70.92	39.61	0.00
Residual	41.18	23.00	1.79		
Total	112.10	24.00			

	Unstandardized Coefficients		Standardized Coefficients			95% Confidence Interval for B	
	B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
(Constant)	7.60	0.33		22.84	0.00	6.91	8.29
Current Acc	0.78	0.12	0.80	6.29	0.00	0.53	1.04

2. Lagged period tests

2.1. Before inflation targeting regime (1970-1999)

Table 3.1.1 CPIX inflation versus Food inflation lag

		CPIX	Food-0	Food-3	Food-6	Food-9	Food-12	Food-15	Food-18	Food-21	Food-24
Pearson Correlation	CPIX	1.00	0.38	0.32	0.38	0.21	0.17	0.14	0.13	0.14	0.15
	Food-0	0.38	1.00	0.20	1.00	0.11	0.05	0.04	0.00	0.00	0.00
	Food-3	0.32	0.20	1.00	0.20	0.16	0.11	0.05	0.03	0.00	0.01
	Food-6	0.38	1.00	0.20	1.00	0.11	0.05	0.04	0.00	0.00	0.00
	Food-9	0.21	0.11	0.16	0.11	1.00	0.20	0.16	0.11	0.05	0.04
	Food-12	0.17	0.05	0.11	0.05	0.20	1.00	0.20	0.16	0.11	0.05
	Food-15	0.14	0.04	0.05	0.04	0.16	0.20	1.00	0.20	0.17	0.11
	Food-18	0.13	0.00	0.03	0.00	0.11	0.16	0.20	1.00	0.20	0.17
	Food-21	0.14	0.00	0.00	0.00	0.05	0.11	0.17	0.20	1.00	0.20
	Food-24	0.15	0.00	0.01	0.00	0.04	0.05	0.11	0.17	0.20	1.00
Sig. (1-tailed)	CPIX	.	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00
	Food-0	0.00	.	0.00	0.00	0.03	0.18	0.26	0.47	0.47	0.47
	Food-3	0.00	0.00	.	0.00	0.00	0.03	0.19	0.27	0.47	0.46
	Food-6	0.00	0.00	0.00	.	0.03	0.18	0.26	0.47	0.47	0.47
	Food-9	0.00	0.03	0.00	0.03	.	0.00	0.00	0.03	0.19	0.25
	Food-12	0.00	0.18	0.03	0.18	0.00	.	0.00	0.00	0.03	0.18
	Food-15	0.01	0.26	0.19	0.26	0.00	0.00	.	0.00	0.00	0.02
	Food-18	0.01	0.47	0.27	0.47	0.03	0.00	0.00	.	0.00	0.00
	Food-21	0.01	0.47	0.47	0.47	0.19	0.03	0.00	0.00	.	0.00
	Food-24	0.00	0.47	0.46	0.47	0.25	0.18	0.02	0.00	0.00	.

R	R^2	Adjusted R^2	Std. Error of the Estimate
0.52	0.27	0.25	2.89

	Sum of Squares	df	Mean Square	F	Sig.
Regression	1000.30	8.00	125.04	14.96	0.00
Residual	2724.51	326.00	8.36		
Total	3724.81	334.00			

	ndardized Coefficients		Standardized Coeffic	t	Sig.	fidence Interval for B		Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Lower Boun	Jpper Boun	Zero-order	Partial	Part	Tolerance	VIF
(Constant)	8.76	0.36		24.43	0.00	8.05	9.46					
Food-3	0.05	0.01	0.23	4.75	0.00	0.03	0.07	0.32	0.25	0.23	0.93	1.07
Food-6	0.07	0.01	0.31	6.45	0.00	0 05	0.09	0.38	0.34	0.31	0.95	1.05
Food-9	0.02	0.01	0.10	2.02	0.04	0.00	0.04	0.21	0 11	0.10	0.92	1.09
Food-12	0 02	0.01	0.07	1.48	0.14	-0.01	0.04	0.17	0.08	0.07	0.91	1.10
Food-15	0.01	0.01	0.05	0.94	0.35	-0.01	0.03	0.14	0.05	0.04	0.90	1.11
Food-18	0.01	0.01	0.05	1.05	0.29	-0.01	0.03	0 13	0.06	0.05	0.90	1.11
Food-21	0.02	0.01	0.08	1.68	0.09	0.00	0.04	0.14	0.09	0.08	0.91	1.09
Food-24	0.03	0.01	0.12	2.36	0.02	0.00	0.05	0.15	0 13	0.11	0.94	1 06

Table 3.1.2 CPIX inflation versus Transport inflation lag

	CPIX	Transport-0	Transport-3	Transport-6	Transport-9	Transport-12	Transport-15	Transport-18	Transport-21	Transport-24
CPIX	1.00	0.36	0.35	0.35	0.35	0.29	0.26	0.21	0.17	0.14
Transport-0	0.36	1.00	0.83	0.71	0.58	0.39	0.36	0.27	0.17	0.08
Transport-3	0.35	0.83	1.00	0.83	0.70	0.57	0.39	0.35	0.27	0.17
Transport-6	0.35	0.71	0.83	1.00	0.82	0.70	0.57	0.38	0.35	0.26
Transport-9	0.35	0.58	0.70	0.82	1.00	0.82	0.69	0.56	0.37	0.34
Transport-12	0.29	0.39	0.57	0.70	0.82	1.00	0.82	0.69	0.56	0.37
Transport-15	0.26	0.36	0.39	0.57	0.69	0.82	1.00	0.82	0.69	0.56
Transport-18	0.21	0.27	0.35	0.38	0.56	0.69	0.82	1.00	0.82	0.69
Transport-21	0.17	0.17	0.27	0.35	0.37	0.56	0.69	0.82	1.00	0.82
Transport-24	0.14	0.08	0.17	0.26	0.34	0.37	0.56	0.69	0.82	1
CPIX	.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Transport-0	0.00	.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
Transport-3	0.00	0.00	.	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Transport-6	0.00	0.00	0.00	.	0.00	0.00	0.00	0.00	0.00	0.00
Transport-9	0.00	0.00	0.00	0.00	.	0.00	0.00	0.00	0.00	0.00
Transport-12	0.00	0.00	0.00	0.00	0.00	.	0.00	0.00	0.00	0.00
Transport-15	0.00	0.00	0.00	0.00	0.00	0.00	.	0.00	0.00	0.00
Transport-18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.	0.00	0.00
Transport-21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.	0.00
Transport-24	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.

R	R^2	Adjusted R^2	Std. Error of the Estimate
0.41	0.17	0.14	3.10

	Sum of Squares	df	Mean Square	F	Sig.
Regression	622.53	9.00	69.17	7.21	0.00
Residual	3127.57	326.00	9.59		
Total	3750.10	335.00			

	Unstandardized Coefficients		Std Coeff	t	Sig.	95% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
(Constant)	9.15	0.42		21.67	0.00	8.32	9.98		
Transport-0	0.16	0.06	0.30	2.91	0.00	0.05	0.27	0.23	4.26
Transport-3	-0.03	0.07	-0.05	-0.36	0.72	-0.17	0.12	0.14	7.14
Transport-6	0.00	0.07	0.00	-0.02	0.98	-0.14	0.14	0.14	7.03
Transport-9	0.06	0.07	0.12	0.87	0.38	-0.08	0.21	0.14	6.98
Transport-12	0.08	0.08	0.14	0.99	0.32	-0.07	0.22	0.13	7.51
Transport-15	-0.03	0.07	-0.05	-0.40	0.69	-0.17	0.11	0.14	6.95
Transport-18	-0.02	0.07	-0 03	-0.24	0.81	-0.16	0.12	0.15	6.85
Transport-21	0.01	0.07	0.01	0.10	0.92	-0.13	0.15	0.15	6.88
Transport-24	0.04	0.06	0.08	0.74	0.46	-0.07	0.15	0.25	4.06

Table 3.1.3 CPIX inflation versus House inflation lag

		CPIX	House-0	House-6	House-12	House-18	House-24
Pearson Correlation	CPIX	1.00	0.42	0.41	0.46	0.50	0.46
	House-0	0.42	1.00	0.71	0.50	0.50	0.37
	House-6	0.41	0.71	1.00	0.80	0.59	0.45
	House-12	0.46	0.50	0.80	1.00	0.81	0.59
	House-18	0.50	0.50	0.59	0.81	1.00	0.84
	House-24	0.46	0.37	0.45	0.59	0.84	1.00
Sig. (1-tailed)	CPIX	.	0.00	0.00	0.00	0.00	0.00
	House-0	0.00	.	0.00	0.00	0.00	0.00
	House-6	0.00	0.00	.	0.00	0.00	0.00
	House-12	0.00	0.00	0.00	.	0.00	0.00
	House-18	0.00	0.00	0.00	0.00	.	0.00
	House-24	0.00	0.00	0.00	0.00	0.00	.

R	R^2	Adjusted R^2	Std. Error of the Estimate
0.55	0.30	0.29	2.81

	Sum of Square	df	Mean Squar	F	Sig.
Regression	1142.87	5.00	228.57	28.93	0.00
Residual	2607.23	330.00	7.90		
Total	3750.10	335.00			

	Unstandardized Coeffi		Standardizt		Sig.	95% Confidence Inter		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bou	Upper Bou	Tolerance	VIF
(Constant)	7.56	0.40		18.67	0.00	6.76	8.36		
House-0	0.15	0.04	0.25	3.43	0.00	0.06	0.23	0.41	2.46
House-6	-0.04	0.07	-0.06	-0.58	0.56	-0.17	0.09	0.20	5.13
House-12	0.13	0.08	0.19	1.63	0.10	-0.03	0.28	0.15	6.70
House-18	0.04	0.08	0.06	0.43	0.66	-0.13	0.20	0.13	7.78
House-24	0.16	0.06	0.24	2.70	0.01	0.04	0.28	0.27	3.72

Table 3.1.4 CPIX inflation versus Brent Crude Oil lag

		CPIX	Brent-0	Brent-1	Brent-2	Brent-3	Brent-4	Brent-5	Brent-6	Brent-7	Brent-8
Pearson Correlation	CPIX	1.00	-0.07	0.03	0.09	0.11	0.08	0.04	0.02	0.01	0.00
	Brent-0	-0.07	1.00	0.81	0.48	0.17	0.00	-0.02	-0.01	-0.01	-0.03
	Brent-1	0.03	0.81	1.00	0.81	0.48	0.18	0.01	-0.01	0.00	0.00
	Brent-2	0.09	0.48	0.81	1.00	0.81	0.48	0.19	0.02	-0.01	0.01
	Brent-3	0.11	0.17	0.48	0.81	1.00	0.81	0.49	0.19	0.02	-0.01
	Brent-4	0.08	0.00	0.18	0.48	0.81	1.00	0.81	0.49	0.19	0.01
	Brent-5	0.04	-0.02	0.01	0.19	0.49	0.81	1.00	0.81	0.48	0.18
	Brent-6	0.02	-0.01	-0.01	0.02	0.19	0.49	0.81	1.00	0.81	0.48
	Brent-7	0.01	-0.01	0.00	-0.01	0.02	0.19	0.48	0.81	1.00	0.81
	Brent-8	0.00	-0.03	0.00	0.01	-0.01	0.01	0.18	0.48	0.81	1.00
Sig. (1-tailed)	CPIX	.	0.10	0.31	0.06	0.02	0.07	0.24	0.39	0.44	0.48
	Brent-0	0.10	.	0.00	0.00	0.00	0.50	0.34	0.43	0.41	0.28
	Brent-1	0.31	0.00	.	0.00	0.00	0.00	0.42	0.40	0.50	0.49
	Brent-2	0.06	0.00	0.00	.	0.00	0.00	0.00	0.38	0.44	0.46
	Brent-3	0.02	0.00	0.00	0.00	.	0.00	0.00	0.00	0.38	0.45
	Brent-4	0.07	0.50	0.00	0.00	0.00	.	0.00	0.00	0.00	0.41
	Brent-5	0.24	0.34	0.42	0.00	0.00	0.00	.	0.00	0.00	0.00
	Brent-6	0.39	0.43	0.49	0.36	0.00	0.00	0.00	.	0.00	0.00
	Brent-7	0.44	0.41	0.50	0.44	0.38	0.00	0.00	0.00	.	0.00
	Brent-8	0.48	0.28	0.49	0.46	0.45	0.41	0.00	0.00	0.00	.

R	R^2	Adj R^2	Std. Error Est
0.17	0.03	0.00	3.23

	Sum of Squares	df	Mean Square	F	Sig.
Regression	96.67	9.00	10.74	1.03	0.42
Residual	3279.76	314.00	10.45		
Total	3376.43	323.00			

	Unstandardized Coefficients		Standardized Coefficients			95% Confidence B		Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Lower 95	Upper 95	Tolerance	VIF
(Constant)	12.12	0.20		61.33	0.00	11.73	12.51		
Brent-0	-0.01	0.01	-0.22	-2.00	0.05	-0.02	0.00	0.25	4.07
Brent-1	0.01	0.01	0.18	1.01	0.31	-0.01	0.03	0.10	10.07
Brent-2	0.00	0.01	-0.02	-0.11	0.91	-0.02	0.02	0.09	10.82
Brent-3	0.01	0.01	0.11	0.60	0.55	-0.01	0.02	0.09	10.82
Brent-4	0.00	0.01	-0.03	-0.17	0.87	-0.02	0.02	0.10	10.49
Brent-5	0.00	0.01	-0.01	-0.04	0.97	-0.02	0.02	0.09	10.77
Brent-6	0.00	0.01	0.00	0.00	1.00	-0.02	0.02	0.09	10.73
Brent-7	0.00	0.01	0.04	0.22	0.83	-0.02	0.02	0.10	9.98
Brent-8	0.00	0.01	-0.03	-0.29	0.77	-0.01	0.01	0.25	4.03

Table 3.1.5 CPIX inflation versus Exchange rate lag

		CPIX	Ex-0	Ex-1	Ex-2	Ex-3	Ex-4	Ex-5	Ex-6	Ex-7	Ex-8
Pearson Correlation	CPIX	1.00	0.01	0.11	0.14	0.16	0.16	0.13	0.13	0.11	0.10
	Ex-0	0.01	1.00	0.79	0.59	0.35	0.04	-0.09	-0.18	-0.21	-0.20
	Ex-1	0.11	0.79	1.00	0.80	0.59	0.36	0.05	-0.09	-0.18	-0.21
	Ex-2	0.14	0.59	0.80	1.00	0.80	0.60	0.36	0.06	-0.09	-0.18
	Ex-3	0.16	0.35	0.59	0.80	1.00	0.80	0.60	0.36	0.05	-0.09
	Ex-4	0.16	0.04	0.36	0.60	0.80	1.00	0.80	0.59	0.36	0.06
	Ex-5	0.13	-0.09	0.05	0.36	0.60	0.80	1.00	0.80	0.59	0.36
	Ex-6	0.13	-0.18	-0.09	0.06	0.36	0.59	0.80	1.00	0.81	0.60
	Ex-7	0.11	-0.21	-0.18	-0.09	0.05	0.36	0.59	0.81	1.00	0.81
	Ex-8	0.10	-0.20	-0.21	-0.18	-0.09	0.06	0.36	0.60	0.81	1.00
Sig. (1-tailed)	CPIX	.	0.40	0.02	0.01	0.00	0.00	0.01	0.01	0.03	0.03
	Ex-0	0.40	.	0.00	0.00	0.00	0.21	0.05	0.00	0.00	0.00
	Ex-1	0.02	0.00	.	0.00	0.00	0.00	0.21	0.05	0.00	0.00
	Ex-2	0.01	0.00	0.00	.	0.00	0.00	0.00	0.16	0.05	0.00
	Ex-3	0.00	0.00	0.00	0.00	.	0.00	0.00	0.00	0.16	0.06
	Ex-4	0.00	0.21	0.00	0.00	0.00	.	0.00	0.00	0.00	0.16
	Ex-5	0.01	0.05	0.21	0.00	0.00	0.00	.	0.00	0.00	0.00
	Ex-6	0.01	0.00	0.05	0.16	0.00	0.00	0.00	.	0.00	0.00
	Ex-7	0.03	0.00	0.00	0.05	0.16	0.00	0.00	0.00	.	0.00
	Ex-8	0.03	0.00	0.00	0.00	0.06	0.16	0.00	0.00	0.00	.

R	R^2	Adj R^2	Std. Error Est
0.23	0.05	0.02	3.19

	Sum of Squares	df	Mean Square	F	Sig.
Regression	172.70	9.00	19.19	1.88	0.05
Residual	3203.73	314.00	10.20		
Total	3376.43	323.00			

	Unstandardized Coefficients		Standardized Coefficients			95% Confidence B		Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Lower 95	Upper 95	Tolerance	VIF
(Constant)	11.63	0.25		45.87	0.00	11.13	12.13		
Ex-0	-0.04	0.02	-0.18	-1.61	0.11	-0.08	0.01	0.25	3.94
Ex-1	0.04	0.03	0.20	1.38	0.17	-0.02	0.10	0.15	6.89
Ex-2	0.01	0.03	0.04	0.31	0.76	-0.05	0.07	0.15	6.66
Ex-3	0.02	0.03	0.10	0.72	0.47	-0.04	0.08	0.15	6.81
Ex-4	-0.01	0.03	-0.03	-0.20	0.84	-0.07	0.06	0.11	8.85
Ex-5	-0.01	0.03	-0.03	-0.19	0.85	-0.07	0.05	0.14	7.09
Ex-6	0.01	0.03	0.04	0.27	0.79	-0.05	0.07	0.14	6.95
Ex-7	0.01	0.03	0.03	0.22	0.83	-0.06	0.07	0.14	7.27
Ex-8	0.02	0.02	0.09	0.79	0.43	-0.03	0.07	0.24	4.08

Table 3.1.6 CPIX inflation versus M3 lag

		CPIX	M-0	M-1	M-2	M-3	M-4	M-5	M-6	M-7	M-8
Pearson Correlation	CPIX	1.00	0.07	0.11	0.17	0.21	0.25	0.27	0.28	0.29	0.30
	M-0	0.07	1.00	0.87	0.68	0.45	0.21	0.07	-0.03	-0.10	-0.17
	M-1	0.11	0.87	1.00	0.87	0.67	0.44	0.20	0.07	-0.03	-0.10
	M-2	0.17	0.68	0.87	1.00	0.86	0.67	0.44	0.21	0.07	-0.02
	M-3	0.21	0.45	0.67	0.86	1.00	0.86	0.67	0.45	0.22	0.09
	M-4	0.25	0.21	0.44	0.67	0.86	1.00	0.87	0.68	0.46	0.24
	M-5	0.27	0.07	0.20	0.44	0.67	0.87	1.00	0.87	0.69	0.48
	M-6	0.28	-0.03	0.07	0.21	0.45	0.68	0.87	1.00	0.87	0.69
	M-7	0.29	-0.10	-0.03	0.07	0.22	0.46	0.69	0.87	1.00	0.88
	M-8	0.30	-0.17	-0.10	-0.02	0.09	0.24	0.48	0.69	0.88	1.00
Sig. (1-tailed)	CPIX	.	0.11	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	M-0	0.11	.	0.00	0.00	0.00	0.00	0.11	0.30	0.03	0.00
	M-1	0.02	0.00	.	0.00	0.00	0.00	0.00	0.11	0.31	0.04
	M-2	0.00	0.00	0.00	.	0.00	0.00	0.00	0.00	0.09	0.37
	M-3	0.00	0.00	0.00	0.00	.	0.00	0.00	0.00	0.00	0.05
	M-4	0.00	0.00	0.00	0.00	0.00	.	0.00	0.00	0.00	0.00
	M-5	0.00	0.11	0.00	0.00	0.00	0.00	.	0.00	0.00	0.00
	M-6	0.00	0.30	0.11	0.00	0.00	0.00	0.00	.	0.00	0.00
	M-7	0.00	0.03	0.31	0.09	0.00	0.00	0.00	0.00	.	0.00
	M-8	0.00	0.00	0.04	0.37	0.05	0.00	0.00	0.00	0.00	.

R	R^2	Adj R^2	Std. Error Est
0.36	0.13	0.11	3.06

	Sum of Squares	df	Mean Square	F	Sig.
Regression	442.54	9.00	49.17	5.26	0.00
Residual	2933.88	314.00	9.34		
Total	3376.43	323.00			

	Unstandardized Coefficients		Standardized Coefficients			95% Confidence B		Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Lower 95	Upper 95	Tolerance	VIF
(Constant)	7.13	0.84		8.51	0.00	5.48	8.77		
M-0	0.08	0.08	0.13	1.06	0.29	-0.07	0.23	0.17	5.75
M-1	-0.07	0.11	-0.11	-0.63	0.53	-0.29	0.15	0.08	11.92
M-2	0.05	0.11	0.08	0.43	0.67	-0.17	0.26	0.09	11.68
M-3	-0.03	0.11	-0.04	-0.23	0.82	-0.24	0.19	0.09	11.53
M-4	0.15	0.12	0.25	1.32	0.19	-0.08	0.38	0.08	13.01
M-5	-0.02	0.11	-0.03	-0.17	0.86	-0.24	0.20	0.08	12.22
M-6	-0.01	0.11	-0.01	-0.07	0.95	-0.23	0.21	0.08	12.55
M-7	-0.06	0.11	-0.09	-0.49	0.62	-0.28	0.17	0.08	12.87
M-8	0.22	0.08	0.36	2.77	0.01	0.06	0.37	0.17	6.06

Table 3.1.7 CPIX inflation vs Current Account Deficit to %GDP

		CPIX	Cur Acc0	Cur Acc1	Cur Acc2	Cur Acc3	Cur Acc4	Cur Acc5	Cur Acc6	Cur Acc7	Cur Acc8
Pearson Correlation	CPIX	1.00	-0.09	-0.05	-0.15	-0.18	-0.12	-0.12	-0.12	-0.13	-0.10
	Cur Acc0	-0.09	1.00	0.74	0.65	0.54	0.45	0.24	0.14	0.10	0.05
	Cur Acc1	-0.05	0.74	1.00	0.75	0.66	0.55	0.46	0.25	0.16	0.11
	Cur Acc2	-0.15	0.65	0.75	1.00	0.75	0.67	0.56	0.47	0.27	0.17
	Cur Acc3	-0.18	0.54	0.66	0.75	1.00	0.76	0.68	0.58	0.48	0.28
	Cur Acc4	-0.12	0.45	0.55	0.67	0.76	1.00	0.78	0.69	0.58	0.49
	Cur Acc5	-0.12	0.24	0.46	0.56	0.68	0.78	1.00	0.78	0.70	0.59
	Cur Acc6	-0.12	0.14	0.25	0.47	0.58	0.69	0.78	1.00	0.79	0.70
	Cur Acc7	-0.13	0.10	0.16	0.27	0.48	0.58	0.70	0.79	1.00	0.79
	Current Acc8	-0.10	0.05	0.11	0.17	0.28	0.49	0.59	0.70	0.79	1.00
Sig. (1-tailed)	CPIX	.	0.18	0.29	0.06	0.03	0.10	0.10	0.10	0.09	0.15
	Cur Acc0	0.18	.	0.00	0.00	0.00	0.00	0.01	0.07	0.15	0.28
	Cur Acc1	0.29	0.00	.	0.00	0.00	0.00	0.00	0.00	0.05	0.12
	Cur Acc2	0.06	0.00	0.00	.	0.00	0.00	0.00	0.00	0.00	0.04
	Cur Acc3	0.03	0.00	0.00	0.00	.	0.00	0.00	0.00	0.00	0.00
	Cur Acc4	0.10	0.00	0.00	0.00	0.00	.	0.00	0.00	0.00	0.00
	Cur Acc5	0.10	0.01	0.00	0.00	0.00	0.00	.	0.00	0.00	0.00
	Cur Acc6	0.10	0.07	0.00	0.00	0.00	0.00	0.00	.	0.00	0.00
	Cur Acc7	0.09	0.15	0.05	0.00	0.00	0.00	0.00	0.00	.	0.00
	Current Acc8	0.15	0.28	0.12	0.04	0.00	0.00	0.00	0.00	0.00	.

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.23	0.05	-0.03	70.05

	Sum of Squares	df	Mean Square	F	Sig.
Regression	27820.76	9.00	3091.20	0.63	0.77
Residual	500480.65	102.00	4906.67		
Total	528301.41	111.00			

	Unstandardized Coefficients		Standardized Coefficients			95% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Tolerance	VIF
(Constant)	17.59	6.66		2.64	0.01	4.37	30.80		
Current Acc0	-1.01	2.84	-0.06	-0.35	0.72	-6.64	4.63	0.37	2.73
Current Acc1	3.78	3.25	0.21	1.16	0.25	-2.66	10.23	0.28	3.62
Current Acc2	-2.83	3.33	-0.16	-0.85	0.40	-9.44	3.77	0.26	3.91
Current Acc3	-3.96	3.31	-0.23	-1.20	0.23	-10.53	2.60	0.25	3.97
Current Acc4	1.34	3.17	0.08	0.42	0.67	-4.95	7.64	0.26	3.89
Current Acc5	-0.14	3.31	-0.01	-0.04	0.97	-6.71	6.42	0.23	4.41
Current Acc6	1.37	3.34	0.09	0.41	0.68	-5.25	8.00	0.22	4.62
Current Acc7	-0.49	3.24	-0.03	-0.15	0.88	-6.92	5.95	0.23	4.43
Current Acc8	-1.53	2.77	-0.10	-0.55	0.58	-7.03	3.97	0.31	3.27

2.2. Inflation targeting regime (2000-2006)

Table 3.2.1 CPIX inflation versus Food inflation lag

		CPIX	Food-0	Food-3	Food-6	Food-9	Food-12	Food-15	Food-18	Food-21	Food-24
Pearson Correlation	CPIX	1.00	0.74	0.87	0.80	0.60	0.28	0.06	-0.04	-0.09	-0.06
	Food-0	0.74	1.00	0.74	0.40	0.10	-0.14	-0.18	-0.09	-0.03	-0.01
	Food-3	0.87	0.74	1.00	0.74	0.40	0.11	-0.13	-0.17	-0.08	-0.02
	Food-6	0.80	0.40	0.74	1.00	0.74	0.40	0.10	-0.14	-0.18	-0.08
	Food-9	0.60	0.10	0.40	0.74	1.00	0.74	0.39	0.09	-0.16	-0.20
	Food-12	0.28	-0.14	0.11	0.40	0.74	1.00	0.73	0.38	0.07	-0.19
	Food-15	0.06	-0.18	-0.13	0.10	0.39	0.73	1.00	0.72	0.36	0.03
	Food-18	-0.04	-0.09	-0.17	-0.14	0.09	0.38	0.72	1.00	0.71	0.33
	Food-21	-0.09	-0.03	-0.08	-0.18	-0.16	0.07	0.36	0.71	1.00	0.70
	Food-24	-0.06	-0.01	-0.02	-0.08	-0.20	-0.19	0.03	0.33	0.70	1.00
Sig. (1-tailed)	CPIX	.	0.00	0.00	0.00	0.00	0.01	0.30	0.36	0.22	0.31
	Food-0	0.00	.	0.00	0.00	0.19	0.11	0.05	0.21	0.39	0.46
	Food-3	0.00	0.00	.	0.00	0.00	0.18	0.12	0.06	0.24	0.43
	Food-6	0.00	0.00	0.00	.	0.00	0.00	0.18	0.12	0.06	0.23
	Food-9	0.00	0.19	0.00	0.00	.	0.00	0.00	0.22	0.08	0.04
	Food-12	0.01	0.11	0.18	0.00	0.00	.	0.00	0.00	0.28	0.05
	Food-15	0.30	0.05	0.12	0.18	0.00	0.00	.	0.00	0.00	0.39
	Food-18	0.36	0.21	0.06	0.12	0.22	0.00	0.00	.	0.00	0.00
	Food-21	0.22	0.39	0.24	0.06	0.08	0.28	0.00	0.00	.	0.00
	Food-24	0.31	0.46	0.43	0.23	0.04	0.05	0.39	0.00	0.00	.

R	R^2	Adjusted R^2	Std. Error of the Estimate
0.95	0.90	0.89	0.73

	Sum of Squares	df	Mean Square	F	Sig.
Regression	327.99	9.00	36.44	68.57	0.00
Residual	36.67	69.00	0.53		
Total	364.66	78.00			

	ardized Coefficients		Standardized Coeffic	t	Sig.	95% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
(Constant)	2.99	0.23		13.04	0.00	2.54	3.45		
Food-0	0.17	0.03	0.39	6.22	0.00	0.12	0.23	0.37	2.70
Food-3	0.15	0.04	0.34	3.98	0.00	0.07	0.22	0.20	4.97
Food-6	0.09	0.04	0.22	2.53	0.01	0.02	0.17	0.20	5.05
Food-9	0.10	0.04	0.23	2.77	0.01	0.03	0.18	0.20	4.92
Food-12	0.00	0.04	0.01	0.11	0.91	-0.07	0.08	0.20	5.08
Food-15	0.01	0.04	0.02	0.29	0.77	-0.06	0.08	0.21	4.71
Food-18	0.03	0.04	0.07	0.83	0.41	-0.04	0.11	0.22	4.61
Food-21	-0.03	0.04	-0.06	-0.72	0.47	-0.10	0.05	0.23	4.37
Food-24	0.02	0.03	0.04	0.62	0.54	-0.04	0.07	0.41	2.44

Table 3.2.2 CPIX inflation versus Transport inflation lag

	CPIX	Transport-0	Transport-3	Transport-6	Transport-9	Transport-12	Transport-15	Transport-18	Transport-21	Transport-24
CPIX	1.00	0.43	0.29	0.11	-0.02	-0.23	-0.37	-0.40	-0.48	-0.52
Transport-0	0.43	1.00	0.74	0.57	0.44	0.28	0.34	0.15	-0.10	-0.26
Transport-3	0.29	0.74	1.00	0.73	0.56	0.44	0.31	0.39	0.19	-0.10
Transport-6	0.11	0.57	0.73	1.00	0.72	0.55	0.47	0.39	0.44	0.19
Transport-9	-0.02	0.44	0.56	0.72	1.00	0.71	0.59	0.56	0.45	0.45
Transport-12	-0.23	0.28	0.44	0.55	0.71	1.00	0.75	0.66	0.60	0.45
Transport-15	-0.37	0.34	0.31	0.47	0.59	0.75	1.00	0.79	0.68	0.59
Transport-18	-0.40	0.15	0.39	0.39	0.56	0.66	0.79	1.00	0.79	0.66
Transport-21	-0.48	-0.10	0.19	0.44	0.45	0.60	0.68	0.79	1.00	0.78
Transport-24	-0.52	-0.26	-0.10	0.19	0.45	0.45	0.59	0.66	0.78	1.00
CPIX	.	0.00	0.01	0.18	0.43	0.02	0.00	0.00	0.00	0.00
Transport-0	0.00	.	0.00	0.00	0.00	0.01	0.00	0.10	0.20	0.01
Transport-3	0.01	0.00	.	0.00	0.00	0.00	0.00	0.00	0.05	0.20
Transport-6	0.18	0.00	0.00	.	0.00	0.00	0.00	0.00	0.00	0.05
Transport-9	0.43	0.00	0.00	0.00	.	0.00	0.00	0.00	0.00	0.00
Transport-12	0.02	0.01	0.00	0.00	0.00	.	0.00	0.00	0.00	0.00
Transport-15	0.00	0.00	0.00	0.00	0.00	0.00	.	0.00	0.00	0.00
Transport-18	0.00	0.10	0.00	0.00	0.00	0.00	0.00	.	0.00	0.00
Transport-21	0.00	0.20	0.05	0.00	0.00	0.00	0.00	0.00	.	0.00
Transport-24	0.00	0.01	0.20	0.05	0.00	0.00	0.00	0.00	0.00	.

R	R^2	Adjusted R^2	Std. Error of the Estimate
0.71	0.50	0.43	1.64

	Sum of Squares	df	Mean Square	F	Sig.
Regression	178.34	9.00	19.82	7.38	0.00
Residual	177.31	66.00	2.69		
Total	355.66	75.00			

	Unstandardized Coeffi		Standardiz t		Sig.	95% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
(Constant)	6.18	0.89		6.96	0.00	4.40	7.95		
Transport-0	0.77	0.28	0.52	2.79	0.01	0.22	1.32	0.22	4.60
Transport-3	0.05	0.31	0.03	0.16	0.87	-0.57	0.67	0.17	5.72
Transport-6	-0.01	0.30	-0.01	-0.03	0.97	-0.61	0.59	0.20	5.07
Transport-9	0.19	0.29	0.12	0.65	0.52	-0.39	0.77	0.22	4.60
Transport-12	0.01	0.26	0.01	0.05	0.96	-0.51	0.53	0.27	3.64
Transport-15	-0.72	0.31	-0.49	-2.31	0.02	-1.34	-0.10	0.17	5.98
Transport-18	-0.16	0.30	-0.12	-0.54	0.59	-0.77	0.44	0.16	6.41
Transport-21	-0.03	0.31	-0.02	-0.09	0.92	-0.65	0.59	0.14	6.95
Transport-24	-0.08	0.26	-0.06	-0.30	0.76	-0.59	0.44	0.20	4.92

Table 3.2.3 CPIX inflation versus House inflation lag

		CPIX	House-0	House-6	House-12	House-18	House-24
	CPIX	1.00	0.63	0.12	-0.04	0.16	0.00
	House-0	0.63	1.00	0.42	-0.51	-0.36	0.17
	House-6	0.12	0.42	1.00	0.25	-0.58	-0.34
	House-12	-0.04	-0.51	0.25	1.00	0.33	-0.58
	House-18	0.16	-0.36	-0.58	0.33	1.00	0.30
earson Correlatio	House-24	0.00	0.17	-0.34	-0.58	0.30	1.00
	CPIX	.	0.00	0.15	0.37	0.08	0.49
	House-0	0.00	.	0.00	0.00	0.00	0.07
	House-6	0.15	0.00	.	0.02	0.00	0.00
	House-12	0.37	0.00	0.02	.	0.00	0.00
	House-18	0.08	0.00	0.00	0.00	.	0.00
Sig. (1-tailed)	House-24	0.49	0.07	0.00	0.00	0.00	.

R	R^2	Adjusted R^2	Std. Error of the Estimate
0.83	0.69	0.67	1.25

	Sum of Squares	df	Mean Square	F	Sig.
Regression	245.74	5.00	49.15	31.30	0.00
Residual	109.91	70.00	1.57		
Total	355.66	75.00			

	Unstandardized Coefficients		Standardized Coeffi			95% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Tolerance	VIF
(Constant)	5.33	0.22		24.24	0.00	4.89	5.77		
House-0	0.36	0.04	1.14	9.25	0.00	0.28	0.43	0.29	3.46
House-6	-0.11	0.05	-0.38	-2.32	0.02	-0.20	-0.02	0.16	6.16
House-12	0.13	0.06	0.49	2.39	0.02	0.02	0.24	0.10	9.56
House-18	0.06	0.04	0.23	1.40	0.17	-0.02	0.14	0.16	6.16
House-24	-0.03	0.03	-0.12	-0.96	0.34	-0.10	0.03	0.28	3.51

Table 3.2.4 CPIX inflation versus Exchange rate lag

		CPIX	Ex-0	Ex-1	Ex-2	Ex-3	Ex-4	Ex-5	Ex-6	Ex-7	Ex-8
Pearson Correlatio	CPIX	1.00	0.32	0.57	0.74	0.82	0.79	0.69	0.60	0.53	0.43
	Ex-0	0.32	1.00	0.84	0.64	0.42	0.19	0.08	-0.01	-0.09	-0.16
	Ex-1	0.57	0.84	1.00	0.84	0.64	0.42	0.19	0.08	-0.01	-0.09
	Ex-2	0.74	0.64	0.84	1.00	0.82	0.62	0.41	0.18	0.08	0.00
	Ex-3	0.82	0.42	0.64	0.82	1.00	0.83	0.63	0.44	0.19	0.08
	Ex-4	0.79	0.19	0.42	0.62	0.83	1.00	0.84	0.66	0.45	0.20
	Ex-5	0.69	0.08	0.19	0.41	0.63	0.84	1.00	0.84	0.66	0.44
	Ex-6	0.60	-0.01	0.08	0.18	0.44	0.66	0.84	1.00	0.82	0.63
	Ex-7	0.53	-0.09	-0.01	0.08	0.19	0.45	0.66	0.82	1.00	0.82
	Ex-8	0.43	-0.16	-0.09	0.00	0.08	0.20	0.44	0.63	0.82	1.00
Sig. (1-tailed)	CPIX	.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Ex-0	0.00	.	0.00	0.00	0.00	0.05	0.25	0.48	0.23	0.08
	Ex-1	0.00	0.00	.	0.00	0.00	0.00	0.05	0.24	0.47	0.21
	Ex-2	0.00	0.00	0.00	.	0.00	0.00	0.00	0.06	0.24	0.49
	Ex-3	0.00	0.00	0.00	0.00	.	0.00	0.00	0.00	0.05	0.24
	Ex-4	0.00	0.05	0.00	0.00	0.00	.	0.00	0.00	0.00	0.04
	Ex-5	0.00	0.25	0.05	0.00	0.00	0.00	.	0.00	0.00	0.00
	Ex-6	0.00	0.48	0.24	0.06	0.00	0.00	0.00	.	0.00	0.00
	Ex-7	0.00	0.23	0.47	0.24	0.05	0.00	0.00	0.00	.	0.00
	Ex-8	0.00	0.08	0.21	0.49	0.24	0.04	0.00	0.00	0.00	.

R	R^2	Adj R^2	Std. Error Est
0.93	0.87	0.85	0.85

	Sum of Squares	df	Mean Square	F	Sig.
Regression	312.39	9.00	34.71	48.27	0.00
Residual	48.17	67.00	0.72		
Total	360.56	76.00			

	Unstandardized Coefficients		Standardized Coefficients			95% Confidence B		Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Lower 95	Upper 95	Tolerance	VIF
(Constant)	5.67	0.11		52.90	0.00	5.46	5.89		
Ex-0	-0.01	0.01	-0.15	-1.59	0.12	-0.03	0.00	0.23	4.29
Ex-1	0.02	0.01	0.20	1.60	0.11	-0.01	0.05	0.12	8.17
Ex-2	0.02	0.01	0.23	1.84	0.07	0.00	0.05	0.12	8.01
Ex-3	0.04	0.01	0.42	3.26	0.00	0.02	0.07	0.12	8.33
Ex-4	0.01	0.01	0.14	1.04	0.30	-0.01	0.04	0.11	9.04
Ex-5	0.00	0.01	-0.03	-0.27	0.79	-0.03	0.02	0.13	7.79
Ex-6	0.00	0.01	-0.03	-0.27	0.79	-0.03	0.02	0.13	7.75
Ex-7	0.02	0.01	0.23	1.88	0.06	0.00	0.05	0.13	7.65
Ex-8	0.02	0.01	0.21	2.34	0.02	0.00	0.04	0.25	4.05

Table 3.2.5 CPIX inflation versus Brent Crude oil lag

		CPIX	Brent-0	Brent-1	Brent-2	Brent-3	Brent-4	Brent-5	Brent-6	Brent-7	Brent-8
Pearson Correlation	CPIX	1.00	0.00	-0.03	-0.08	-0.21	-0.29	-0.30	-0.29	-0.18	0.00
	Brent-0	0.00	1.00	0.70	0.46	0.11	-0.34	-0.50	-0.57	-0.53	-0.45
	Brent-1	-0.03	0.70	1.00	0.69	0.41	0.02	-0.41	-0.54	-0.60	-0.56
	Brent-2	-0.08	0.46	0.69	1.00	0.68	0.36	-0.02	-0.43	-0.56	-0.61
	Brent-3	-0.21	0.11	0.41	0.68	1.00	0.68	0.36	-0.01	-0.41	-0.55
	Brent-4	-0.29	-0.34	0.02	0.36	0.68	1.00	0.70	0.40	0.03	-0.35
	Brent-5	-0.30	-0.50	-0.41	-0.02	0.36	0.70	1.00	0.72	0.43	0.08
	Brent-6	-0.29	-0.57	-0.54	-0.43	-0.01	0.40	0.72	1.00	0.73	0.45
	Brent-7	-0.18	-0.53	-0.60	-0.56	-0.41	0.03	0.43	0.73	1.00	0.75
	Brent-8	0.00	-0.45	-0.56	-0.61	-0.55	-0.35	0.08	0.45	0.75	1.00
Sig. (1-tailed)	CPIX	.	0.49	0.38	0.24	0.03	0.01	0.00	0.00	0.06	0.49
	Brent-0	0.49	.	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.00
	Brent-1	0.38	0.00	.	0.00	0.00	0.43	0.00	0.00	0.00	0.00
	Brent-2	0.24	0.00	0.00	.	0.00	0.00	0.43	0.00	0.00	0.00
	Brent-3	0.03	0.16	0.00	0.00	.	0.00	0.00	0.47	0.00	0.00
	Brent-4	0.01	0.00	0.43	0.00	0.00	.	0.00	0.00	0.40	0.00
	Brent-5	0.00	0.00	0.00	0.43	0.00	0.00	.	0.00	0.00	0.24
	Brent-6	0.00	0.00	0.00	0.00	0.47	0.00	0.00	.	0.00	0.00
	Brent-7	0.06	0.00	0.00	0.00	0.00	0.40	0.00	0.00	.	0.00
	Brent-8	0.49	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	.

R	R^2	Adj R^2	Std. Error Est
0.44	0.19	0.09	2.07

	Sum of Squares	df	Mean Square	F	Sig.
Regression	70.17	9.00	7.80	1.83	0.08
Residual	294.50	69.00	4.27		
Total	364.66	78.00			

Table 3.2.6 CPIX inflation versus money supply, M3 lag

		CPIX	M-0	M-1	M-2	M-3	M-4	M-5	M-6	M-7	M-8
Pearson Correlation	CPIX	1.00	-0.09	0.06	0.17	0.16	0.01	-0.14	-0.35	-0.51	-0.56
	M-0	-0.09	1.00	0.77	0.63	0.49	0.23	0.12	-0.06	-0.23	-0.36
	M-1	0.06	0.77	1.00	0.76	0.63	0.48	0.18	0.11	-0.10	-0.29
	M-2	0.17	0.63	0.76	1.00	0.77	0.66	0.44	0.17	0.06	-0.20
	M-3	0.16	0.49	0.63	0.77	1.00	0.78	0.62	0.41	0.11	-0.01
	M-4	0.01	0.23	0.48	0.66	0.78	1.00	0.76	0.60	0.36	0.06
	M-5	-0.14	0.12	0.18	0.44	0.62	0.76	1.00	0.76	0.59	0.34
	M-6	-0.35	-0.06	0.11	0.17	0.41	0.60	0.76	1.00	0.76	0.60
	M-7	-0.51	-0.23	-0.10	0.06	0.11	0.36	0.59	0.76	1.00	0.77
	M-8	-0.56	-0.36	-0.29	-0.20	-0.01	0.06	0.34	0.60	0.77	1.00
Sig. (1-tailed)	CPIX	.	0.23	0.30	0.07	0.08	0.46	0.11	0.00	0.00	0.00
	M-0	0.23	.	0.00	0.00	0.00	0.02	0.15	0.29	0.02	0.00
	M-1	0.30	0.00	.	0.00	0.00	0.00	0.05	0.18	0.18	0.00
	M-2	0.07	0.00	0.00	.	0.00	0.00	0.00	0.07	0.30	0.04
	M-3	0.08	0.00	0.00	0.00	.	0.00	0.00	0.00	0.16	0.46
	M-4	0.46	0.02	0.00	0.00	0.00	.	0.00	0.00	0.00	0.30
	M-5	0.11	0.15	0.05	0.00	0.00	0.00	.	0.00	0.00	0.00
	M-6	0.00	0.29	0.18	0.07	0.00	0.00	0.00	.	0.00	0.00
	M-7	0.00	0.02	0.18	0.30	0.16	0.00	0.00	0.00	.	0.00
	M-8	0.00	0.00	0.00	0.04	0.46	0.30	0.00	0.00	0.00	.

R	R^2	Adj R2	Std. Error Est
0.80	0.63	0.59	1.39

	Sum of Squares	df	Mean Square	F	Sig.
Regression	231.46	9.00	25.72	13.32	0.00
Residual	133.20	69.00	1.93		
Total	364.66	78.00			

	Unstandardized Coefficients		Standardized Coefficients			95% Confidence B		Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Lower 95	Upper 95	Tolerance	VIF
(Constant)	12.99	0.98		13.32	0.00	11.05	14.94		
M-0	-0.39	0.06	-0.81	-6.04	0.00	-0.52	-0.26	0.30	3.39
M-1	0.04	0.08	0.09	0.53	0.60	-0.12	0.20	0.20	4.98
M-2	0.20	0.09	0.37	2.29	0.03	0.03	0.36	0.20	4.94
M-3	0.26	0.09	0.51	3.02	0.00	0.09	0.44	0.19	5.36
M-4	-0.26	0.09	-0.50	-2.90	0.01	-0.43	-0.08	0.18	5.61
M-5	0.08	0.09	0.15	0.87	0.39	-0.10	0.25	0.19	5.29
M-6	0.03	0.09	0.06	0.36	0.72	-0.14	0.21	0.19	5.28
M-7	-0.13	0.09	-0.25	-1.47	0.15	-0.30	0.05	0.19	5.37
M-8	-0.31	0.07	-0.61	-4.33	0.00	-0.45	-0.17	0.27	3.75

Table 3.2.7 CPIX inflation vs Current Account Deficit as %GDP

		CPIX	Cur Acc0	Cur Acc1	Cur Acc2	Cur Acc3	Cur Acc4	Cur Acc5	Cur Acc6	Cur Acc7	Cur Acc8
Pearson Correlation	CPIX	1.00	0.80	0.81	0.76	0.68	0.56	0.45	0.31	0.22	0.08
	Cur Acc0	0.80	1.00	0.84	0.81	0.78	0.76	0.57	0.38	0.40	0.08
	Cur Acc1	0.81	0.84	1.00	0.82	0.77	0.72	0.69	0.44	0.26	0.24
	Cur Acc2	0.76	0.81	0.82	1.00	0.80	0.73	0.64	0.60	0.36	0.13
	Cur Acc3	0.68	0.78	0.77	0.80	1.00	0.75	0.66	0.55	0.54	0.24
	Cur Acc4	0.56	0.76	0.72	0.73	0.75	1.00	0.60	0.49	0.46	0.45
	Cur Acc5	0.45	0.57	0.69	0.64	0.66	0.60	1.00	0.54	0.40	0.32
	Cur Acc6	0.31	0.38	0.44	0.60	0.55	0.49	0.54	1.00	0.45	0.23
	Cur Acc7	0.22	0.40	0.26	0.36	0.54	0.46	0.40	0.45	1.00	0.34
	Current Acc8	0.08	0.08	0.24	0.13	0.24	0.45	0.32	0.23	0.34	1.00
Sig. (1-tailed)	CPIX	.	0.00	0.00	0.00	0.00	0.00	0.01	0.06	0.15	0.35
	Cur Acc0	0.00	.	0.00	0.00	0.00	0.00	0.00	0.03	0.02	0.35
	Cur Acc1	0.00	0.00	.	0.00	0.00	0.00	0.00	0.01	0.11	0.12
	Cur Acc2	0.00	0.00	0.00	.	0.00	0.00	0.00	0.00	0.04	0.28
	Cur Acc3	0.00	0.00	0.00	0.00	.	0.00	0.00	0.00	0.00	0.13
	Cur Acc4	0.00	0.00	0.00	0.00	0.00	.	0.00	0.01	0.01	0.01
	Cur Acc5	0.01	0.00	0.00	0.00	0.00	0.00	.	0.00	0.02	0.06
	Cur Acc6	0.06	0.03	0.01	0.00	0.00	0.01	0.00	.	0.01	0.13
	Cur Acc7	0.15	0.02	0.11	0.04	0.00	0.01	0.02	0.01	.	0.05
	Cur Acc8	0.35	0.35	0.12	0.28	0.13	0.01	0.06	0.13	0.05	.

R	R Square	Adjusted R Square	Std. Error of the Estimate	
0.88	0.77	0.63	1.31	

	Sum of Squares	df	Mean Square	F	Sig.
Regression	86.22	9.00	9.58	5.55	0.00
Residual	25.88	15.00	1.73		
Total	112.10	24.00			

	Unstandardized Coefficients		Standardized Coefficients			95% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Tolerance	VIF
(Constant)	7.78	0.37		21.29	0.00	7.01	8.56		
Current Acc0	0.41	0.32	0.41	1.26	0.23	-0.28	1.10	0.14	7.01
Current Acc1	0.51	0.36	0.46	1.42	0.18	-0.26	1.27	0.15	6.82
Current Acc2	0.42	0.34	0.36	1.25	0.23	-0.30	1.14	0.19	5.38
Current Acc3	0.14	0.33	0.11	0.44	0.67	-0.56	0.85	0.22	4.49
Current Acc4	-0.39	0.33	-0.31	-1.18	0.26	-1.10	0.32	0.22	4.45
Current Acc5	-0.28	0.26	-0.21	-1.07	0.30	-0.83	0.27	0.42	2.39
Current Acc6	-0.10	0.26	-0.07	-0.39	0.70	-0.65	0.45	0.49	2.06
Current Acc7	-0.05	0.28	-0.03	-0.19	0.85	-0.65	0.54	0.48	2.10
Current Acc8	0.17	0.31	0.10	0.55	0.59	-0.50	0.84	0.48	2.07

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UNIVERSITY OF
KWAZULU-NATAL

11 DECEMBER 2006

MR. MF MABELANE (203512281)
GRADUATE SCHOOL OF BUSINESS

Dear Mr. Mabelane

ETHICAL CLEARANCE APPROVAL NUMBER: HSS/06846A

I wish to confirm that ethical clearance has been granted for the following project:

"An evaluation of inflation targeting in South Africa"

Yours faithfully

.....
MS. PHUMELELE XIMBA
RESEARCH OFFICE

cc. Faculty Office (Christel Haddon)
cc. Supervisor (Prof. T Contogiannis)