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By email 4 October 2022

Hon. Ipumbu Shiimi Minister of Finance Ministry of Finance Head office Private Bag 13295 Windhoek Namibia

Through :Mr. Titus Ndove

Executive Director: Ministry of Finance

Cc :Mr. Justus Mwafongwe

Head: Policy Unit- Ministry of Finance

Attention :Mr. Alex Shimuafeni

CEO: Namibia Statistics Agency

Dear Hon. Minister Ipumbu Shiimi & Mr. Alex Shimuafeni,

RE: INFLATION BEHAVIOUR IN NAMIBIA: A RELOOK INTO THE CURRENT NCPI BASKET WEIGHTINGS

The above subject matter refers.

Namibia Savings and Investment Association ("NaSIA") is incorporated as a not-for profit company and represents the interests of its members, which are financial institutions such as unit trust companies, investment managers, and long-term insurers. NaSIA's key strategic objectives and mandate is to foster relationships with key stakeholders and to remain a trusted partner to these stakeholders in the financial services industry. NaSIA has been tasked with ensuring that, as a collective, the industry remains relevant and sustainable.

As industry representatives, we are writing to you, Honourable Minister, in your capacity as the policy maker, and to you Mr. Shimuafeni, in your capacity as CEO of the Namibia Statistics Agency (NSA), to outline and bring to your attention the need to relook into the current NCPI basket weightings and the reporting thereof.

The publication (Annexure "A") is based on specific matters arising from the NaSIA Economic Research, Savings and Policy Development Committee meeting, and ties in with NaSIA's strategic objective of partnering with and being a trusted advisor to government.

This paper aims to:

- Provide a historical overview of inflation in Namibia and South Africa;
- Investigate the relationship between the Namibian and South African inflation;

- Establish whether there is a deviation in the relationship between the Namibian and South; African inflation; and
- Make recommendations for consideration by the Namibia Statistics Agency (NSA).

We look forward to your favourable response in this regard.

Yours sincerely,

JASON HAILONGA

CEO: NaSIA



INFLATION BEHAVIOUR IN NAMIBIA: A RELOOK INTO THE CURRENT NCPI BASKET WEIGHTINGS

This publication is based on specific matters arising from the NaSIA Economic Research, Savings and Policy Development committee meeting, which was held as a virtual meeting on Thursday, 20 July 2021, and ties in with NaSIA's strategic objective of partnering with and being a trusted advisor to government.

INTRODUCTION

Inflation is the rate of increase in prices over a given period of time. The subject has received broad attention in academic and policy literature over many years. Government, businesses, and individuals make decisions on the basis of prices, and therefore changes in prices leads to changes in economic decisions/spending behaviour. As such, it is highly unlikely to talk about the economy without mentioning inflation. Matter of fact, inflation guides monetary policy decisions of central banks, plays an important role in wage demands and negotiations, and also forms part of contractual agreements (i.e., inflation linked bonds that are issued by Government are priced by a formula directly based on the CPI, which therefore impacts the cost of funding for Government directly).

During the last quarter of 2021, Namibia received more than 31% of its imports from South Africa. With the pegging arrangement in place, it follows that Namibia shares a strong relationship with South Africa in terms of inflation and therefore imports from South Africa play a major role in determining Namibia's domestic inflation.

Despite the topic being widely explored, the important question as to whether there is a deviation in the relationship between the Namibian and South African inflation rate and what would inform that deviation (if it does indeed exist) has received little public discourse. Therefore, it is important to shed more light on this question in order to enhance our understanding of the relationship between the Namibian and South African inflation, and provide an opportunity to review the methods and procedures used to calculate the CPI, with the primary purpose of making the CPI a more reliable, indicator that provides a justifiable reflection of the spending patterns at a point in time, that is representative of the whole country.

OBJECTIVES

The paper aims to:

- To provide a historical overview of inflation in Namibia and South Africa;
- To investigate the relationship between the Namibian and South African inflation;
- To establish whether there is a deviation in the relationship between the Namibian and South;
 African inflation; and
- Make recommendations for consideration by the Namibia Statistics Agency (NSA).

1. OVERVIEW OF INFLATION IN NAMIBIA

The history of the Namibian inflation data dates back to 1970, where at the time, the Namibian CPI was calculated as a subnational index of the South African CPI, using their Household and Income Expenditure Survey (HIES) of 1975¹. The South African HIES, which at the time only covered Windhoek, provided a less accurate reflection of the Namibia inflation rate. In1993, 3 years after the country gained its independence, the Central Bureau of Statistics (CBS) introduced the Interim Consumer Price Index (ICPI) to replace the RSA HIES. The 1993 ICPI was initially intended to be an interim measure awaiting introduction of a new national index – The Consumer Price Index (CPI). The CPI is a key macroeconomic indicator used to measure changes in the price level of goods and services purchased by households. The basket of goods and services consumed by Namibian households are weighted on the basis of relative percentage of expenditure of the said goods and services to calculate the rate of inflation.

The 1993-94 HIES was integral in the construction of the CPI in Namibia. The survey, which was carried out over a 12-month period (November 1993 to October 1994) was aimed at providing household data for the construction of a CPI that is a representative of the entire nation, using expenditure records of 4,379 households for deriving CPI weights, based on the 1991 Population Census². According to the results of the 1993-94 HIES survey, the expenditure on food, transport and housing accounted for 65 % of the total household expenditure. The household expenditure on food was the highest, representing almost 30% of the total expenditure. This was followed by expenditure on housing (20%). The spending on the remaining group (clothing and footwear, education, health, etc) was 35%.³

The change in spending patterns necessitated further addition of new goods and services to the basket, and as such, a new CPI with a national coverage was published in January 2005. The rebasing exercise provided an opportunity to review the methods and procedures used to calculate the CPI with the primary purpose of making the CPI a more reliable, indicator that provides a justifiable

¹ Gaomab II, M. (1998). Bank of Namibia.

² Likukela, M. (2007). An econometrics analysis of the determinants of inflation in Namibia (Masters dissertation).

³ Likukela, M. (2007). *An econometrics analysis of the determinants of inflation in Namibia* (Masters dissertation).

reflection of the spending patterns at a point in time, and that is representative of the whole country. The inflation basket is therefore reconstituted every five years. The current basket was last rebased in 2013, using household expenditure data collected in the 2009/10 Household Income and Expenditure Survey.

The main lines, in order of largest weighting, are:

- 1. Housing and utilities (28.4%)
- 2. Food and non-alcoholic beverages (16.5%)
- 3. Transport (14.3%)
- 4. Alcoholic beverages and tobacco (12.6%)
- 5. Furnishings, household equipment (5.5%)
- 6. Miscellaneous goods and services (5.4%)
- 7. Communications (3.8%)
- 8. Education (3.7%)
- 9. Recreation and culture (3.6%)
- 10. Clothing and footwear (3.1%)
- 11. Health (2%)
- 12. Hotels, cafes and restaurants (1.4%)

2. OVERVIEW OF INFLATION IN SOUTH AFRICA

The history of South African inflation data dates back to 1917, where at the time, the South African Consumer Price Index (SCPI) was restricted only to large urban areas. The exclusion of other areas of the country meant that the calculation of inflation was not a true reflection of the entire country. The rural and total country indices were later covered in 2002. At present, various price indices are used in South Africa; Consumer Price index, Core Index, Consumer Price Index excluding Mortgage Bonds, and Food Price Index, CPIF⁴.

The results of the Income and Expenditure Household Survey (IES) provides guidance as to which goods and services should be included in the SCPI basket. A combination of diary and recall methods were used to conduct the 2005/2006 IES. This survey was unique in that, it was designed to collect information on items and services acquired by South African households, various sources of income acquired by participating households (monetary or in-kind) and details as to how they spent this income (on expenditure, remittances, etc). Prior to that, the IES relied upon the recall method, which was only designed for households at selected dwellings in the sample⁵.

Unlike Namibia, the SCPI basket is reweighted more regularly. This is particularly important because the accuracy of weights to represent current expenditure patterns decreases as the length of time increases from the weight reference period. Changes to the SCPI basket of goods and services and

⁴ Statistics South Africa. (2013). Consumer Price Index: The South African CPI Sources and Methods Manual Release.

⁵ Statistics South Africa. (2013). Consumer Price Index: The South African CPI Sources and Methods Manual Release.

the weights of those goods and services were announced by Stats SA in January 2022. The reference period for the new weights is 2019. Update prior to that was made in January 2017.

The main lines, in order of largest weighting, are:

- 1. Housing and utilities (24.49%)
- 2. Food and non-alcoholic beverages (17.14%)
- 3. Miscellaneous goods and services (14.81%)
- 4. Transport (14.35%)
- 5. Alcoholic, beverages, and tobacco (6.26%)
- 6. Recreation and culture (5.2%)
- 7. Furnishings, household equipment etc (4.37%)
- 8. Clothing and footwear (3.65%)
- 9. Hotels, cafes and restaurants (3.25%)
- 11. Education (2.62%)
- 12. Communications (2.42)
- 13. Health (1.44%)

3. THE RELATIONSHIP BETWEEN THE NAMIBIAN AND SOUTH AFRICAN INFLATION

3.1. Namibian and South African inflation trend: 1990 – 2022

The monetary policy framework in Namibia is underpinned by the fixed exchange rate peg of the Namibia dollar, which is on par with the ZAR (One to one basis). Price stability in the interest of sustainable growth and development is the ultimate goal of monetary policy in Namibia. Maintenance of the exchange rate peg is the intermediate target, and it ensures the achievement of the ultimate goal of price stability by importing stable inflation from South Africa⁶.

With a fixed exchange rate policy, Namibia's attainment of exchange rate stability (as implied by pegging of the dollar to the rand) will help to ensure that its domestic prices approximate prices in South Africa, provided the exchange rate is fixed to a low inflation rate and a stable currency. Exchange rate pegging also suggests that developments of the South African rand have both a direct and an indirect impact on the Namibian dollar. This occurs through imported goods, especially seeing that South Africa is Namibia 's main trading partner and by implication the increase in the general price level of goods and services in South Africa is also passed on to Namibia.

Figure 1 below shows the movements of inflation rates between Namibia and South Africa from 1990 to 2022. It further reveals that Inflation in Namibia typically mirrors that of South Africa, due to the currency peg and import reliance.

⁶ Sheefeni, J. P. S. (2009). *The impact of Namibia's currency peg on its domestic inflation* (Masters Dissertation).

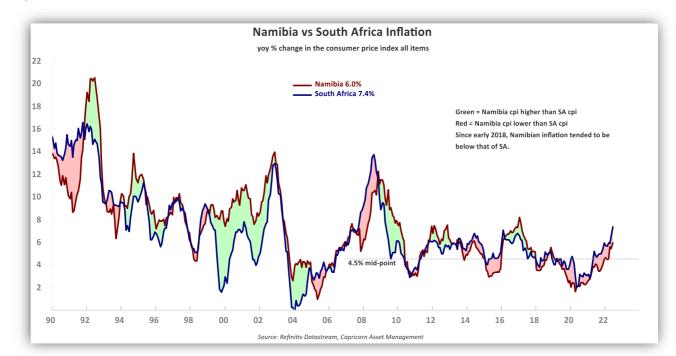


Figure 1: Trends in Namibian and South African inflation rates: 1990 - 2022

Source: NSA and Stats SA, CAM

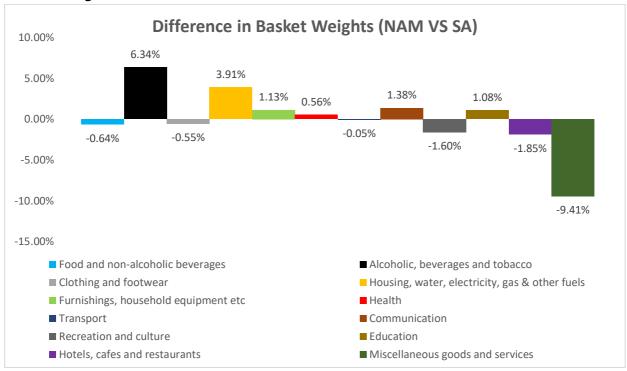
3.2. Inflation deviation between Namibia and South Africa

The question of whether there is a deviation in the relationship between Namibia and South Africa's inflation rates and what would inform that deviation (if it does indeed exist) is an important one worthy of further investigation. Based on the background of the inflation between the two countries over the years given above, the question is thus addressed as follows:

i) Weightings

Inflation deviation between Namibia and South Africa is informed by the weights of Namibia Consumer Price Index (NCPI) and the South Africa Consumer Price Index (SCPI) baskets. As illustrated in figure 2 below, South Africa's miscellaneous goods and services category has a higher weighting (14.81%) compared to Namibia (5.4%) with Insurance and financial services forming part of this category (77% of miscellaneous goods and services accounts for this in South Africa). This category therefore contributes more towards inflation in South Africa than the same category in Namibia contributes towards its domestic inflation. As such, a large deviation exists between the inflation rates of the two countries. On the other hand, Although South Africa's Clothing and footwear category has a higher weighting (3.65%) compared to Namibia (3.1%) and contributes more towards inflation in South Africa than the same category in Namibia contributes towards its domestic inflation, there exists a much smaller deviation between the two countries in terms of inflation because their respective weightings in this category and inflation dynamics are closely linked.

Figure 2: Inflation deviation between Namibia and South Africa explained by difference in baskets weights



Source: NSA, Stats SA, NASIA

ii) Inflation for underyling NCPI and SCPI catergories (Namibia vs South Africa)

Inflation deviation can also be explained by the inflation for underlying NCPI and SCPI categories. Figure 3 below shows that South Africa's inflation for food has been lower than that of Namibia over much of the period.

Figure 3: Namibia vs South Africa Inflation: Food

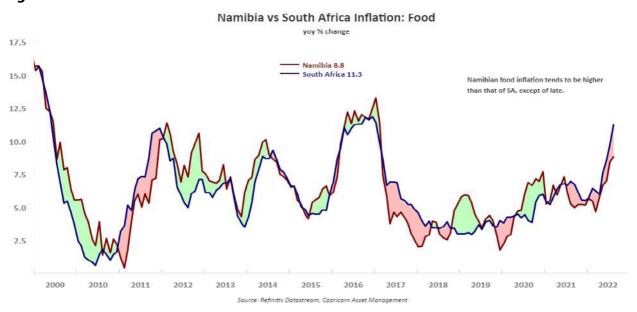


Figure 4 below shows that South Africa's inflation for alcoholic beverages and tobacco has been lower than that of Namibia over much of the period. Since the beginning of 2021, Namibia's inflation for alcoholic beverages and tobacco has been consistently lower than that of South Africa.

Namibia vs South Africa: Alcoholic Beverages & Tobacco Inflation yoy % change consumer price index 15.0 Namibia 6 South Africa 7 Namibian alcoholic beverages and tobacco inflation tends to be higher than that of SA. 10.0 7.5 5.0 2.5 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 Source: Refinitiv Datastream, Capricorn Asset Management

Figure 4: Namibia vs South Africa Inflation: Alcoholic Beverges & Tobacco

Source: NSA, Stats SA, CAM

Figure 5 below shows that Namibia's inflation for clothing and footwear has exhibited a deflationary trend over much of the period.

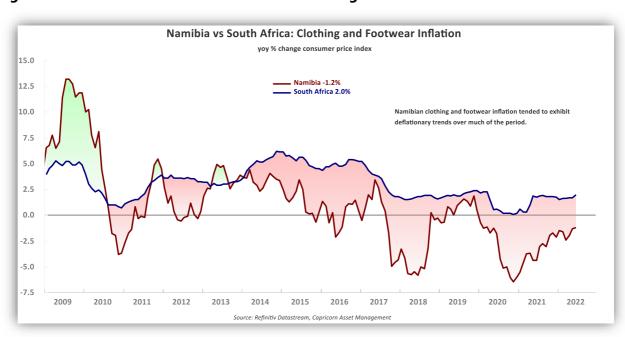


Figure 5: Namibia vs South Africa Inflation: Clothing and Fotwear Inflation

Figure 6 below shows that South Africa's housing, water and electricity inflation has been lower than that of Namibia until the property market started to contract in 2013, followed by the general macro slow-down that started in 2016 which impacted demand for rentals in the property market, and which was further exacerbated by the Covid -19 pandemic since 2020.

Namibia vs South Africa: Housing Water Electricity Inflation yoy % change consumer price index 22.5 Namibian housing inflation tended to be higher than that of SA until the property 20.0 market started to contrat in 2013, followed by the general macro slow-down that started in 2016 which impacted demand for rentals in the property market, and 17.5 which was exacerbated by Covid since 2020. 15.0 Note that this is not a house price index. It measures the cost of housing such rentals and utility costs. 12.5 Namibia 1.4% South Africa 5.1% 10.0 7.5 5.0 2.5 0.0 -2.5 2009 2010 2011 2012 2013 2014 2015 2017 2018 2019 2020 2021 2022

Figure 6: Namibia vs South Africa Inflation: Housing Water Electricity

Source: NSA, Stats SA, CAM

Figure 7 below shows that South Africa's inflation for furnishings and household equipment has been lower than that of Namibia over much of the period.

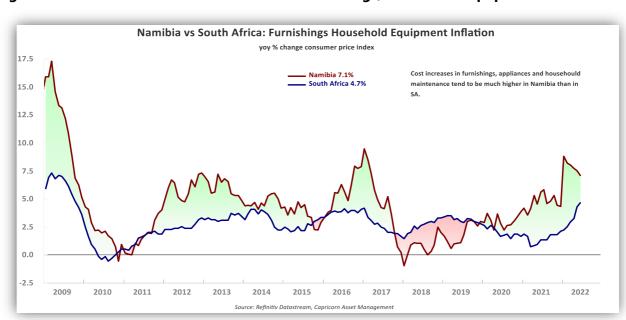


Figure 7: Namibia vs South Africa Inflation: Furnishings, Household Equipment

Figure 8 below shows that Namibia's inflation for health has been much lower than that of South Africa over much of the period.

Namibia vs South Africa: Health Inflation yoy % change consumer price index 9.0 Health related inflation tends to be higher in SA than in Namibia. 6.0 4.5 3.0 1.5 2011 2020 2012 2013 2014 2016 2017 2018 2019 2021 2022 2015

Figure 8: Namibia vs South Africa Inflation: Health

Source: NSA, Stats SA, CAM

Figure 9 below shows that historically, South Africa's inflation for transport has been lower than that of Namibia.

Source: Refinitiv Datastream, Capricorn Asset Management

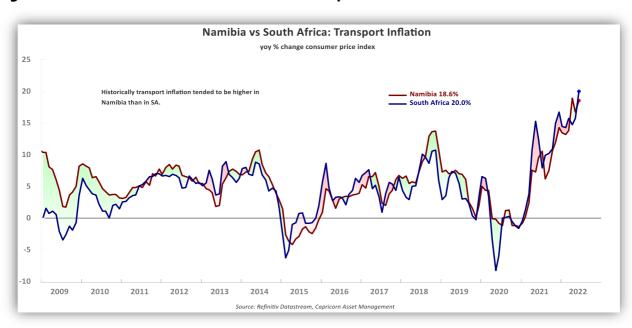


Figure 9: Namibia vs South Africa Inflation: Transport

Figure 10 below shows that South Africa's inflation for communications has exhibited a deflationary trend over much of the period.

Namibia vs South Africa: Communications Inflation yoy % change consumer price index 9.0 Namibia -0.1% South Africa -0.2% Communications have been on a deflationary trend in SA Not so in Namibia except of late. 6.0 4.5 3.0 0.0 -1.5 -3.0 2009 2010 2011 2012 2014 2015 2016 2018 2019 2020 2021 2022

Figure 10: Namibia vs South Africa Inflation: Communications

Source: NSA, Stats SA, CAM

Figure 11 shows that South Africa's inflation for recreation and culture has been much lower than that of Namibia over much of the period.

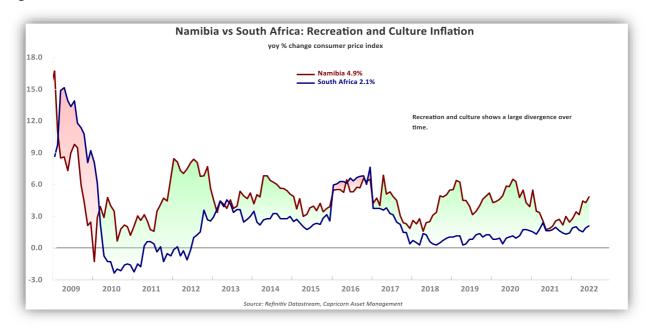
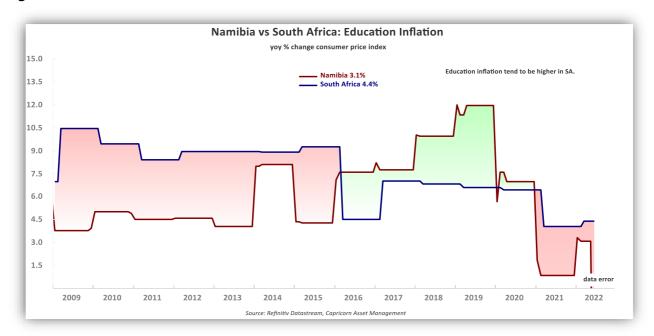


Figure 11: Namibia vs South Africa Inflation: Recreation and Culture

Source: NSA, Stats SA, CAM

Figure 12 shows that Namibia's inflation for education has been much lower than that of South Africa over much of the period.

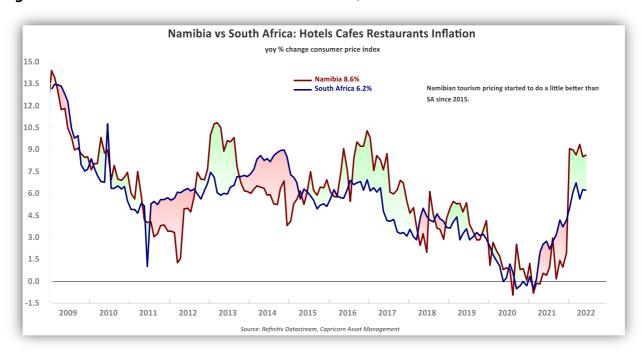
Figure 12: Namibia vs South Africa Inflation: Education



Source: NSA, Stats SA, CAM

Figure 13 shows that since 2015, Namibia's inflation for hotels, cafes and restaurants started exhibiting a stronger trend than that of South Africa.

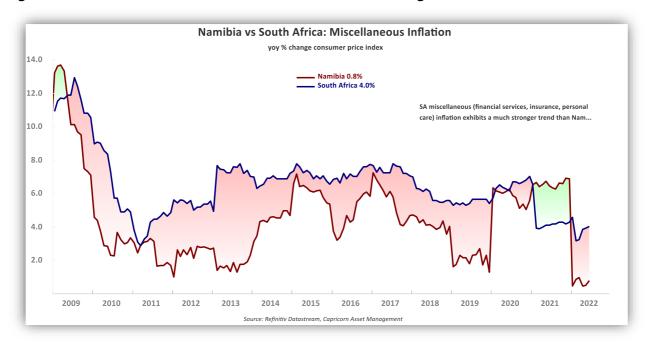
Figure 13: Namibia vs South Africa Inflation: Hotels, Cafes and Restaurants



Source: NSA, Stats SA, CAM

Figure 14 shows that Namibia's inflation for miscellaneous goods has been much lower than that of South Africa over much of the period.

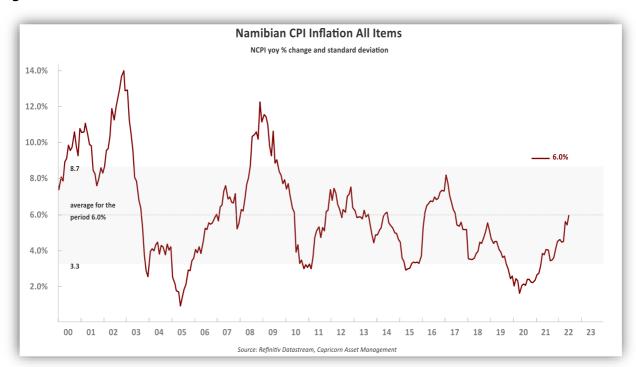
Figure 14: Namibia vs South Africa Inflation: Miscellaneous goods and services



Source: NSA, Stats SA, CAM

iii) Standard deviation

Figure 15: Namibia CPI Inflation for all Items



Source: NSA, CAM

RSA inflation: All items CPI all items, yoy % change 7.9% 6.0 the period 5.5% NΩ

Figure 16: South Africa CPI Inflation for all Items

Source: Stats SA, CAM

The paper also makes use of standard deviation to establish whether a deviation exists in the relationship between the Namibian and South African inflation rates. The standard deviation is a measure of dispersion of data relative to the mean. In most cases, lower values for the standard deviation are considered better because this shows that there is less variability around the mean. Figure 15 and 16 above illustates Namibia and South Africa's avarage inflation rate and standard deviations for the period 2000 – 2022. It further shows that Namibia's average inflation of 6.0% (which lies between 3.3% and 8.7%), is higher than that of South Africa (5.5%, and lies between 3.1% and 7.9%). In addition, Namibia's standard deviation of 2.7 is also higher than South Africa's standard deviation of 2.4. The high standard deviation for Namibia (when compared to South Africa) is supported by the fact that the last National Household and Income Expenditure Survey (NHIES) was carried out in 2015/16 (an exercise that proved futile due to limited data collection). As a result, the current NCPI basket is still dermined by the 2009/10 NHIES (and is outdated). Changes to the SCPI on the other hand were announced in January 2022 (and the reference period for the new weights being 2019). Update prior to that was made in January 2017.

CONCLUSION

In conclusion, we find that there is a close correlation between the inflation rates of Namibia and South Africa, however, our work points out that much improvement can be achieved by improving the accuracy of NCPI methodology. According to the NSA, the current basket now contains over 350 items, grouped into 12 categories and 55 subcategories, for which prices are collected on a monthly basis from more than 900 retail outlets⁷. On the contrary, it appears that Housing and utilities, Furnishings and household equipment, Health, Education, Hotels, cafes and restaurants, and

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⁷ NSA. (2013). Namibia Consumer Price December 2021. Retrieved from: https://nsa.org.na/page/publications/.

Miscellaneous goods and services are all surveyed once a year. This makes six out of twelve categories.

GENERAL RECOMMENDATIONS

Based on the analysis provided above, NaSIA recommends the following points for consideration by the Namibia Statistics Agency (NSA):

- 1. Reweighting of the current NCPI basket, which is still determined by the 2009/10 NHIES (and is outdated). It is international best practice for the surveys to be done and weights to be changed every 5 years.
- 2. The weights in the basket is one thing, but the accuracy and credibility of the measurements of the items in the basket is another, and is arguably, more important. In that regard, the following deficiencies need addressing:
 - i. Under Health, Hospital Services have not been measured for several years, that is the index had been 100 for a long time now. The question is whether it is still relevant;
 - ii. We recommend for possible inclusion of medical aids (as they are not currently being accounted for)
 - iii. Under Transport, Rail rates have not been measured since at least January 2021;
 - iv. Under Miscellaneous, Financial services appear to not have been measured so far this year;
 - v. The measurement of the Housing component should be improved in scope and frequency. It is the largest component of the basket and likely to remain so. Currently rentals are surveyed only in January. It is clear that there is heavy reliance on surveys in January for several items/categories.
- 3. That the NSA publishes its methodology for compiling the NCPI and more specifically the schedule of the surveys of items not measured monthly. This practice can be seen in the monthly release of the South Africa's CPI data wherein such a schedule is published. This adds to the credibility of the numbers and makes for more accurate inflation expectations to be developed by all users of the data, including the monetary authorities;