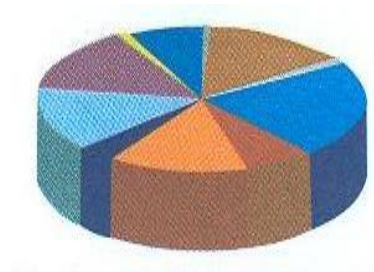Republic of South Sudan

Ministry of Finance and Planning

QUARTERLY MACROECONOMIC UPDATE

Macroeconomic Planning Department

Q.1 FY 2022/2023

September 2022

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List of Abbreviations and Acronyms

Institutions:

BSS	Bank of South Sudan
GRSS	Government of the Republic of South Sudan
IMF	International Monetary Fund
MoFP	Ministry of Finance and Planning
MPD	Macroeconomic Planning Department
MoP	Ministry of Petroleum
NBS	South Sudan National Bureau of Statistics
NLA	National Legislative Assembly
RSS	Republic of South Sudan
SPLA	Sudan Peoples' Liberation Army
SPLM	Sudan Peoples' Liberation Movement

Legislation:

PFMA	Public Financial Management and Accountability Act
PRMA	Petroleum Revenue Management Act
PSA	Petroleum Sharing Agreement

Misc. Units and Terms:

bbl / kbbl / mbbl	Barrels of Oil / Thousands of… / Millions of…
CPI	Consumer Price Index
FY	Fiscal/Financial Year
GDP	Gross Domestic Product
GNI	Gross National Income
PIT	Personal Income Tax
QX	Quarter No.X
SSP / SSP mn/bn	South Sudanese Pounds / Millions of… / Billions of…
USD / USDmn /bn	United States Dollars / Millions of… / Billions of…
VAT	Value Added Tax (Sales Tax)
TRGONU	Transitional Revitalized Government of National Unity

FOREWORD

The Directorate of Macroeconomic Planning publishes Quarterly Macroeconomic Update Report. This report is an attempt to initiate accountability and transparency. It informs the government spending agencies, the developmental partners, and the people of South Sudan about the economy's performance and it also provides analysis about what can be done to address economic challenges. The report is produced by the staff from across the Directorate, with inputs from colleagues in Budget and Treasury.

The First quarter of FY 2022-23 indicates continuous economic uncertainty. The economic performance continues to project disappointments, as the impact of the Ukraine-Russian War, climate change and COVID-19 pandemic surge in with negative economic performance. Although inflation dropped by -3.3%, the recent increase in wages struggles to keep up with inflation, the number of people living in poverty continues to increases unabated. The latest data from the National Bureau of Statistics and the World Bank suggest around 80% of the population now live in absolute poverty. As a result, South Sudan is one of the most impoverished countries in the world.

However, there are reasons to be hopeful. Firstly, an increase in oil price and the revived IMF SMP at the end of Q1 have drastically increased government revenues, which in the medium term should help us to reduce the deficit, lessen our borrowing from the Bank of South Sudan (BSS), and so stabilize the economy. Secondly, in February 2022, South Sudan completed imbursements to the Government of Sudan as obligated under Transitional Financial Arrangements (TFA). The agreement for the tariffs is waiting for the new negotiation that seems to have a high positive impact on increase in oil revenue. Finally, the commitment of South Sudan to the East African Community is a hope to boost trade for South Sudan. It is an opportunity to bring sustainable peace to the country. People will be able to return to their homes. People can return to steady work, and land can be farmed. Eventually, oil production in abandoned and damaged oil fields can resume. If the Peace Agreement continues to be implemented, the country can begin to heal, and the economy will start to grow.

Following our sideline meetings with the IMF and the World during the 2022 Annual Meetings in Washington, DC., South Sudan will now have access to a number of regional Windows on infrastructure and food security. While acknowledging the significant progress South Sudan has

made in the PFM reform agenda; including improvement in macroeconomic management and sustained foreign exchange market liberalization, challenges still abound. South Sudan is now putting measures in place that will strengthen fiscal policy formulation, build reserve buffers, achieve debt sustainability and expand income sources to reduce reliance on oil as well as increase overall intergovernmental accountability and efficiency. Additionally, South Sudan is cooperating with other agencies to implement AML/ACF frameworks to ensure the country is not used as a hub for illegal financial proceeds.

Expenditure reforms;

The current deficit is inherited from financing expenditures related to the FY 2021/2022 Budget, arrears on outstanding contracts, and Peace Budget. The economic situation worsened, as we borrowed from BSS to finance the deficit. BSS offered a short-term loan (overdraft), which resulted in high inflation in the Q4 same year. As a result, South Sudanese Pound lost its purchasing power (increasing the price of imports and essential commodities in the local market). To address the expenditure side, we have introduced cash allocation plan, cash ceiling and stick to the agency approved budget in order to reduce overspending by 24% of Q1 2022-23.

Our recommendation to lawmakers is to embark on necessary reforms, and be steadfast and impartial in their budget oversight role. This will ensure that budget execution is guided by the necessary Financial and Appropriation Acts.

Revenue Reforms

Improvement of revenue collection mechanism by introducing a digital electronic system, revisiting the exemption practices, widening the tax base (tapping additional sources that are not presently taxable), imposing tax compliance on key taxpayers, and reducing tax discounts on non-essential items. With these reforms in place, we expect non-oil revenues to increase by around 45-50% with gross to GDP of about 7% in 2024. This would reduce the deficit. In addition, other reforms should include the diversification of the economy with the intent of reducing dependency on oil e.g., investment on Agriculture, education, roads, mining, health, tourism among others according to South Sudan National Development Strategy (SSNDS) priorities.

External Support

The external support is on the two sides, technical and financial. As evidenced in the presentation, the government sector employees need capacity building for sustainability purposes. Building capacity will ensure that the already commenced reform agenda is not only effective but hastened to achieve the desired economic outcome. A sustainable economic development program will require a vibrant private sector and entrepreneurial innovation, agricultural productivity and climate change adaptability. South Sudan is working closely with and urges the partners support our efforts to improve local productive capacities and resilience.

Following the signing of the Roadmap to end the transitional period by peace partners, South Sudan is now entering a new era, one that requires efficient intergovernmental coordination and making use of existing policies and regulations to help create pipelines of sustainable projects and strict adherence to fiscal discipline. Despite adverse challenges, the Ministry of Finance and Planning is committed to consistently developing frameworks for effective execution of its core mandate in achieving the desired socio-economic transformation.

Hon. Dier Tong Ngor
Minister,
Ministry of Finance and Planning (RSS).

I.   HIGHLIGHTS: MACROECONOMIC DEVELOPMENT

- South Sudan Nominal GDP amounts to SSP 2.53 trillion in FY2022-2023 with real GDP growth of 4.2% projection compared to SSP 1.83 trillion difference of SSP 7.04 billion about 39% increase in the same period. The growth in nominal GDP in FY 2022-23 projection was associated with expected increase in oil price of 100 USD per barrels, Growth in nonoil revenue of about 5%, as well as devaluation of the official exchange rates projected at USD/SSP of 620.4.

- Agricultural production and the rest of the non-oil private sector will increase in both 2022 and 2023 due to the improved implementation of the peace agreement and PFM reforms. As a result, displaced people are expected to return home, infrastructures are to improve, resulting in accessibility to markets and reduced risks related to Covid-19. Hence, the overall production capacity of the population is expected to gain momentum.

- The average monthly inflation rate in 2022/2023 was -3.3 per cent. Prices were falling due to improved agricultural activities that provided more food for consumption, private sector demand, and extensive reliance on humanitarian aid. From Aug 2022 to Sept 2022 South Sudan experienced deflation in both months. In September 2022, prices decreased by -4.1 per cent. During Q.1 FY 2022/2023 inflation was variable, ranging from -1.5 per cent in August to -4.1 per cent in September. The overall drivers have stabilized exchange rates but are held back by weak domestic market demand.

- Q1 2022/23, official exchange Rate increased in average of 620.35 SSP per USD above the projection of 435 in same year budget while Parallel exchange rate stood at average of 636.59 per USD. The spread is as small as 16 SSP per two rates about USD depreciation of 37 per cent in the same quarter.

- Through Q1 2022-2023, oil production has been stable at around 162,000 bbls/day compared to 151,000 barrels per day projected in FY2022/2023. Due to floods, oil production is expected to reduce to 147,000 per day, (about 5,000 barrels per day in the remaining month of 2022).

- Q1 FY 2022-2023 South Sudan average oil price stood at 100.4 USD per barrel, above the bench budget price of 75 USD per barrel and further above the Brent price of about 85.16 USD/bbls about 15.22 USD differences within the quarter.

- Gross Non-oil revenues in Q1 outturn amounted to SSP 38 billion compared to SSP 29 billion projected in Q1 FY 2022/2023, thus giving a surplus of SSP 9 billion, about 31% above the quarter target.

- Gross Oil revenues in Q1 outturns amounted to SSP 529 billion compared to SSP 179 billion projected in FY 2022/2023, thus giving a surplus of SSP 350 billion, about 196% above the quarter target.

- Q1 FY 2022-23 Government net revenue amounted to SSP 327.4 billion compared to SSP 134 billion Quarterly target. Thus giving a surplus of SSP 194 billion about 45% above the target.

- Q1 of FY 2022/2023 outturns government expenditures amounted to SSP 264 billion compared to SSP 348 billion quarterly target with underspending of SSP 84 billion about 24% across the chapters.

- Therefore, Q1 FY 2022-2023 attained a surplus of SSP 63 billion compared to the deficit target of about SSP (214) billion in Q1 FY 2022-23. This large improvement in the budget deficits by 71% was accelerated by PFM reforms, advance oil loan from companies in barrels, improvement in average oil prices as well as further depreciation in official exchange rate.

- The debt position excluding debt servicing at the end of September amounted to SSP 1,756 trillion. This comprises of domestic debt amounting to SSP 485.5 billion and external debt amounting to USD 2,050 Million, about SSP 1,271 trillion evenly split between different creditors of loans (Multilateral, Bilateral and Commercial) while interest rates repayment amounted to USD 80771.66 equivalent to SSP 50 billion.

Key Macroeconomic Tables

Table 1: Key Macroeconomic Indicators

	FYQ4. Outturn 2021-22	FYQ1.Outturn 2022-23	FY2022-2023 Projection
Inflation (Quarterly, monthly/ Annual Average growth)	12.1%	-3.3%	20%
Inflation End of the Period (EoP)	-0.03%	-4.9%	38%
Official exchange rate (USD, quarter average)	452.94	620.4	435
Parallel exchange rate (USD, quarter average)	463.58	636.7	643
BSS Credit to GRSS (SSP Bn)	812,406,751	1,515,028,844	-
Monetary Base (eop) SSP Bn)	907,996,153	1,612,213,873.7	3,320,560,375

Table 2: Key Fiscal Figure

Fiscal items	2022/2023 Approved Quarterly Budget	FY 2022/2023 Q1 Outturns	FY 2022/2023 Q1 % change
Net Oil revenue	104,487.01	289,093.25	277%
Non-Oil Revenue	29,258.84	38,270.73	131%
Government Spending	348,222.47	264,409.74	76%
Deficit/Surplus	(214,476.62)	62,954.24	-29%

Source; Ministry of Petroleum and Ministry of Finance and Planning (MPD)

II. GLOBAL AND REGIONAL OUTLOOK

Global GDP growth is projected to slow down at 2.5 per cent 2022 compare to 4.6 per cent in 2021 about 2.1 per cent reduction. This reduction was spell off by ongoing war in Ukraine and sanctions on Russia are expected to generate substantial economic spillovers, War-related interruptions to production, sanctions, and strongly impaired access to cross-border payment systems was impediments to disrupt trade flows, notably for energy and food

Sub Saharan African countries GDP growth is estimated to slow by 3.6% in 2022/23 compare to 4% in 2021-22. The decline was associated with amid a slowdown in global economic activity, continued supply constraints, outbreaks of new coronavirus variants, high inflation, and rising financial risks due to high and increasingly vulnerable debt levels. Likewise, the eastern African region GDP was very volatile from years denoted by 2019-2020 with negative growth and recovered along 2022 and 2023.

Table 3: Contribution to overall GDP growth Per cent

Real GPD Growth in Eastern African Region	FY 2019-2020	FY 2020-2021	FY 2021-2022	FY 2022-2023
Kenya	(0.10)	6.30	6.40	6.10
Uganda	(0.80)	4.00	4.70	5.60
South Sudan	3.61	(1.36)	(0.82)	4.21
Tanzania	4	2.8	4.9	6.3
Ethiopia	6.10	4.00	4.60	5.80

Data Source; NBS and MoFP (MPD) FY Estimates/projections

The above table's GDP growth illustrates that all the countries within the region attained higher growth in 2021-2022 compared to 2019 and 2020. This was because of global economy shocks of Pandemic disease that let to low global output growth, trade barriers, lockdown, boarder restriction

as well as poor deflators performance that persuade growth and development for Uganda, South Sudan and Kenya in 2019-2022.

However, in 2022-23 region project the positive growth due to subsiding od the corona various, the present of vaccine, as well as resumption of trade and other sectors of these economies.

Figure 1:Regional GDP Growth Rate in Per cent.
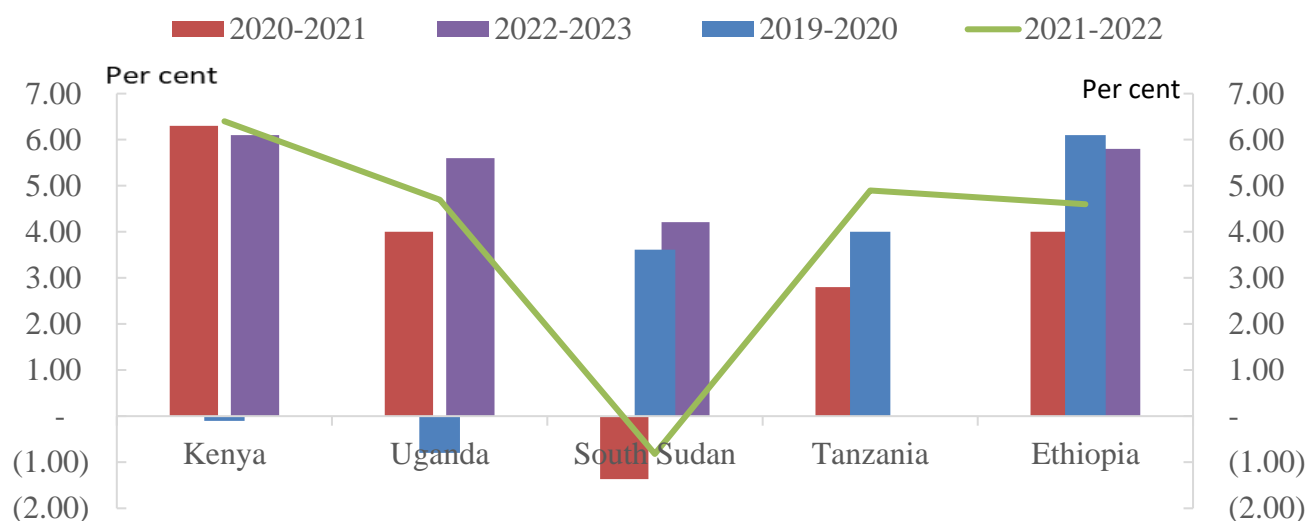
Source: NBS, 2020 and 2021 to 2023 are MPD estimates/projections

South Sudan Nominal GDP amounts to SSP 2.53 trillion in FY2022-2023 projection compare to SSP 1.83 trillion difference of SSP 7.04 billion about 39% increase in the same period. The growth in nominal GDP in FY 2022-23 projection was associated expected increase in oil price of 100 USD per barrels, Growth in nonoil revenue of about 5%, as well as devaluation of the official exchange rates projected at USD/SSP of 620.4.

while real GDP growth was projected to recover from negative to positive of higher growth by 4.2 % FY 2022-23 compare -0.82 in 2021-2022. This was attributed by different sectors contribution to GDP, the petroleum sector, nonoil sector (agricultural, trade, Mining, fishing) sectors and the government are the dominant sectors in the economy. However, Nonoil sector dominated the large share of 79.4 % in 2022-23 compare to 78.7% 2021-2022 a slowly increase of about 0.7% than

anticipated in FY 2021/22 while oil sector account for same share of 21% in 2021-22 and 2022-23 estimates.

In *the agricultural sector*, where crop production accounts for 75 per cent of production, there was a positive trend in net cereal production between 2019 and 2022. In 2019 there was a significant increase of 13 per cent, contributing to reasonably high growth in non-oil GDP. Despite the effects of the global pandemic and the Ukrainian/Russian war that speak all the international prices, the economy was synonymously engaged in agriculture. Due to the availability of domestic agricultural products and improved infrastructures, food security was articulate to be at a lower level in 5 years. The prevailing peace positively impacts agriculture, namely the increase in planting due to the availability of seeds and displaced population mindsets of part of the rural population production. Improvement of market infrastructure, transport and storage infrastructure will further increase the availability of both domestic and imported agricultural goods.

Overall, production in the private sector is expected to increase significantly in 2022 and further in 2023 that hope to increase employment, increase in savings as well high chance to investment. This is experiences from other African countries are that the impact of civil peace will be felt for growth in several years through productive.

Table 4: South Sudan GDP Estimates

South Sudan GDP Estimates	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23
Nominal GDP (Trillion SSP)	1,871,090	2,802,888	3,075,401	1,825,427	2,529,464
Real GDP Growth (%)	7.68	3.61	(1.36)	(0.82)	4.21
Share of Oil to GDP (%)	22.48	21.80	25.71	21.31	20.62
Non-oil Contribution (%)	77.52	78.20	74.29	78.69	79.38

Data Source: Ministry of Finance and Planning (Macroeconomic Department Projection

III.   INFLATION DEVELOPMENT

South Sudan inflation is measure by consumer's price index (CPI), which reflect the change in basket of goods in the market with a given weighted average per a month. The compilation target three major cities of Juba, Wau and Malakal.

It is interesting to note that the trend for monthly inflation is falling from the peak of 5.0 per cent in July 2022 to -8,7 per cent in September 2022, whilst the year trend was up from 6.4 per cent in July 2022 to -8.22 per cent in June 2022. The falling monthly inflation rate might be due to the reduced rate of new borrowing from the central bank since the start of first quarter, supply of agricultural products, humanitarian ratios, to the local markets at cheapest costs. If the government continues to restrain from borrowing from the central bank, monthly inflation is expected to continue to fall. Eventually, through the year and month as well.

FY 2022-23 was decreasing both month on month and throughout the year, although there was sharp increase in July 2022, this was partially due to the sharp depreciation of the national currency since in the same quarter. This gave an impetus for traders to increase prices, as well as increase sales and customs taxes. In addition, continuing fuel shortages have also contributed to high transport costs and high business costs.

Figure 2:CPI Inflation Q3 2021/22– Q1 2022/23
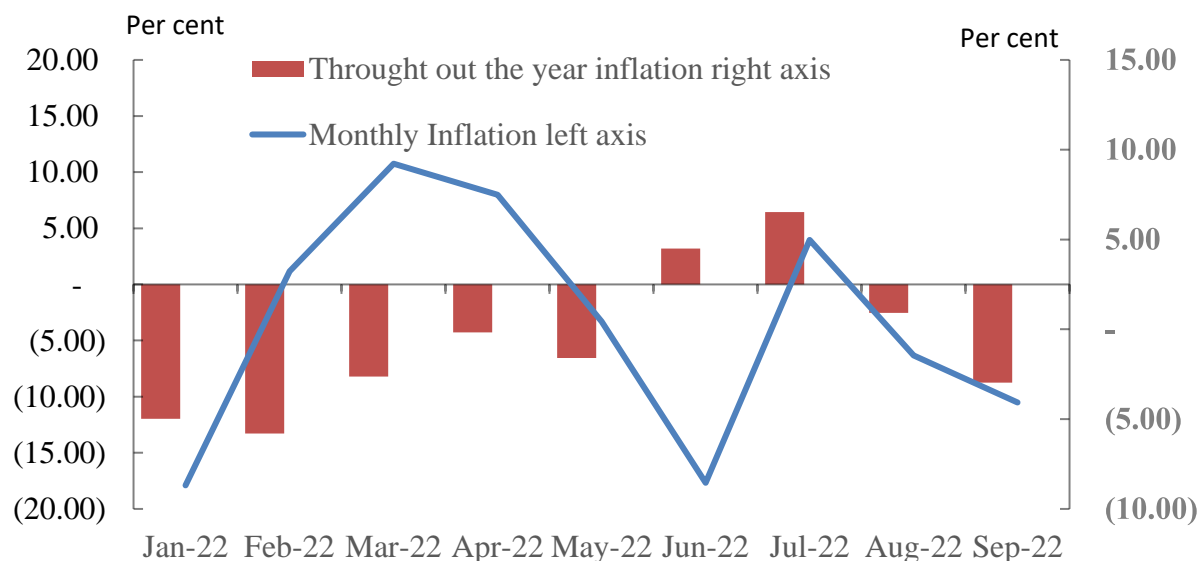
Table 3: CPI inflation

	July	August	Sept	July	August	Sept
All items	6.4	-2.5	-8.7	5.0	-1.5	-4.1
Food and bev.[1]	1.7	-5.3	1.7	4.5	1.1	-7.4
Transport				25.1	-2.9	0.0
	36.3	30.6	36.6			
Health	9.5	41.5	21.2	6.1	20.3	2013 2023
Rest.&hotel	26.7	-22.9	20.5	15.7	-32.4	24.8

Figure 3: CPI Inflation and Money Supply Growth

Per cent

— Month on Month/Quarterly Growth in Money Supply (M1, M2)

— Month on Month/Quarterly CPI (Inflation)

Q1-2021/22   Q2-2021/22   Q3-2021-22   Q4-2021/22   Q1-2022/23
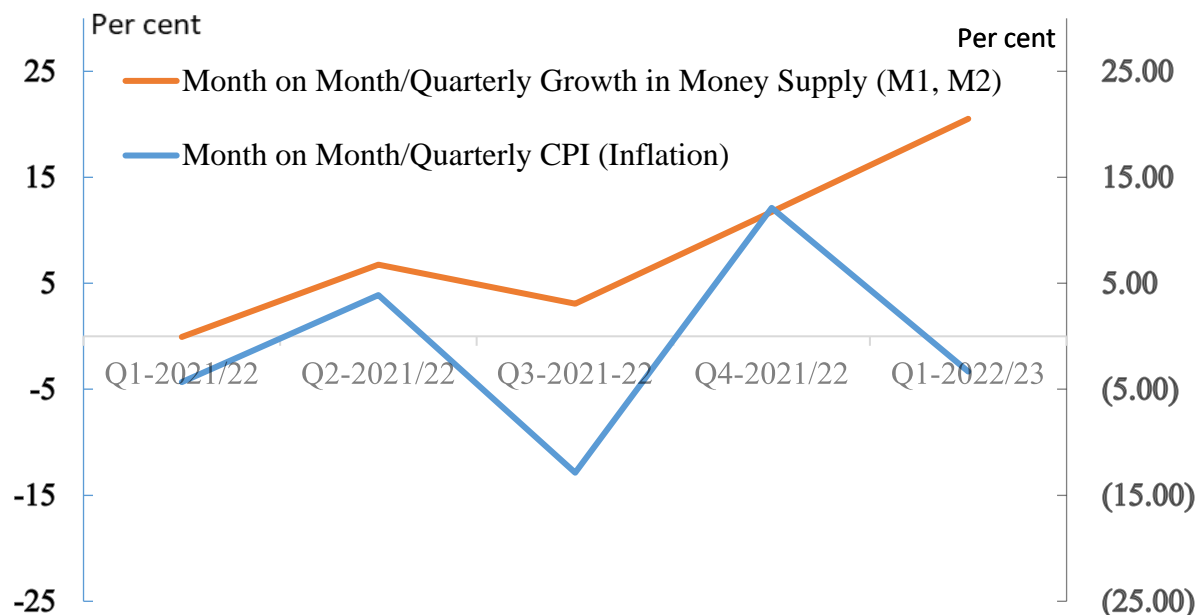
However, this stabilization in the macroeconomic situation is likely to be temporary unless the government deficit is substantially reduced. Realistically, this could only be achieved by an increase in the global oil price, increasing domestic oil production, and reducing government expenditure. The trust laid by the TGoNU provides an opportunity to achieve the latter two things, as well as increasing domestic production generally with the return of peace and improving different sectors' growth.

IV.   EXCHANGE RATE DEVELOPMENT

FY 2022-2023 Approved Budget forecasted indicative exchange rate SSP/USD lower than the current situation. The parallel exchange rate quarterly average amounted to SSP/USD 636.4 in Q1 2022-2023 compared to SSP/USD 463.62 Q4 FY 2021-2022, while Q1 Official rates amounted to SSP 620.4 compared to SSP 453 in Q4 FY 2021-2022. Both two rates SSP Q1 2022-2023 depreciate by about 37% compared to Q4-2021/22.

It is thought that the colossal depreciation is due to government deficits being financed by the BSS through short-term loans (overdrafts) and future speculations about the economy value of SSP. However, whether this depreciation and destabilization can be sustained depends on whether these

expectations reflect shifts in economic fundamentals. For example, suppose the government deficit is not reduced, and the supply of USD to the economy needs to be increased. In that case, the effect is likely to continue till the end of 2022 or even with further depreciation in the fourth quarter of 2022/23, as observed in the market recently.

To improve the current devaluation for exchange rates in the next quarter, the Ministry of Finance and Bank of South Sudan to embarked on SMP program, improve on domestic production to increase GDP, increase interest rates to attract foreign direct investment, reduce on the absorptions and further non-deficit financing through overdraft.

Table 4: Average mid-rates for First Quarter 2022-2023

Exchange rate	Q3-2021/2022	Q4-2021/2022	Q1-2022/2023
Parallel	437.09	463.62	636.59
Official	432.62	453.03	620.35
Difference	4.47	10.58	16.24

Figure 4: Exchange Rates
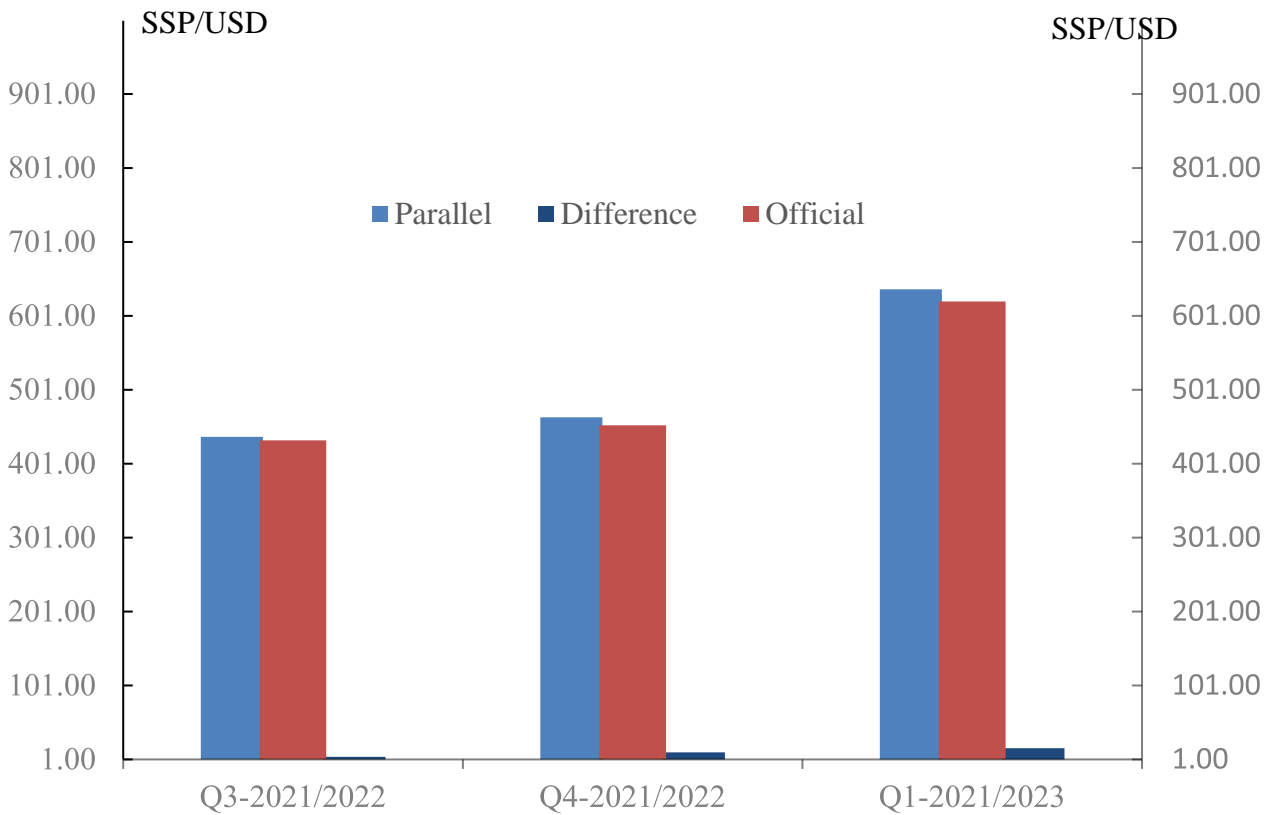
Data Source: Bank of South Sudan Research and Statistic Department.

An outstanding overdraft accompanied the substantial depreciation through the quarter with no clear cash plan and prioritization of the claims for payment, thus, high inflation. Monthly inflation averaged 12 per cent in quarter four of 2021-2022, the highest after Q2 of 2020-2021. Monthly inflation was, however, falling through the quarter from -1.5 per cent in August to -4 per cent in September 2022. Through-the-year inflation increased strongly through the quarter, rising from 50 per cent in June 2019 and remaining stable at 12 per cent for June 2021 and June 2022. The data provided by the NBS could not complement our argument for the causes of low inflation in the country. Still, the MPD has remarked that the situation could be on the low demand for food items as there is improved agricultural activities, expectation on the exchange rate stability, and asymmetry information to the public on the Monetary and Fiscal policies by the RSS government.

V.   EMPLOYMENT AND POPULATION

Historically government of South Sudan account for as a large employer of the general population compare to the private sector. In other countries in the world public sectors contribution to employment is always less than the private. But due to overwhelmed emerge of wars that create insecurity all over the country investment and private sector participation reduced as well.

Therefore, there are significant challenges in accurately capturing the rate of unemployment in South Sudan as no more surveys are carried out by NBS. For instance, information obtained from Trading Economics (see Table 1) gives a constant South Sudan growth rate of unemployment of about 0.2 percent over 2019 -2020, this mean that in 2022 unemployment stand at projection of about 10.3 percent.

Table 5:Showing the unemployment level of South Sudan and other countries

Table 8: Unemployment among Labor Force Aged 25(+), percent annual					
	2017	2018	2019	2020	2021
Burundi	1.1	1.1	1.2	1.2	1.2
Comoros	3.1	3.1	3.1	3.2	3.2
Eritrea	4.5	4.5	4.5	4.5	4.6
Ethiopia	1.3	1.3	1.3	1.3	1.3
Kenya	7.2	7.3	7.3	7.4	7.4
Rwanda	0.7	0.8	0.8	0.8	0.8
Sudan	9.3	9.3	9.4	9.5	9.7
South Sudan	9.8	9.8	9.9	9.9	10.1
Tanzania	1.3	1.3	1.2	1.2	1.2

Data for Djibouti, Somalia and Seychelles Missing.
Source of Data: ILO modelled estimates.

VI.   CURRENT ACCOUNT DEVELOPMENTS

 South Sudan's current account balance recorded deficit throughout the three quarters of Q3 and Q4 2021-2022 and further projected for Q1 2022-23. This is mainly attributed to considerable high value of import of SSP 2,280.05 billion compare to Export of SSP 1,638.56 billion receipts that, in turn, reflected a 56% increase imports of goods and services and further projected to continue in deficit for the next quarter.

Current Account Deficit marks the disbalance in a nation's economy, which indicates more expenditure on imports and less income through exports**.** This disbalance increases the chances of credit risks as the struggling nations start depending on and expecting their foreign counterparts to invest and offer funds to bring economic balance back to it original status quo.

Table 6:Curret Account Balance

CURRENT ACCOUNT	Q3-2021-2022	Q4-2022-2022	Projection Q1-2022-2023
Current account balance	- 778	- 641	-710
Primary Income	- 93.66	- 166.27	-129.96
Secondary Income	115.70	154.22	134.96

Data Source; Bank of South Sudan, Research and Statistics (External Sector) and MPD Proj.

Figure 5:Graph showing quarterly current Account's development from 2021-2023
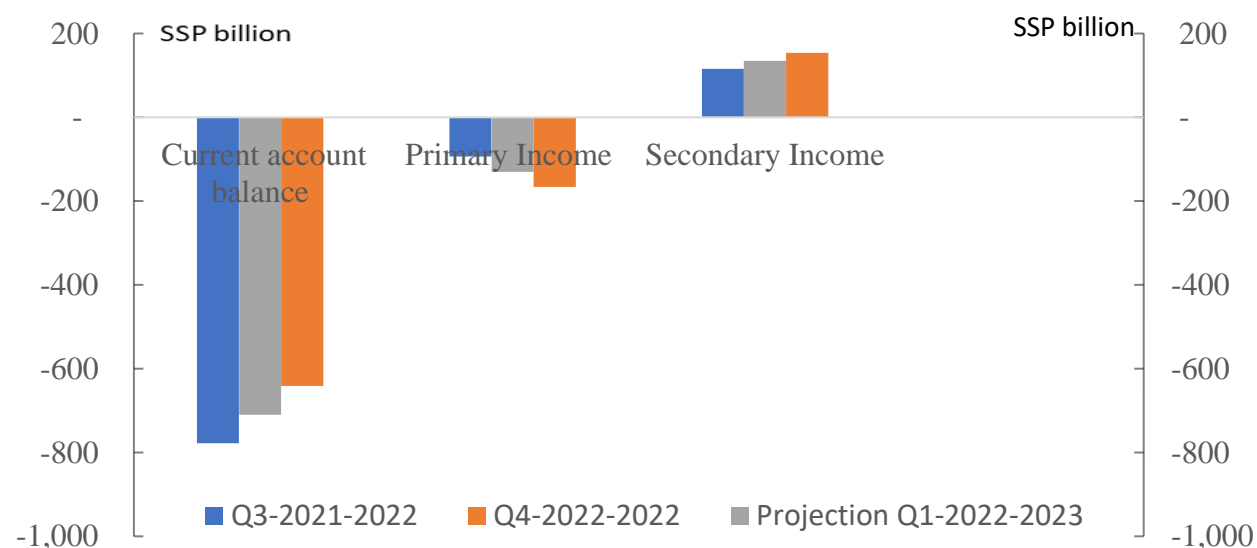
Source of data: BSS Research and Statistics Department (External Sector)

VII.   FISCAL SECTOR DEVELOPMENT

a) Oil Production Sector Development

Two different types of oil blends are exported out of South Sudan: Nile Blend from Ruweng and Dar Blend from the Northern Upper Nile. Nile Blend is a high-quality, lightweight crude oil sold at almost no discount (historic 1-2 USD per barrel) compared to the Brent price and Minas Blend

of Indonesia in 2012 to 2018. While Dar Blend, on the other hand, is heavier and more acidic than Nile Blend. Because of its lower quality, fewer refineries can refine Dar Blend compared to Nile Blend. Historically, Dar Blend has been priced at around 10 USD per barrel lower than the benchmark blend, Brent Blend. However, the recent trend is that the discount is reduced somewhat.

In Q1 2022-2023 Q1 Oil production amounted to 14,639,291barrels with an average daily production of 162,000 barrel a day before September compare to 151,000 barrels per day projected in the FY Budget. Q4 2021-2022 of 13,749,202 barrels. This daily increase in average oil production was realized after GPOC improved its production in mid July 2022 to an average amount of 45,000 barrels per day compare to 39,000 barrels projected in the approved FY 2022/23 Budget.

Therefore, to on-going flood in upper Nile and Unity state, the three oil fields are affected highly in September 2022 thus reduce daily average production to 147,000 compare to 162,000 per day in the previous Month hence, if this situation persist with no innovation the current FY 2022/23 estimates will not be achieved.

Table 7: Oil production in (000') barrels for First Quarter 2022-2023

Oil Companies	FY Q4 2021-2022	FY Q1 2022-2023
DPOC	10,197,104	9,900,401
GPOC	3,552,098	4,181,890
SPOC	-	557,000
Total Quarterly Oil Production (000') bbrls	**13,749,202**	**14,639,291**

Figure 6: Monthly Oil production for Q1-2022-2023 by Oil Operating Companies
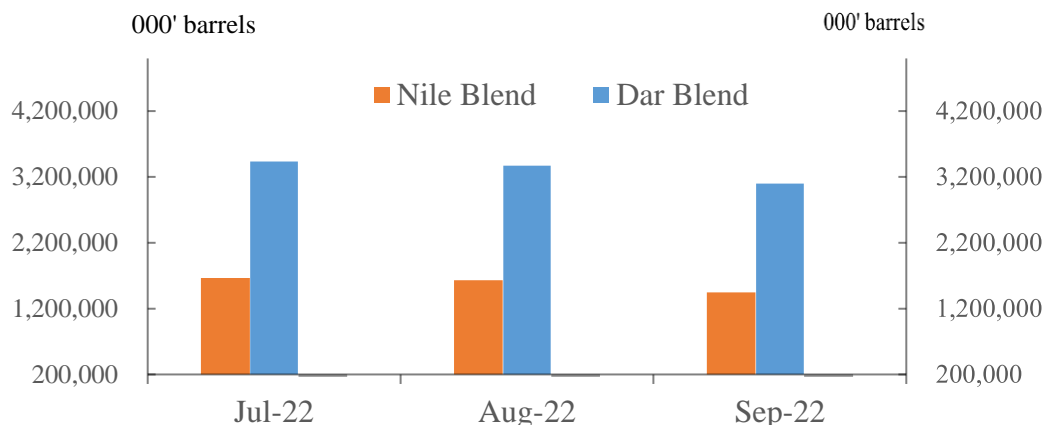
Data Source: MoP

b) South Sudan Oil Price Development

Through the first quarter of 2022-2023, average South Sudan oil price declined to 100.4 USD/ barrels compared to 115.2 USD/barrels in Q4 2021-2022 but still higher than the average Brent price a difference of 15.2 dollars' end of September 2022-23. South Sudan oil price has been seen in the last two years with higher prices than EIA Brent prices, this is best explained by the demand for Dar oil and the quality produce by Nile blend that attract many buyers. Therefore, it is difficult to predict the prices due to volatility of the world growing economies and uncertainties associated with production.

Table 8:Average South Sudan oil price and Brent per Month in 2022

Average Oil price	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22
South Sudan Price	107.35	114.54	123.65	112.4	101	87.75
Brent Price	101.64	109.26	114.34	91.48	83.8	80.2
Price differential	5.71	5.28	9.31	20.92	17.2	7.55

Data Source: MOP and EIA (energy intelligent agent for USA)

Figure 7: South Sudan Average Oil Price and Brent Price development
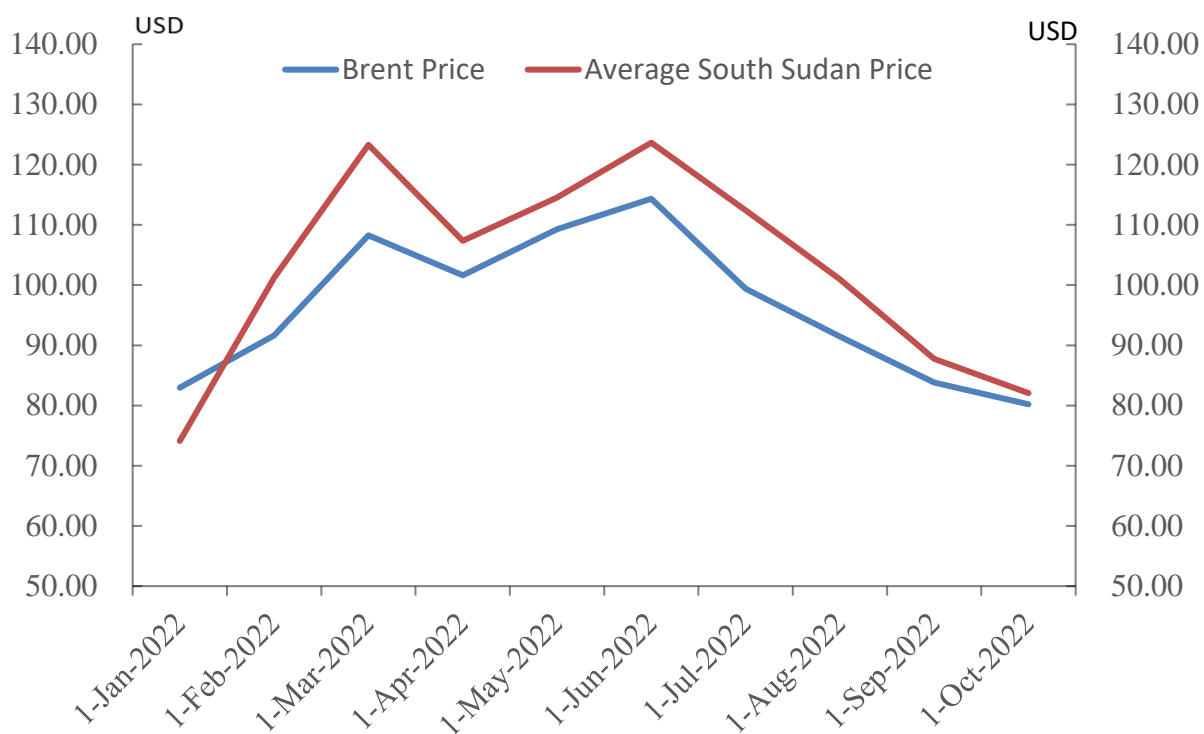
Source: MoFP

Table 9:Government Profit Share from Oil Production Development

Government of RSS Oil share in Million barrels	22-Jul	22-Aug	22-Sep	Q1 2022-2023 Oil Sales
In-kind lifting to Sudan (9.1 dollars)	736,899.50	691,362.70	537,895.00	1,966,157.20
DAR Blend Lifting	1,219,214.00	1,712,818.00	1,142,416.00	4,074,448.00
Nile Blend Lifting	1,393,476.00	630,570.00	570,477.00	2,594,523.00
RSS Total Lifting (NB+DB)	2,612,690.00	2,343,388.00	1,712,893.00	6,668,971.00
RSS gross Total Lifting	**3,349,589.50**	**3,034,750.70**	**2,250,788.00**	**8,635,128.20**
aver. DB and NB Price	112.4	101	87.8	100.4

c) Oil Revenue Development

In the First Quarter of 2022-23 government gross revenue amount to US$ 840 million compare to US$ 411.4 million, about 104 per cent compare to the quarterly budget. This is a first quarter with higher volume much as average prices are low compare to the previous fourth quarter of 2021-22.

Gross revenue in US$ will were realized twice to the quarterly budget of FY2022/23.

Figure 8:Oil Revenues
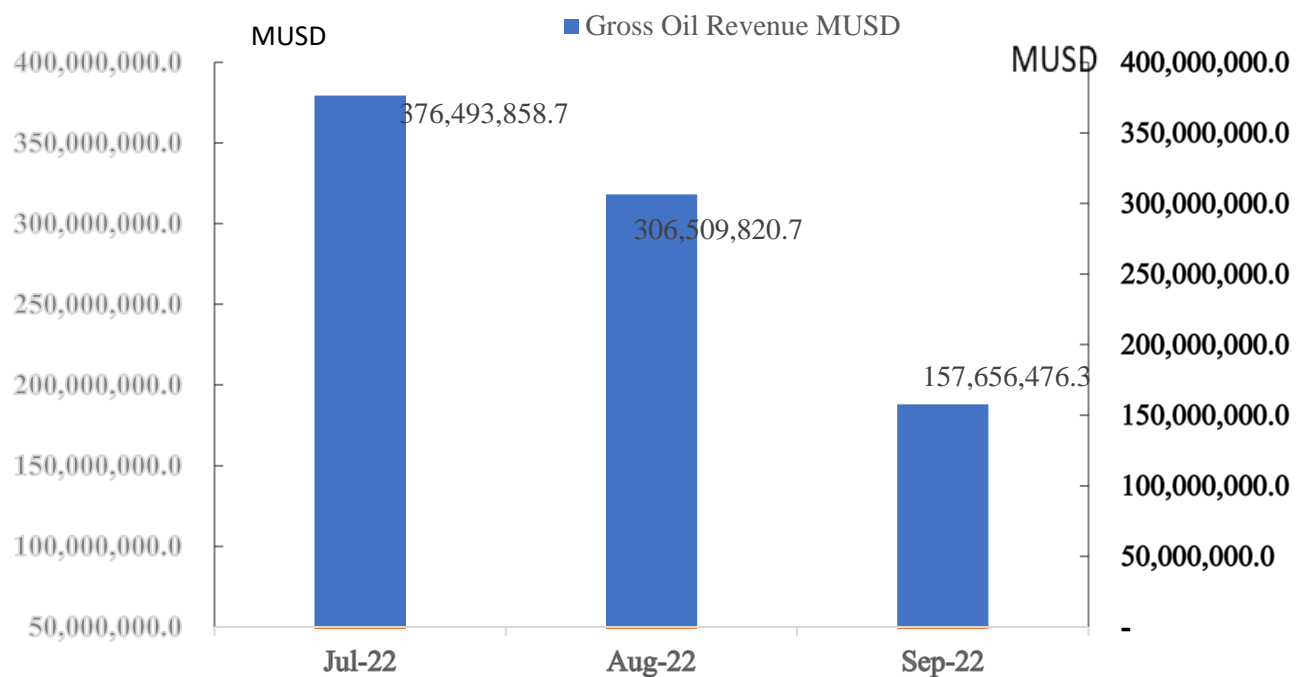
The collapse in oil prices was unfortunate timing in 2019-2020 due to prolonged global Covid-19 that affect the world. Although the exchange rate reform and increase in oil price increased government revenues in SSP and almost closed the deficit, reducing inflationary and depreciation pressure in Q3 2021-2022, the payment of mandatories and loans repayment always left the fiscal space warrying.

The First quarter saw a slight increase in total production to 500,000 barrels, down from 13.7 million barrels in Q4 2021-2022 Outturn compared to 14,4 Million barrels in Q1 2022-2023. This put the average monthly production for the quarter at 151,000 barrels per day, above 148,000

barrels from the previous quarter. Furthermore, production is expected to decline throughout the quarter the upcoming two quarters as flood, from 156,881 barrels per day in January to 136,732 per day in March.

According to Macro Directorate's projections, oil production is expected to stabilize at around 4,650,000 barrels per month over the next year – equivalent to approximately 150,000 barrels per day. However, this might be revised downward next quarter, as the IMF believe production will be closer to around 120,000 barrels per day after discussions with oil companies.

The government's share of income (entitlement) moves hand in hand with the production level. The higher the production, the higher the government share and vice versa; therefore, the Government share increased in Q1 2022-2023 by about 60% end of September compared to an average of 41% in Q4 2021-2022. This increasing share through the First Quarter reflects the government's unique arrangement with the oil companies by borrowing (share portion of 'profit - oil') in per cent ages within the period to settle government obligations and supposed to be paid in due FY 2022-2023.

d) Oil Revenue Development

The fiscal situation in South Sudan have improved drastically in Q1 FY 2022-2023. In Q1 of 2022 compare to Q4 2021-2022. Gross oil revenues amount to SSP 529 billion compare to quarterly target of SSP 179 billion thus give a variance of SSP 350 billion about 196% increase end of September 2022 with the huge spending transfer to Sudan government of SSP 126 billion about 449% increase in Sudan transfers compare to the approved quarterly SSP 22.9 billion budget. These transfers seem to have been associated with continues non-agreement on new OROEM tariffs by the two countries (Sudan and South Sudan via Transportation, processing and transit fees

much as revenue increases with an increase in RSS share in the Q1 of FY 2022-23 compare to the budget, this does not reflect an increase in oil production but instead Government took advance loan from oil companies in million barrels to settle outstanding government obligations and agreed to pay back with no interest rate end of December 2022. With this oil advance, all other mandatory transfers increased by about 121%, hence net oil revenue amounts to 289.1 billion compare to 104.5 billion Q1 approved budget about SSP 185 billion (177% increase in the same quarter).

In conclusion therefore, government to urgent negotiation on the new OROEM with Sudan, urgent need to finished up the refineries, building up of the dykes, avoiding pay loans with cargoes as well as reducing tariffs on oil investment to attracting more investors.

Figure 9:Q1 FY 2022-23 Fiscal Outturns Against the Approved Quarterly Budget
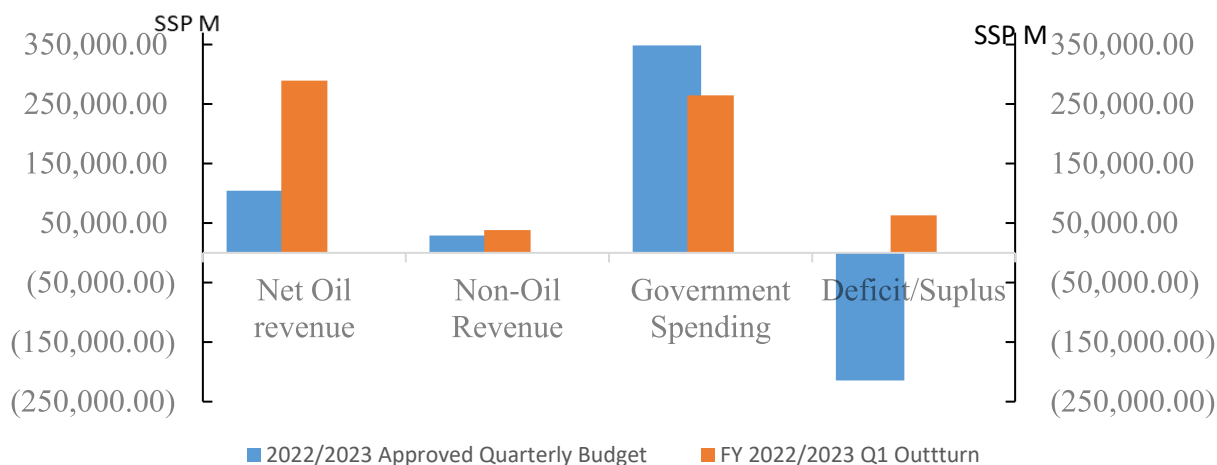
Table 10:South Sudan Profit Oil revenue share for Q1 FY 2022-23 Approved Budget

Monthly Oil Revenue 2022/23		For FY 2022/2023(in Bns SSP)						
1: Fiscal summary	2022/2023 Approved Budget	2022/2023 Approved Quarterly Budget	Jul/2022	Aug/2022	Sep/2022	FY 2022/2023 Q1 Outtturn	Outturns as % of annual budget	Outtruns as % of Q1 budget
Gross Oil Revenue	715,772	178,943	222,443	202,962	103,545	528,950	74%	296%
Payment to Sudan (9.1 barrels)	91,969	22,992	48,937	46,238	31,000	126,175	137%	549%
2% 3% For Oil Producing States & Communities	31,190	7,798	5,761	7,836	3,627	17,225	55%	221%
States 2%	12,476	3,119	2,304	3,134	1,451	6,890	55%	221%
Communities 3%	18,714	4,679	3,457	4,702	2,176	10,335	55%	221%
Ministry of Petroleum 3%	18,714	4,679	3,457	4,702	2,176	10,335	55%	221%
FGF 10%	62,380	15,595	11,522	15,672	7,255	34,449	55%	221%
ORSA 15%	93,570	23,393	17,283	23,509	10,882	51,674	55%	221%
Net oil revenue	417,948	104,487	135,483	105,005	48,605	289,093	69%	277%

Source of data; MoP and MoFPAccounts Directorate

e) Non-Oil Revenue Development
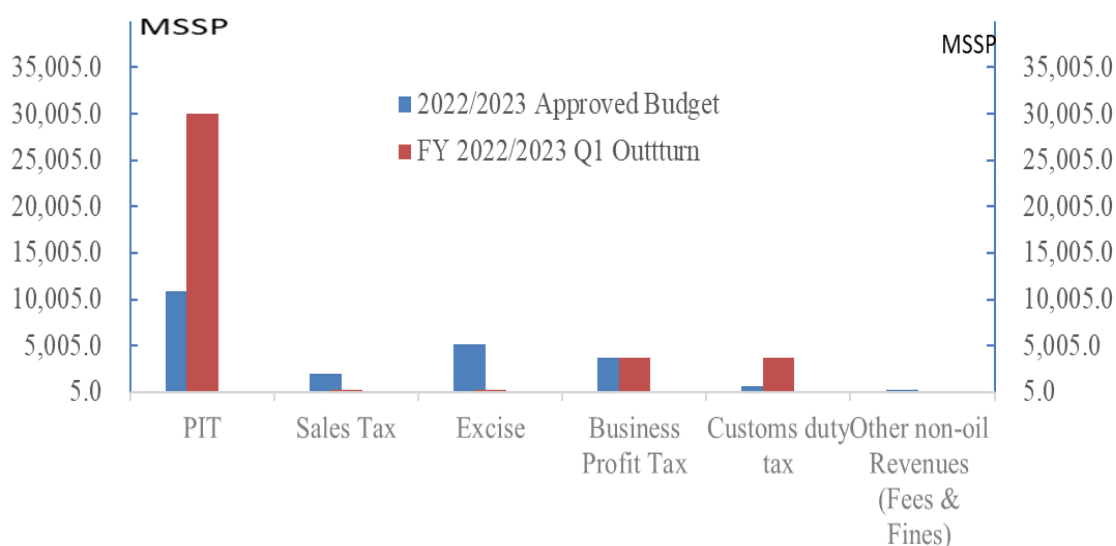
The gross nonoil revenue for Q1 2022-23 amounted SSP 38.3 billion, compared to SSP 29.3 billion quarterly approved budget with a surplus outturn above the budget by 31 per cent.

These growths were accelerated by payment of salary arrears that lead to an increase in PIT public couple with improvement in Custom division at NRA. The argument for an increase in tax rates to increase revenues was not seen in Q1 2022-23 Budget due to excise duty tax, sales tax felt by 94 per cent and 86 per cent compared to the quarterly target respectively. However, government increasing tax rates seems to have quite significant re-allocation impacts across sectors. It will move scarce resources away from tradable to non-tradable industries, raising the prices of commodities to consumers thus consumer's deficit burden.

Although the fiscal data mitigates some worries of deficits in the next quarters, it is an I deal that for NRA to achieve a target of 6% growth of nonoil revenue as per cent age of GDP by 2024, government is   to stick toward adaptation of strong fiscal measures of PFM reforms implementation, widening the tax base, Custom exchange rate realignment from SSP (200-400) per USD, installation of digital machines and scanners along the borders, implement the policy of VAT, improved on administration as well as implementation of IMF SMP policies for creation of fiscal space for fiscal sustainability.

Figure 10:Revenue by Tax Type per FYQ4 2021-Q1 FY2022-2

Table 11:Q1 FY 2022-2023 Nonoil Revenues by Tax Types

Non-Oil Revenues	2022/2023 Approved Budget	2022/2023 Approved Quarterly Budget	Jul/2022	Aug/2022	Sep/2022	FY 2022/2023 Q1 Outtturn	Outturns as % of annual budget	Outtruns as % of Q1 budget
PIT	43,630	10,907.5	9,610.6	11,233.1	9,158.8	30,002.4	69%	275%
Sales Tax	7,805	1,951.3	61.8	79.1	178.2	319.1	4%	16%
Excise	20,504	5,126.0	96.7	90.8	114.4	301.9	1%	6%
Business Profit Tax	37,106.1	9,276.5	1,553.8	1,202.2	983.6	3,739.5	10%	40%
Customs duty tax	6,914.6	1,728.6	100.6	1,411.1	2,250.9	3,762.5	54%	218%
Other non-oil Revenues (Fees & Fines)	1,075.7	268.9		-	145.2	145.2	14%	54%
Total non-oil revenue	117,035.4	29,258.8	11,423.4	14,016.2	12,831.1	38,270.7	33%	131%

Data Sources: NRA and Ministry of Finance and Planning EFMIS

VIII.   GOVERNMENT EXPENDITURE DEVELOPMENT

During the quarter government spending amounts to SSP 264.4 billion compare to SSP 348.2 billion FY 2022-23 approved quarterly budget. The variance amounts to SSP 84 billion about underspending by 24 per cent compare to the target. The underspending arises as from no spending by other chapters like contingency, other, less transfers etc while overspending arises from the loan service fees payment, peace implementation, Road projects, salaries as well as use of goods and services (operation).

With the above challenges, it will be essential for the government to adopt measures to reduce government spending, eg implementing the PFM reforms of cash allocation plan to spending agencies base on their budget allocation, limited the cash according to the FY approved budget plan, "use of bird in hand policy", cleansing the payroll for ghost workers, use biometric to pay salaries in the banking industries, budget discipline- no spending outside the budget.

Table 12:Q1 Outturns against Q1 Approved Budget Government Spending by Sectors
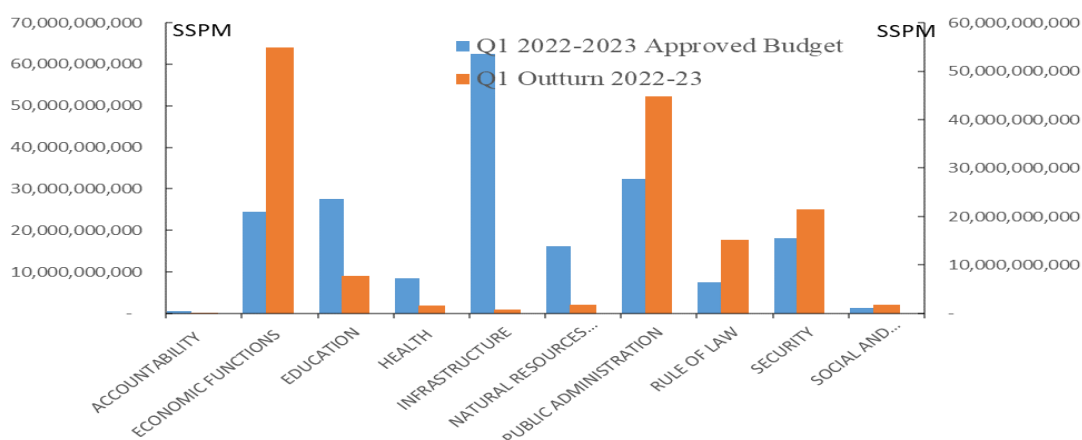
In Q1 2022-2023 government spending by sectors amounts to SSP 150.1 billion compared to SSP 199 billion, a variance of SSP 49 billion about 25% underspending. The sectors spending performance were very volitile in Q1 2022-2023 from sector to sector. Economic sector account for overspending of about 124%, rule of law 101% , social and Humanatarian 31%. The variation arise during the budgeting processes and amalagamtion of other agencies with huge spending eg peace budget under the Economic function also with debt service payments that was underbudgeted in the Ministry of Finance and Planning.

Table 13:Q1 Outturns Government Spending by sectors against the budget

Spending by Sectors	Approved FY 2022-2023	Q1 2022-2023 Approved Budget	Q1 Outturn 2022-23	% Q1-2022-2023 change Against Approved Quarterly Budget
ACCOUNTABILITY	2,077,324,806	519,331,202	117,040,248	23%
ECONOMIC FUNCTIONS	97,823,058,741	24,455,764,685	54,856,192,853	224%
EDUCATION	110,497,811,858	27,624,452,965	7,745,615,569	28%
HEALTH	33,569,770,825	8,392,442,706	1,631,617,067	19%
INFRASTRUCTURE	250,010,175,510	62,502,543,878	749,675,031	1%
NATURAL RESOURCES AND rura	64,584,230,494	16,146,057,624	1,745,798,575	11%
PUBLIC ADMINISTRATION	129,671,109,227	32,417,777,307	44,781,896,402	138%
RULE OF LAW	30,327,036,743	7,581,759,186	15,263,141,942	201%
SECURITY	72,486,195,499	18,121,548,875	21,498,902,208	119%
SOCIAL AND HUMANITATIA	5,335,454,782	1,333,863,696	1,743,538,146	131%
Grand Total	**796,382,168,485**	**199,095,542,121**	**150,133,418,041**	**75%**

Data Source: MoFPDirectorate of Accounts EFMIS

IX. PUBLIC DEBT POSITION

South Sudan Debt stock position stood at Q1 FY 2022-23 SSP 1,756.6 trillion of which domestic debt position amounts to SSP 485.5 billion and External debt stock amounted to USD 2,050 million equivalent to SSP 1,271.1 trillion.

There are no new loans contracted both externally and domestically in Q1 2022-2023. The interest repaid stood at USD 80,771.66 for world Bank loans and amount equivalent to SSP 50 million, Therefore, the growth in South Sudan debt position was accelerated by higher interest rate on domestic debt stock as well as commercial loan from external oil related creditors.

External Debt as of end September 2022

The outstanding external debt as of September 2022 was US$2,050 billion equivalent to SSP

1,271.1 trillion. Debt with Commercial creditors represented the largest share of total external debt at 77 percent, while debt with Multilateral and Bilateral creditors respectively accounted for 17 and 6 percent of total external debt Figure.

External Debt Composition by Creditor Category as of September 2022
Total share %

17%
6%
77%

■ Multilateral ■ Bialateral ■ Commercial

Data source Debt Management Unit MoFP

The overall outstanding debt service due in Q1 FY2022/23 is US$105 million equivalent to SSP 44.3 billion of this, external debt service paid between July 2022 and September 2022 amounts to US$ 80,771.66 equivalents to SSP 50 million mainly on the multilateral creditors.

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External Debt by creditors	end 30th Sept2022	Total share %
Multilateral	349,663,596	17%
Bialateral	127,008,657	6%
Commercial	1,573,473,273	77%
Total principal	2,050,145,526	100%

Source of data: Bank of South Sudan debt Management Unit.

Table 2 – Domestic outstanding external debt as of September 2023.	
Creditor (Sources)	*Amount (SSP)*
Government Direct Borrowing from BSS (SSP)	**424,997,799,945.75**
Interest accrued on the GRSS Direct Borrowing from BSS (SSP)	60,163,109,099.56
Subtotal	**485,160,909,045.31**
Government debt related to Capital Restoration of the BSS (SSP)	1,917,373,479.74
Interest accrued on the Recapitalisation of the GRSS debt (SSP)	330,283,470.44
Subtotal	**2,247,656,950.18**
Total Lending to Government of South Sudan	**485,491,192,515.75**

X. ANNEXES

Annex I: Government spending by spending agencies and sectors.

Spending Agencies by Sectors	Approved Budget FY 2022-2023	Q1 Approved Budget FY 2022-2023	Q1 Outturns Budget FY 2022-2023	Q1 Outturns against as %FY 2022-2023 Approved Budget.	Q1 Outturns as % change against Quarterly target
Accountability	**2,077,324,806**	**519,331,202**	**117,040,248**	**6%**	**23%**
Audit Chamber	1,709,405,494	427,351,373.50	96,628,239.96	6%	23%
National Bureau of Statistics	160,496,144	40,124,036.00	10,366,262.28	6%	26%
Anti-Corruption Commission	137,956,061	34,489,015.25	4,662,744.00	3%	14%
South Sudan Reconstruction & Development Fund	46,501,321	11,625,330.25	2,882,176.00	6%	25%
South Sudan Fiscal & Financial Allocation & Monitoring Commission	22,965,786	5,741,446.50	2,500,826.00	11%	44%
Economic Functions	**97,823,058,741**	**24,455,764,685**	**54,856,192,853**	**56%**	**224%**
Ministry of Finance and Planning	30,543,078,812	7,635,769,703.00	51,482,351,617.89	169%	674%
Ministry of Petroleum	18,918,670,874	4,729,667,718.50	26,061,164.00	0%	1%
Ministry of Mining	24,182,846,777	6,045,711,694.25	47,396,117.00	0%	1%
Ministry of Trade, Industry	856,344,367	214,086,091.75	174,376,658.91	20%	81%
Ministry of Land, Housing & Urban Development	742,173,333	185,543,333.25	26,201,859.00	4%	14%
Ministry of Investment	329,106,275	82,276,568.75	9,839,834.32	3%	12%
Ministry of Water Resources & Irrigation	1,274,295,371	318,573,842.75	71,702,527.56	6%	23%
National Revenue Authority	19,976,709,143	4,994,177,285.75	2,926,910,931.09	15%	59%
Petroleum and Gas Commission	181,597,065	45,399,266.25	4,836,414.00	3%	11%
National Bureau of Standards	144,969,683	36,242,420.75	28,735,017.00	20%	79%
Electricity Corporation	438,090,056	109,522,514.00	28,061,414.00	6%	26%
South Sudan Urban Water Corporation	235,176,985	58,794,246.25	29,719,298.60	13%	51%
Public Procurement and Disposal of Asset Authority	-	-	0.00	0%	0%
Education	**110,497,811,858**	**27,624,452,965**	**7,745,615,569**	**7%**	**28%**
Ministry of General Education & Instruction	81,965,179,865	20,491,294,966.25	4,554,139,641.92	6%	22%
Ministry of Higher Education, Science & Technology	22,732,281,457	5,683,070,364.25	3,180,098,314.34	14%	56%
South Sudan National Examination Council	800,350,536	200,087,634.00	11,377,613.00	1%	6%
Research & Development Center	1,000,000,000	250,000,000.00		0%	0%
Student Support Funds	4,000,000,000	1,000,000,000.00		0%	0%
Health	**33,569,770,825**	**8,392,442,706**	**1,631,617,067**	**5%**	**19%**
Ministry of Health	32,986,918,220	8,246,729,555.00	1,619,508,915.34	5%	20%
HIV/aids Commission	559,353,829	139,838,457.25	9,108,769.00	2%	7%
Drugs & Food Control Authority	23,498,776	5,874,694.00	2,999,383.00	13%	51%
Health Care Support Fund	-	-	-	0%	0%
Infrastructure	**250,010,175,510**	**62,502,543,878**	**749,675,031**	**0%**	**1%**
Ministry of Energy & Dams	2,123,884,110	530,971,027.50	20,061,530.00	1%	4%
Ministry of Transport	1,989,899,501	497,474,875.25	618,897,573.00	31%	124%
Ministry of Roads & Bridges	242,295,149,386	60,573,787,346.50	33,252,057.00	0%	0%
South Sudan Roads Authority	3,009,930,493	752,482,623.25	39,118,846.84	1%	5%
South Sudan Civil Aviation Authority	591,312,020	147,828,005.00	38,345,024.00	6%	26%
Natural Resources & Rural Development	**65,092,448,494**	**16,273,112,124**	**1,745,798,575**	**3%**	**11%**
Ministry of Agriculture & Food Security	55,963,999,996	13,990,999,999.00	188,842,348.39	0%	1%
Ministry of Livestock &Fisheries Industry	3,266,396,909	816,599,227.25	25,490,607.68	1%	3%
Ministry of Environment & Forestry	376,644,508	94,161,127.00	197,493,804.52	52%	210%
Wildlife Conservation & Tourism	4,920,720,452	1,230,180,113.00	1,332,181,083.00	27%	108%
South Sudan Land Commission	564,686,629	141,171,657.25	1,790,731.22	0%	1%
Environment Management Authority	-	-	-	0%	0%

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Public Administration	**129,671,109,227**	**32,417,777,307**	**44,781,896,402**	**35%**	**138%**
Ministry of Presidential Affairs	14,917,126,189	3,729,281,547.25	21,650,181,325.61	145%	581%
Ministry of Cabinet Affairs	11,751,208,976	2,937,802,244.00	1,045,705,544.82	9%	36%
Ministry of Foreign Affairs &International Cooperation	14,552,479,587	3,638,119,896.75	6,560,277,551.92	45%	180%
Ministry of Peace Building	1,433,051,224	358,262,806.00	8,299,241.00	1%	2%
Parliamentary Affairs	2,066,649,324	516,662,331.00	47,885,779.00	2%	9%
Federal Affairs	3,542,338,062	885,584,515.50	17,691,536.93	0%	2%
Ministry of Information	2,703,387,717	675,846,929.25	108,219,218.04	4%	16%
Telecommunication and Postal Services	448,000,000	112,000,000.00	2,911,425.00	1%	3%
Ministry of East African Affairs	204,276,531	51,069,132.75	30,025,157.00	15%	59%
Transitional National Legislative Assembly	60,736,387,043	15,184,096,760.75	13,197,112,921.44	22%	87%
South Sudan Local Government Board	23,854,702	5,963,675.50	6,877,462.00	29%	115%
National Election Commission	73,446,022	18,361,505.50	124,699,403.00	170%	679%
Council of States	15,040,336,915	3,760,084,228.75	1,673,074,675.08	11%	44%
National Constitution Review Commission	75,444,684	18,861,171.00	18,411,718.00	24%	98%
Northern Corridor Implementation Authority	26,563,135	6,640,783.75	1,342,780.00	5%	20%
Political Parties Affairs	109,072,923	27,268,230.75	25,938,075.00	24%	95%
Peace Commission	134,393,824	33,598,456.00	5,253,526.00	4%	16%
National Communication Authority	409,875,892	102,468,973.00	5,524,918.00	1%	5%
South Sudan Broadcasting Cooporation	354,061,922	88,515,480.50	122,850,400.00	35%	139%
Ministry of Public Service & Human Resource Development	246,828,023	61,707,005.75	55,226,323.52	22%	89%
Ministry of Labour	245,288,657	61,322,164.25	23,515,612.74	10%	38%
South Sudan Employees Justice Chamber	26,575,437	6,643,859.25	2,618,181.36	10%	39%
South Sudan Grievances Chamber	21,636,496	5,409,124.00	2,093,001.80	10%	39%
Access for Information Commission	26,230,004	6,557,501.00	513,780.00	2%	8%
Universal Services Access Fund (USAF)	27,000,000	6,750,000.00		0%	0%
Media Authority	24,950,763	6,237,690.75	1,441,784.00	6%	23%
South Sudan Civil Service Commission	33,064,761	8,266,190.25	7,906,417.00	24%	96%
Parliamentary Service Commission	417,580,414	104,395,103.50	36,298,644.00	9%	35%
Salaries and Remuneration Commission	-	-		0%	0%
Rule of Law	**30,327,036,743**	**7,581,759,186**	**15,263,141,942**	**50%**	**201%**
Ministry of Justice & Constitutional Affairs	3,019,256,201	754,814,050.25	102,769,059.33	3%	14%
Ministry of Interior	4,966,378,741	1,241,594,685.25	6,287,708,679.31	127%	506%
Police	12,344,491,420	3,086,122,855.00	6,849,001,613.30	55%	222%
Prisons	5,666,295,558	1,416,573,889.50	1,300,715,237.00	23%	92%
Fire Brigade	1,965,396,700	491,349,175.00	521,332,584.00	27%	106%
Judiciary of South Sudan	2,130,620,533	532,655,133.25	178,714,153.02	8%	34%
Judicial Services Commission	13,393,438	3,348,359.50		0%	0%
South Sudan Law Review Commission	106,729,232	26,682,308.00	3,805,843.00	4%	14%
Bureau of Community Security & Small Arms Control	32,280,171	8,070,042.75	3,421,201.00	11%	42%
South Sudan Human Rights Commission	36,424,662	9,106,165.50	3,977,372.00	11%	44%
Commission for Refugee Affairs	45,770,087	11,442,521.75	11,696,199.84	26%	102%
Security	**72,486,195,499**	**18,121,548,875**	**21,498,902,208**	**30%**	**119%**
Defense	48,290,200,024	12,072,550,006.00	15,704,556,628.32	33%	130%
Veteran Affairs	12,024,078,017	3,006,019,504.25		0%	0%
National Security Service	11,758,355,583	2,939,588,895.75	5,762,757,854.39	49%	196%
National Mine Action Authority	53,631,490	13,407,872.50	4,122,262.00	8%	31%
Disarmament, Demobilization & Reintegration Commission	99,444,191	24,861,047.75	13,117,793.00	13%	53%
Financial Intelligence Unit (FIU)	260,486,194	65,121,548.50	14,347,670.00	6%	22%
Social & Humanitarian Affairs	**4,335,454,782**	**1,083,863,696**	**1,743,538,146**	**40%**	**161%**
Ministry of Gender, Child & Social Welfare	956,465,373	239,116,343.25	31,393,702.00	3%	13%
Ministry of Humanitarian Affairs & Disaster Management	167,685,654	41,921,413.50	333,394,498.00	199%	795%
Ministry of Culture, Museum and National Heritage	1,405,760,078	351,440,019.50	107,603,543.00	8%	31%
Ministry of Youth & Support	1,424,007,753	356,001,938.25	1,014,736,874.52	71%	285%
South Sudan Relief & Rehabilitation Commission	219,462,533	54,865,633.25	248,967,712.73	113%	454%
War Disabled, Widows & Orphans Commission	162,073,391	40,518,347.75	7,441,815.44	5%	18%

Annex II: Resumption of South Sudan Macroeconomic Model previously used by MPD

SSMOD is the tool developed by the MPD in collaboration with Statistics Norway for the last three years. The SSMOD entailed the output data collected from the Nationals Accounts and Budget of the country. The model is developing the whole four sectors of the economy (Fiscal, Real, BOP, and Monetary industry). However, it has input only the two sectors already with its equations in relationship to one another.

SMOD has two data incorporated into the model (HEAT data) and MOD data.

The model has 198 variables 104 are endogenous variables, 38 are exogenous variables other 51 are added factors, and with all these, the model has 104 equations that link the economy to one another.

Importance of the model to MPD and decision-makers.

- SSMOD is a crucial tool for data analysis and projections for economic variables.
- It permits considering complex economic relationships and conducting scenario analysis of changes in assumptions: i.e. oil production, oil prices, and tax rates.
- It can be used for the analysis of debt sustainability.
- It can be used for long-term analysis requirements for growth in the non–oil economy.
- It provides consistency in forecasting.
- It is precise and time-saving in analysis and forecasting.

The model can analyze the policy scenarios of any policy shift, for example, increasing non-oil revenue to replace oil revenues in the long run, as below.

SOUTH SUDAN MACROECONOMIC MODEL (SSMOD) VARIABLES;

AD SPEND	End	Eq43	Agency spending, current prices
CA	End	Eq103	Current account balance, current prices
		Eq104	Indicator for Current account balance, private non-oil, current
CANO	End	prices	
CAPEX	Exon	Exog	Capital expenditures, oil companies, current prices
CG	End	Eq28	Government consumption (total), constant prices
GCC	End	Eq20	Government consumption (Central), constant prices

CGCEN_A	Add	Eq20	
CGDON	Exon	Ex	Government consumption is donor-funded, and constant prices
GST	End	Eq24	Local government consumption (states), constant prices
		Exog	Consumption by non-profit institutions serving households,
CNP	Exon	constant prices	
CONS	End	Eq68	Total consumption, constant prices
CP	Exon	Exog	Private consumption, constant prices
DEM	End	Eq86	Domestic demand indicator, constant prices
DS	Exon	Exog	Change in stocks, constant prices
EG	Exon	Exog	Employment, public sector
GLOBAL	End	Eq44	Government balance, current prices
GLOBALSTAR	End	Eq46	Government balance states
GDDOM	End	Eq45	Government domestic debt
GDDOM_A	Add	Eq45	
GDFOR	Exon	Ex	Government foreign debt
NEXT	End	Eq12	Government expenditures, current prices
REXROTH	End	Eq18	Other Government expenditures, current prices
GOV_SHARE	Exon	Ex	Government share, oil
GR	End	Eq1	Government revenues, current prices
GRAIL	End	Eq3	Non-oil revenues, current prices
GRNOIL_A	Add	Eq3	
GRAIL	End	Eq2	Oil revenues, current prices
GROIL_A	Add	Eq2	
GR			
EAT			
	Exon	Exog	State revenues, current prices
I	End	Eq89	Imports, constant prices
I_A	Add	Eq89	
INFO	End	Eq87	Imports non-oil, constant prices
INO_A	Add	Eq87	
INTGD	End	Eq15	Interest payments on government total debt

INTGD_A	Add	Eq15	
INTGDDOM	End	Eq13	Interest payments on Government domestic debt
INTGDDOM_A	Add	Eq13	
INTGDFOR	End	Eq14	Interest payments on Government foreign debt
INTGDFOR_A	Add	Eq14	
IO	End	Eq88	Imports oil, constant prices
IO_A	Add	Eq88	
IRGDDOM	Exon	Exog	Interest rate on Government domestic debt
IRGDFOR	Exon	Exog	Interest rate on Government foreign debt
J	End	Eq80	Total investments, constant prices
JG	End	Eq38	Government investment (Central), constant prices
JG	End	Eq30	Central government investments, constant prices
JGDON	Exon	Exog	Donor financed investments, constant prices.
JGSTAT	End	Eq34	State government investments, constant prices
JNO	Exon	Exog	Investment non-oil, constant prices
JO	End	Eq72	Oil investments, constant prices
JO_A	Add	Eq72	
JP	End	Eq75	Private sector investments, constant prices
MG	End	Eq42	Operating, constant prices
NCT	Exon	Exog	Net Current Transfers, current prices
NIA	Exon	Exog	Net Income Abroad, current prices
OPEX	Exon	Exog	Operating expenditures oil companies
PCG	End	Eq29	Government consumption (total), deflator
PCGCEN	End	Eq21	Government consumption (Central), deflator
PCGDON	End	Eq26	Government consumption (donor financed), deflator
PCGDON_A	Add	Eq26	
PCGSTAT	End	Eq23	Government consumption (States), deflator
PCGSTAT_A	Add	Eq23	
PCNPI	End	Eq65	Non-profit institutions serving households, deflator
PCNPI_A	Add	Eq65	
PCOS	End	Eq70	Total consumption, deflator

PCP	End	Eq63	Private consumption, deflator
PCP_A	Add	Eq63	
PDS	End	Eq83	Change in stocks, deflator
PIRATE	Exon	Exog	Ratio of deflator for change in stocks to GDP deflator
PI	End	Eq85	Imports, deflator
PI_A	Add	Eq85	
PINO	End	Eq90	Imports non-oil, deflator
PINO_A	Add	Eq90	
PIO	End	Eq91	Imports oil, deflator
PIO_A	Add	Eq91	
PJ	End	Eq82	Total investments, deflator
JPG	End	Eq39	Government investment (Central), deflator
PJG_A	Add	Eq39	
PJGCEN	End	Eq31	Central government investments, deflator
PJGCEN_A	Add	Eq31	
PJGDON	End	Eq36	Donor financed investments, deflator
PJGSTAT	End	Eq33	State government investments, deflator
PJGSTAT_A	Add	Eq33	
PJNO	End	Eq77	Investment non-oil, deflator
PJNO_A	Add	Eq77	
PRO	End	Eq79	Oil investment, deflator
PJO_A	Add	Eq79	
PJP	End	Eq71	Private sector investments, deflator
PJP_A	Add	Eq71	
PMG	End	Eq41	Operating, deflator
PMG_A	Add	Eq41	
PMGRATE	Exon	Exog	Ratio of deflator for purchases of goods and services to the non-oil GDP deflator
PRICE_HEAT_SS	Exon	Exog	Oil price from the HEAT-model, USD per barrel
PROD_HEAT_MBBL	Exon	Exog	Oil production in MBBL (million barrels per year) from HEAT model

PW	Exon	Exog	World market price index, local exchange currency
PX	End	Eq102	Exports, deflator
PXNO	End	Eq99	Export of non-oil, deflator
PXNORATE	Exon	Exog	Ratio of deflator for non-oil exports to consumer deflator
PRO	End	Eq95	Exports of oil, deflator
PXO_M	Exon	Exog	Multiplicative residual, oil price
PY	End	Eq52	Gross Domestic Product (GDP), deflator
PY_A	Add	Eq52	
PYG	End	Eq49	Value added public sector, deflator
PONY	End	Eq66	Non-Oil GDP, deflator
PYNO_A	Add	Eq66	
PYO	End	Eq60	Oil GDP, deflator
PIRATE	Exon	Exog	Ratio of deflator for oil GDP to oil exports deflator
PYP	End	Eq57	Value added private sector (non-oil), deflator
QG	Exon	Exog	Value added per employee in the public sector (Labour productivity)
SSPUSD	Exon	Exog	Exchange rate (Number of South Sudanese Pounds per unit of US Dollar)
STATE TO	End	Eq17	Transfers of oil-related revenues to states
STATETRO_A	Add	Eq17	
SUDANTRANSFER	End	Eq16	Transfers of oil-related revenues to Sudan
SUDANTRANSFER _A	Add	Eq16	
TBP	End	Eq7	Tax on Business Profit
TBP_A	Add	Eq7	
TBPRATE	Exon	Exog	Ratio of Tax on Business Profit and GDP in the private non-oil sector
TDH	End	Eq9	Direct taxes, households
TDH_A	Add	Eq9	
TED	End	Eq6	Tax, Excise Duty
TED_A	Add	Eq6	

T RADE	Exon	Exog	Ratio of Tax, Excise Duty and value of private consumption
TIT	End	Eq5	Tax in International Trade
TIT_A	Add	Eq5	
TITRATE	Exon	Exog	Ratio of Tax in International Trade and value of imports
TOT	Exon	Exog	Ratio of Tax, revenues, other
TIP	End	Eq4	Tax on Personal Income
TPI_A	Add	Eq4	
PIRATE	Exon	Exog employees	Ratio of Tax on Personal Income and Wage bill public
TR	Exon	Exog	Transfers, current prices
TVA	End	Eq8	Tax on Value Added
TVA_A	Add	Eq8	
TVARATE	Exon	Exog	Ratio of Tax on Value Added and value of private consumption
VGC	End	Eq27	Government consumption (total), current prices
VCGCEN	End	Eq19	Government consumption (Central), current prices
VCGCEN_A	Add	Eq19	
VCGDON	End	Eq25	Government consumption donor-funded, current prices
VCGSTAT	End	Eq22	Local government consumption (states), current prices
VCGSTAT_A	Add	Eq22	
VCNPI	End	Eq67 current prices	Consumption by non-profit institutions serving households,
VCO	End	Eq73	
VCO_A	Add	Eq73	
ICONS	End	Eq69	Total consumption, current prices
VCP	End	Eq64	Private consumption, current prices
VDS	End	Eq84	Change in stocks, current prices
VI	End	Eq94	Imports, current prices
VINO	End	Eq92	Imports non-oil, current prices
VINO_A	Add	Eq92	

VIO	End	Eq93	Imports oil, current prices
VIO_A	Add	Eq93	
VJ	End	Eq81	Total investments, current prices
JVG	End	Eq37	Government investment (Central), current prices
VJGCEN	Exon	Ex	Government investment (Central), current prices
VJGDON	End	Eq35	Government investment (Donor financed), current prices
VJGSTAT	End	Eq32	Government investment (States), current prices
VJGSTAT_A	Add	Eq32	
JV	End	Eq76	Investment non-oil, current prices
VIEJO	End	Eq78	Oil investments, current prices
JVP	End	Eq74	Private sector investments, current prices
VMG	Exon	Exog	Operating, current prices
VX	End	Eq101	Exports, current prices
VXNO	End	Eq98	Export of non-oil, current prices
VXO	End	Eq97	Exports of oil, current prices
VY	End	Eq50	Gross Domestic Product (GDP), current prices
VICOR	End	Eq54	
VYCORR_A	Add	Eq54	
BY	End	Eq48	Value added public sector, current prices
VYG_A	Add	Eq48	
VINO	End	Eq62	Non-Oil GDP, current prices
V	End	Eq58	Value-added oil, current prices
VYP	End	Eq56	Value added private sector (non-oil), current prices
WG	Exon	Exog	Wage rate public sector
X	End	Eq100	Exports, constant prices
X	Exon	Exog	Export of non-oil, constant prices
XO	End	Eq96	Exports of oil, constant prices
XO_M	Exon	Exog	Multiplicative residual, oil production
Y	End	Eq51	Gross Domestic Product (GDP), constant prices
Y_A	Add	Eq51	
YOUR	End	Eq53	

YCORR_A	Add	Eq53	
YG	End	Eq47	Value added public sector, constant prices
YG_A	Add	Eq47	
YH	End	Eq10	Gross income household sector
YH_A	Add	Eq10	
YEAR	End	Eq11	Real disposable income household sector
YHDR_A	Add	Eq11	
YNO	End	Eq61	Non-Oil GDP, constant prices
YO	End	Eq59	Value-added oil, constant prices
YO_A	Add	Eq59	
YP	End	Eq55	Value added private sector (non-oil), constant prices
YP_A	Add	Eq55	
YAG	End	Eq40	Salaries, Government, current prices
YWG_A	Add	Eq40	

SOUTH SUDAN MACROECONOMIC VARIABLES EQUATIONS.

"gr = groil + grnoil

" Eq1: $gr = F(grnoil, groil)$

"groil = gov_share * Eq2: $groil = F(gov\_share, price\_heat\_ss, prod\_heat\_mbbl,$

" sspusd)

"grnoil = tpi + tit " Eq3: $grnoil = F(tbp, ted, tit, tot, tpi, tva)$

"tpi = tpirate * ywg

" Eq4: $TPI = F(tpirate, ywg)$

"tit = titrate * vi " Eq5: $tit = F(titrate, vi)$

"ted = tedrate * vcp

" Eq6: $ted = F(tedrate, vcp)$

"tbp = tbprate *
vyno "   Eq7:   tbp = F(tbprate, vyno)

"tva = tvarate * vcp
"   Eq8:   tva = F(tvarate, vcp)

"tdh = TPI + tot "   Eq9:   tdh = F(tot, tpi)

"yh = ywg + tr "   Eq10:   yh = F(tr, ywg)

"yhdr = (yh - tdh) /
"   Eq11:   yhdr = F(PCP, tdh, yh)

"gexp = vcgcen +
vjg "   Eq12:   gexp = F(gexpoth, intgd, tr, vcgcen, vjgcen)

"intgddom =
irgddom * "   Eq13:   intgddom = F(gddom, irgddom)

"intgdfor = irgdfor *
"   Eq14:   intgdfor = F(gdfor, irgdfor)

"intgd = intgddom
+ "   Eq15:   intgd = F(intgddom, intgdfor)

"sudantransfer = (15
* "   Eq16:   sudantransfer = F(gov_share, prod_heat_mbbl, sspusd)

"statetro = 0.05 * (
"   Eq17:   statetro = F(groil, sudantransfer)

"gexpoth =
sudantrans "   Eq18:   gexpoth = F(statetro, sudantransfer)

"vcgcen = ywg +
vmg "   Eq19:   vcgcen = F(vmg, ywg)

"cgcen = wgrateby *
e "   Eq20:   cgcen = F(eg, mg)

"pcgcen = vcgcen /
c "   Eq21:   pcgcen = F(cgcen, vcgcen)

"vcgstat = tr + stat "Eq22:   vcgstat = F(statetro, tr, vjgstat)

"pcgstat = pcgcen " Eq23:   pcgstat = F(pcgcen)

"cgstat = vcgstat / "Eq24:   cgstat = F(pcgstat, vcgstat)

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"vcgdon = cgdon *
pc "   Eq25:   vcgdon = F(cgdon, pcgdon)
 "pcgdon = pcgcen " Eq26:   pcgdon = F(pcgcen)
 "vcg = vcgcen +
vcgs "   Eq27:   vcg = F(vcgcen, vcgdon, vcgstat)
 "CG = cgcen +
cgstat "   Eq28:   CG = F(cgcen, cgdon, cgstat)
 "pcg = vcg / CG "   Eq29:   pcg = F(cg, vcg)
 "jgcen = vjgcen /
pjg "   Eq30:   jgcen = F(pjgcen, vjgcen)
 "pjgcen = pjp "   Eq31:   pjgcen = F(pjp)
 "vjgstat = vcgstat *
"   Eq32:   vjgstat = F(vcgcen, vcgstat, vjgcen)
 "pjgstat = pjgcen "   Eq33:   pjgstat = F(pjgcen)
 "jgstat = vjgstat / p "Eq34: jgstat = F(pjgstat, vjgstat)
 "vjgdon = jgdon *
pjg "   Eq35:   vjgdon = F(jgdon, pjgdon)
 "pjgdon = pjgcen "   Eq36:   pjgdon = F(pjgcen)
 "vjg = vjgcen +
vjgs "   Eq37:   vjg = F(vjgcen, vjgdon, vjgstat)
 "jg = jgcen + jgstat
"   Eq38:   jg = F(jgcen, jgdon, jgstat)
 "pjg = vjg / JG "   Eq39:   pjg = F(jg, vjg)
 "ywg = wg * eg "   Eq40:   ywg = F(eg, wg)
 "PMG = pmgrate *
pcp "   Eq41:   PMG = F(PCP, pmgrate)
 "mg = vmg / pmg "   Eq42:   mg = F(pmg, vmg)
 "agspend = vmg +
ywg "   Eq43:   agspend = F(tr, vjgcen, vmg, ywg)
 "gbal = gr - gexp " Eq44:   gbal = F(gexp, gr)

"gddom = gddom(-
1) - "   Eq45:   gddom = F(gbal, gddom, gdfor, sspusd)

"gbalstat = grstat +
"   Eq46:   gbalstat = F(grstat, statetro, tr, vcgstat, vjgstat)

"yg = qg * eg "   Eq47:   yg = F(eg, qg)

"vyg = ywg "   Eq48:   vyg = F(ywg)

"pyg = vyg / yg "   Eq49:   pyg = F(vyg, yg)

"vy = vcons + vj +
v "   Eq50:   vy = F(vcons, vds, vi, vj, vx)

"y = cons + j + ds
"   Eq51:   y = F(cons, ds, i, j, x)

"py = (vyp + vyg +
vyo "   Eq52:   py = F(vyg, vyo, vyp, yg, yo, yp)

"ycorr = y - (yp + y
"   Eq53:   ycorr = F(y, yg, yo, yo)

"vycorr = vy - (vyp
"   Eq54:   vycorr = F(vy, vyg, vyo, vyp)

"yp = cons - CG +
jp "   Eq55:   yp = F(cg, cons, ds, ino, jp, xno)

"vyp = vy - vyg - v
"   Eq56:   vyp = F(vy, vyg, vyo)

"pyp = vyp / yp "   Eq57:   pyp = F(vyp, yp)

"vyo = pyo * yo "   Eq58:   vyo = F(pyo, yo)

"yo = 0.894 * xo " Eq59:   yo = F(xo)

"pyo = pyorate *
pxo "   Eq60:   Pyo = F(pxo, pyorate)

"yno = yp + yg "   Eq61:   yno = F(yg, yp)

"vyno = vyp + vyg " Eq62:   vyno = F(vyg, vyp)

"PCP = (pi^0.85 *
py "   Eq63:   PCP = F(PCP, pi, piano)

"vcp = PCP * cp "   Eq64:   vcp = F(cp, pcp)

"pcnpi = pcp "   Eq65:   pcnpi = F(pcp)

"pyno = pcp "   Eq66:   pyno = F(PCP)

"vcnpi = pcnpi *

cnp "   Eq67:   vcnpi = F(cnpi, pcnpi)

"cons = cp + CG +

c "   Eq68:   cons = F(CG, cnpi, cp)

"vcons = vcp + vcg

"   Eq69:   vcons = F(vcg, vcnpi, vcp)

"pcons = vcons /

cons "   Eq70:   pcons = F(cons, icons)

"pjp = pcp "   Eq71:   pjp = F(pcp)

"jo = capex * sspusd Eq72:   jo = F(capex, pjp, sspusd)

"vco = opex *

sspusd "   Eq73:   VCO = F(opex, sspusd)

"vjp = vjno + vjo " Eq74:   vjp = F(vjno, vjo)

"jp = Jno + jo "   Eq75:   jp = F(jno, jo)

"vjno = pjno * jno " Eq76:   vjno = F(jno, pjno)

"pjno = pjp "   Eq77:   pjno = F(pjp)

"vjo = pjo * jo "   Eq78:   vjo = F(jo, pjo)

"pjo = pjp "   Eq79:   pjo = F(pjp)

"j = jno + jo + jg " Eq80:   j = F(jg, jno, jo)

"vj = vjno + vjo +

"   Eq81:   vj = F(vjg, vjno, vjo)

"PJ = vj / j "   Eq82:   pj = F(j, vj)

"pds = pdsrate * py

"   Eq83:   pds = F(pdsrate, py)

"vds = PDS * ds "   Eq84:   vds = F(ds, PDS)

"pi = pw * (sspusd /

"   Eq85:   pi = F(pw, sspusd)

"dem = cp + CG +

j "   Eq86:   dem = F(cg, cp, j, jo, xno)

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"ino = 0.42 * dem " Eq87: ino = F(dem)

"io = jo + .8 * opex

"   Eq88: io = F(jo, opex, pjo, sspusd)

"i = ino + io "   Eq89: i = F(ino, io)

"pino = pi "   Eq90: pino = F(pi)

"pio = pi "   Eq91: pio = F(pi)

"vino = pino * ino " Eq92: vino = F(ino, pino)

"vio = Pio * io "   Eq93: vio = F(io, pio)

"vi = vino + vio "   Eq94: vi = F(vino, vio)

"pxo = pxo1 *

price_h "   Eq95: pxo = F(price_heat_ss, pxo_m, sspusd)

"xo = xo1 *

prod_heat "   Eq96: xo = F(prod_heat_mbbl, xo_m)

"vxo = pxo * xo "   Eq97: vxo = F(pxo, xo)

"vxno = pxno * xno

"   Eq98: vxno = F(pxno, xno)

"pxno = pxnorate *

pc "   Eq99: pxno = F(pcp, pxnorate)

"x = xo + xno "   Eq100:   x = F(xno, xo)

"vx = vxo + vxno "   Eq101:   vx = F(vxno, vxo)

"px = vx / x "   Eq102:   px = F(vx, x)

"ca = vx - vi + nia

"   Eq103:   ca = F(nct, nia, vi, vx)

"cano = groil - suda Eq104:   cano = F(groil, sudantransfer, vcgdon, vcnpi, vi, vio,

"   vjgdon, vxno)