

Status Paper on Odisha Government Debt: 2019-20

Centre of Excellence in Fiscal Policy and Taxation

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ACRONYMS

DI	Debt Index
DMF	District Mineral Foundation
DSA	Debt Sustainability Analysis
DSR	Debt Stock Ratio
EAP	Externally Aided Projects
FC	Finance Commission
FRBM	Fiscal Responsibility and Budget Management Act
FPSS	Fiscal Policy Strategy Statement
GSDP	Gross State Domestic Product
GFD	Gross Fiscal Deficit
IP	Interest Payments
IPRR	Interest Payments to Revenue Receipts
LIC	Life Insurance Corporation
LIBOR	London Interbank Offer Rate
MTFP	Medium Term Fiscal Plan
NABARD	National Bank for Agriculture and Rural Development
NSDPPCA	Net State Domestic Product Per Capita
NSSF	National Small Savings Fund
OMBADC	Odisha Mineral Bearing Areas Development Corporation
RBI	Reserve Bank of India
RRB	Regional Rural Bank
SDLs	State Development Loans
WMA	Ways & Means Advances
WAY	Weighted Average Yield
WAM	Weighted Average Maturity

Status Paper on Government Debt for 2019-20: Odisha

Executive Summary

- i. State Government Debt stood at Rs. 113237 Crore (19 per cent of GSDP) during 2020-21 witnessing an increase from Rs. 52017.3 Crore (15.8 per cent of GSDP) in 2015-16, registering a compound annual growth rate of 21.5 per cent during this period.
- ii. The share of internal debt stood at Rs. 87814.5 Crore which constitute 77.5 per cent of total public debt (14.73 per cent of GSDP) during 2020-21, higher than Rs. 33757.1 Crore in 2015-16 accounts 64.9 per cent of total public debt (10.3 per cent of GSDP).
- iii. The share amount of open market borrowing in total internal debt stood at Rs. 53511 Crore (61 per cent of total internal debt) during 2020-21, higher than Rs. 8128.1 Crore (24 per cent of total internal debt) in 2015-16.
- iv. The share of public account liabilities in the total liabilities has declined during the period 2015-16 to 2019-20, attributable to decline in the contribution of 'State Provident Funds' and 'Reserve Funds' during this period.
- v. The per capita debt stands at Rs. 24751 during 2020-21 as compared to Rs. 11822 during 2015-16, registering a compound annual growth rate of 20.3% during this period.
- vi. IPRR (interest payments to revenue receipts) ratio of the State stood at 5.64 per cent in 2019-20 as compared to 4.85 per cent in 2015-16. Average cost of borrowing (effective interest rate) remained at 6.7 per cent for the 2019-20 as compared to 7.1 per cent in 2015-16. The IPRR ratio and interest rate for State is observed to be well below the nominal GDP growth rate, indicating that Odisha is comfortably placed in terms of debt sustainability parameters.
- vii. During FY 2019-20, 11 nos. of ongoing projects and 6 nos. new projects are funded by external borrowings. Out of total project cost of Rs.1774.00 crore, Rs.1400.00 crore is funded by EAP (external) borrowings.
- viii. Off-Budget borrowing is budgeted at Rs. 7580 crore, which is 10.74 per cent of total programme expenditure of Rs. 70600 crore in FY 2019-20.
- ix. Lower Composite Debt Index (DI) indicates lower debt burden and higher debt sustainability.
- x. Odisha has remained as best four performers in debt management among all states during 2015-16 to 2018-19.
- xi. Based on the past trend, the interest payment to GSDP ratio is estimated at 1.12%, nominal growth in GSDP at 11% and cost of borrowing (interest rate) at 6%. So, the sustainable Debt-GSDP ratio is calculated at 20.7%.

1. Introduction

Accumulation of debt reflects the outcome of state governments' fiscal operations on the revenue and expenditure sides of their budgets. If expenditure, whether committed or discretionary, exceeds revenues - tax and non-tax, the excess can only be financed through fresh borrowings. All borrowings that are repayable and/or which interests accrue are considered as debt.

The Government Debt includes all liabilities of State Government contracted against the Consolidated Fund of the State, and liabilities in the Public Account of the State, called Other Liabilities. Public debt is further classified into Internal Debt and Loans and Advances from the Central Government. Internal debt consists of marketable debt and non-marketable debt. Internal debt comprises State Development Loans (SDLs), Power Bonds, Compensation and other Bonds, Borrowings from Banks and FIs, National Small Saving Fund (NSSF) and Ways & Means Advances (WMA) & ODs from RBI or any other banks. Other liabilities include liabilities on account of State Provident Funds, Reserve Funds and Deposits, Other Accounts, etc.

2. State Government Debt Profile

The liabilities of the State consist mainly of internal borrowings, loans and advances from the GoI and receipts from the Public Accounts and Reserve Funds. The State has successfully overcome the debt-trap of the past years and improved debt sustainability through fiscal prudence. States' dependence on market borrowing has increased significantly over the years, especially since 2017-18, following the recommendation of the 14th Finance Commission (FC) to exclude states from the National Small Savings Fund (NSSF) financing facility. The share of market borrowing in financing GFD has also increased, mainly due to the drying up of other sources of financing. The brief description of the major components of the total outstanding liabilities of the state government is given in Table 1.

State Government Debt stood at Rs. 113237 Crore during 2020-21 witnessing an increase from Rs. 52017.3 Crore in 2015-16, registering a compound annual growth rate of 21.5 per cent during this period. The composition of States' outstanding liabilities reveals decrease in reliance on NSSF borrowings to finance the GFD, as the State has opted out of NSSF since 2016-17, being a high cost borrowing. The share of internal debt stood at Rs. 87814.5 Crore which constitute 77.5 per cent of total public debt (14.73 per cent of GSDP) during 2020-21, higher than Rs. 33757.1 Crore in 2015-16 accounts 64.9 per cent of total public debt (10.3 per

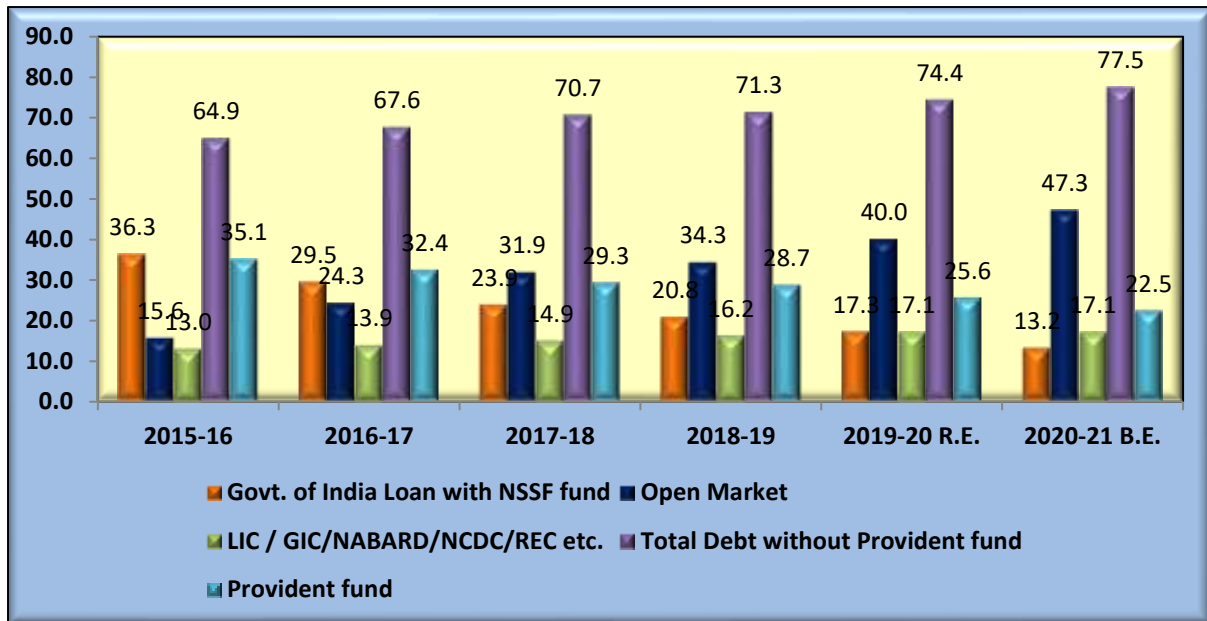
cent of GSDP). The share of open market borrowing in total internal debt stood at Rs. 53511 Crore (61 per cent of total internal debt) during 2020-21, higher than Rs. 8128.1 Crore (24 per cent of total internal debt) in 2015-16. The State's dependence on loans from the central government has come down to around 13.2% during 2020-21 of the total liability from 36.3% during 2015-16 (see Figure 1). The share of State provident funds had declined from the year 2015-16 (35.1%) to 2020-21 (22.5%). The per capita debt stands at Rs. 24751 during 2020-21 as compared to Rs. 11822 during 2015-16, registering a compound annual growth rate of 20.3% during this period (see Table 1 and Figure 1).

Table 1: Debt Position of the State Government and Per-Capita Loan (Rs. Crore)
(Excluding Ways & Means Advance)

Year	2015-16	2016-17	2017-18	2018-19	2019-20 R.E.	2020-21 B.E.
1. Govt. of India Loan with NSSF fund	18882.34	18307.22	17627.31	17004.71	16461.73	14959.20
2. Open Market	8128.11	15092.90	23530.90	28030.90	38171.60	53511.53
3. LIC / GIC/NABARD/NCDC/REC etc.	6746.60	8618.32	11031.64	13217.14	16303.20	19343.80
4. Internal Debt (1+2+3)	33757.06	42018.44	52189.85	58252.75	70936.53	87814.53
5. Provident fund (GPF)	18260.28	20117.02	21674.82	23422.57	24422.57	25422.57
6. Total Debt (4+5)	52017.33	62135.46	73864.67	81675.32	95359.10	113237.10
7. Population (in Cr.)	4.40	4.44	4.49	4.53	4.58	4.58
8. Per capita Loan in Rs. without GPF	7672.06	9463.61	11623.57	12859.33	15505.25	19194.43
9. Per capita Loan in Rs. with GPF	11822.12	13994.47	16450.93	18029.87	20843.52	24751.28

Source: Various Budget Documents, Government of Odisha.

Figure 1: Debt Profile of the State (% Share of Total)



Source: Various Budget Documents, Government of Odisha.

Internal Debt and LIC/GIC/NABARD/NCDC/REC etc. have been increasing during the same period as a percent of total debt as well as a percent of GSDP. However, Govt. of India Loan with NSSF fund, Provident Funds observing a declining trend during this period (see Table 2).

Table 2: Debt Position of the State (per cent)

Years/Components	2015 -16	2016-17	2017-18	2018-19	2019-20 R.E.	2020-21 B.E.
	<i>(As % of Total)</i>					
Internal Debt	64.90	67.62	70.66	71.32	74.39	77.55
LIC / GIC/NABARD/NCDC/REC etc.	12.97	13.87	14.93	16.18	17.10	17.08
Govt. of India Loan with NSSF fund	36.30	29.46	23.86	20.82	17.26	13.21
Provident Funds, etc.	35.10	32.38	29.34	28.68	25.61	22.45
	<i>(As % of GSDP)</i>					
Internal Debt	10.27	10.68	12.00	11.75	13.29	14.73
LIC / GIC/NABARD/NCDC/REC etc.	2.05	2.19	2.54	2.67	3.05	3.244
Govt. of India Loan with NSSF fund	5.75	4.65	4.05	3.43	3.08	2.51
Provident Funds, etc.	5.56	5.11	4.99	4.72	4.58	4.26

Source: Various Budget Documents, Government of Odisha.

3. Public Account Liabilities of the State Government

All public money received by or on behalf of the State Government, other than those for credit to the Consolidated Fund of State Government, is credited to the Public Account. The

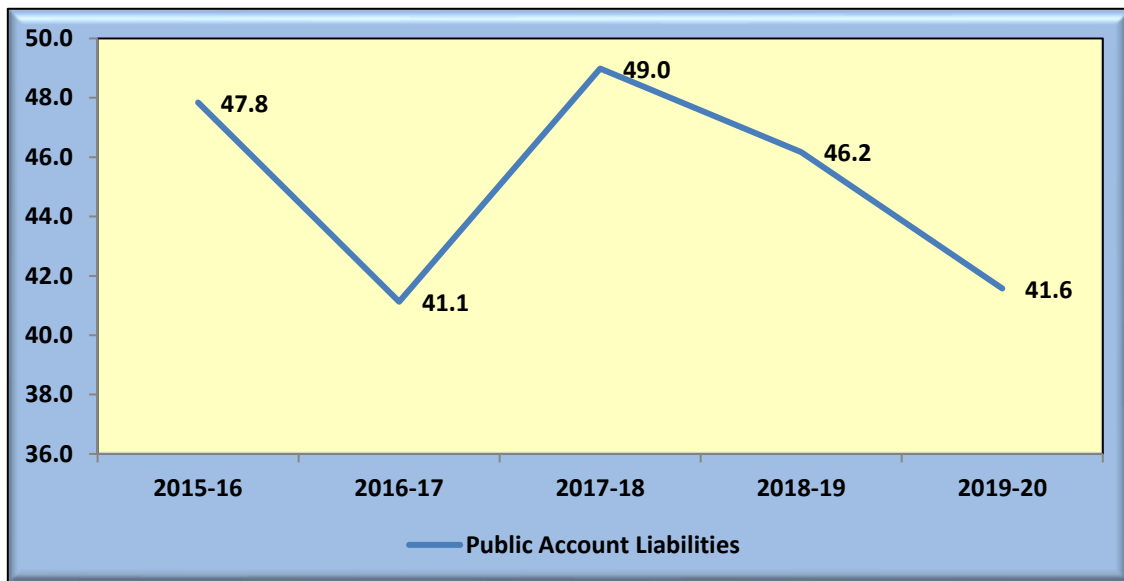
receipts into the Public Account and disbursements out of it are generally not subject to vote. It includes provident fund contributions of State government employees, security deposits and other deposits received by the Government, etc. In the case of Public Account Liabilities, the Government acts as a Banker or Trustee and refunds the money on demand after completion of the implicit contract/ event. The details of Public Account Liabilities of the Central Government are presented in Table 3.

Table 3: Public Account Liabilities of the State Government (Rs. Crore)

Year	2015-16	2016-17	2017-18	2018-19	2019-20
Public Account Liabilities	31200	29606	50486	51467	55430
% Share of Total Outstanding Liabilities	47.8	41.1	49.0	46.2	41.6
% Share of GSDP	9.5	7.5	11.6	10.4	10.4

Source: Various Budget Documents, Government of Odisha.

Figure 2: Public Account Liabilities of the State Government (% share in Total)



Source: Various Budget Documents, Government of Odisha.

Public Account liabilities have increased from Rs. 31200 crore in 2015-16 to Rs. 55430 in 2019-20, constituted 41.6 % of total liabilities. However, the public account liabilities as a percentage of total liabilities have exhibited a steady decline since 2017-18 (see Table 4 and Figure 2). The major categories under this head are discussed below (Ref. Table 5, 6 & 7). As a percentage of GSDP, there is marginal increase from 9.5% in 2015-16 to 10.4% in 2019-20.

3.1 State Provident Funds

The share of accumulated Provident Fund contributions of State Government employees under the head 'State Provident Funds' decreased substantially from 28 % as % of total liabilities in 2015-16 to 17.8 % in 2019-20 (Table 4).

Table 4: State Provident Funds (Rs. Crore)

Year	2015-16	2016-17	2017-18	2018-19	2019-20
State Provident Funds	18260	20118	21675	22675	23675
% Share of Total Outstanding Liabilities	28.0	27.9	21.0	20.3	17.8
% Share of GSDP	5.6	5.1	5.0	4.6	4.4

Source: Various Budget Documents, Government of Odisha.

3.2 Reserve Funds

Reserve Funds constituted 7% of total liabilities and 1.7 % of GSDP in 2019-20, lower from 8.9% and 1.8% respectively during 2015-16. A more detailed account is given in Table 5.

Table 5: Reserve Funds (Rs. Crore)

Year	2015-16	2016-17	2017-18	2018-19	2019-20
Reserve Funds	5830	1760	7197	7198	9299
% Share of Total Outstanding Liabilities	8.9	2.4	7.0	6.5	7.0
% Share of GSDP	1.8	0.4	1.7	1.5	1.7

Source: Various Budget Documents, Government of Odisha.

3.3 Deposit and Advances (Net Balances)

The share of accumulated Deposit and Advances as % of total liabilities increased substantially from 11% in 2015-16 to 16.8% in 2019-20 (Table 6). As a percentage of GSDP, there is marginal increase from 2.2% in 2015-16 to 4.2% in 2019-20.

Table 6: Deposit and Advances (Net) (Rs. Crore)

Year	2015-16	2016-17	2017-18	2018-19	2019-20
Deposit and Advances (Net)	7110	7728	21614	21594	22456
% Share of Total Outstanding Liabilities	10.9	10.7	21.0	19.4	16.8

% Share of GSDP	2.2	2.0	5.0	4.4	4.2
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Source: Various Budget Documents, Government of Odisha.

To summarize, the share of Public Account Liabilities in the total liabilities of the Government has declined during 2015-16 to 2019-20, attributable to decline in the contribution of 'State Provident Funds' and 'Reserve Funds' during this period. The share of other components of Public Account Liabilities such as Deposit and Advances (Net) in the total liabilities of the State Government has increased in the recent years.

4. Externally Aided Projects (EAP) Loans

Externally Aided Projects are important potential sources of augmenting the States' resources and thereby external assistance plays a significant role in the development process. External assistance has gained significance to acquire competitive strength under the globalized economic framework for social and infrastructure sectors.

Therefore, in recent years, to finance the capital outlay for sustained development and creation of infrastructure, the state has been availing external funds (denominated in foreign currency) from Multilateral Development Banks (MDBs), Bilateral Agencies, and International Financial Institutions (IFIs) such as World Bank, DFID, IFAD, WFP, JBIC (JICA), KFW, BRICS Bank, AIIB etc. These external resources are used to fund the capital projects in the sectors like Irrigation, Energy, Road, Disaster Management, Urban Infrastructure & Sanitation, Higher Education, Forestry, ST&SC Girls Education, and livelihood support to the Particularly Vulnerable Tribal Groups. These funds are routed through Govt. of India and made available to the State through a budgetary mechanism. This helps in bridging the resource gap in the developmental program of the State. The cost of these external borrowings is relatively cheaper than internal borrowing, and available for long term. These external borrowings are known as Externally Aided Projects (EAP) are tied in nature as it is used for financing identified capital projects.

4.1 Lending Back to Back and Exchange Rate Risk

These external donors lend fund in multiple foreign currencies which have exchange rate risk. As both principal and interest payment are generally linked to London Interbank Offer Rate (LIBOR) of different currencies. In terms of the recommendation of the 12th Finance

Commission, EAP is being made available to the States on the same terms and conditions as granted by the lending agencies on back to back basis w.e.f. 01.04.2005. Therefore, the exchange rate fluctuations on this foreign currency assistance given by the external donor are being borne by the State Governments.

4.2 Status of EAP in Odisha: FY 2019-20

During FY 2019-20, 11 nos. of ongoing projects and 6 nos. new projects are funded by external borrowings. Out of total project cost of Rs.1774.00 crore, Rs.1400.00 crore is funded by EAP (external) borrowings accounting for 79% of total cost. The specific capital projects funded by various external lending institutions are indicated in Table 7 below.

Table 7: List of External Lenders and Capital Projects in FY 2020-21

Sl.	External Lenders	Sectors
1	World Bank	Irrigation, Roads and Disaster Management, Skill Development, Higher Education, HR Capacity Building, Social Protection Registry, Strengthening Statistical System,
2	JICA	Irrigation, Urban Sanitation Energy & Forestry
3	ADB	Irrigation, Skill Development & Urban Area Development
5	KfW	Urban Infrastructure

Since EAP is borrowing in foreign currency with floating rate of interest, it is exposed to both exchange rate risk and interest rate risk. Both repayment cost as well as interest cost in terms of domestic currency may become very high in long term. Besides, some lenders charge commitment fee on undisbursed balances.

5. Fiscal Consolidation

State government is committed towards fiscal consolidation in a phased manner. In Odisha, fiscal consolidation or the fiscal roadmap for the State government is expressed in terms of the targets for fiscal parameters to be realised in successive budgets, as provided in the Fiscal Responsibility and Budget Management Act (FRBM). The FRBM framework has a twin focus on debt and fiscal deficit and indicates that the Government of Odisha is committed to follow the path of fiscal consolidation.

The Medium Term Fiscal Plan (MTFP) cum Fiscal Policy Strategy Statement (FPSS) presented along with the State Budget for 2020-21 outlined a gradual path of reduction of fiscal deficit and specified rolling targets for fiscal deficit. The fiscal deficit was budgeted at 3.0 per cent of GSDP and debt to GSDP ratio is estimated at 18.99% for the year 2020-21 (see Table 8).

Table 8: Fiscal indicators for the Medium Term Projection period

Description	Actual	Last Year Revised Estimates	Current Year Target Budget Estimates	Targets for Next two	
			Y	Y + 1	Y + 2
	2018-19	2019-20	2020-21	2021-22	2022-23
Revenue Deficit as percentage of GSDP (%)	2.86%	1.16%	1.59%	1.88%	1.65%
Fiscal Deficit as percentage of GSDP (%)	-2.05%	-3.41%	-3.00%	-3.00%	-3.00%
Primary Deficit as percentage of GSDP (%)	-0.88%	-2.19%	-1.80%	-1.82%	-1.82%
Total Debt Stock as percentage of GSDP (%)	16.47%	17.86%	18.99%	20.01%	20.95%

Source: Various Budget Documents, Government of Odisha.

6. Adherence to FRBM Act

The State Government has adopted a rule based fiscal policy with medium term fiscal targets through enactment of the Fiscal Responsibility and Budget Management Legislation. The State Government has amended the FRBM Act, 2005 on the basis of recommendations of the 14th Finance Commission. The FRBM (Amendment) Act, 2016 has made it mandatory for the State to generate revenue surplus, contain the fiscal deficit within 3% of GSDP, achieve Debt/GSDP ratio at Finance Commission recommended level and put in place a monitoring mechanism on implementation of FRBM Act. Further, the State can avail additional 0.25 per cent of fiscal deficit, if the debt-GSDP ratio is less than or equal to 25 per cent in the preceding year and another 0.25 per cent if the interest payments are less than or equal to 10 per cent of the revenue receipts in the preceding year provided there is no revenue deficit in the year in which borrowing limits are to be fixed and the immediately preceding year. In the meantime, the 15th Finance Commission has submitted the standalone report for the year 2020-21, which does not provide for specific fiscal correction path in medium term. Thus, till

the full report of the 15th Finance Commission comes out, the fiscal policy of the State will be guided by targets envisaged in Odisha FRBM Act.

Table 9: Strict Adherence of Debt Indicators to FRBM Act

Year	2015-16	2016-17	2017-18	2018-19	2019-20 R.E.	FRBM Limit
Fiscal Deficit as percentage of GSDP	-2.15%	-2.38%	-2.15%	-2.05%	-3.41%	3%
Interest Payment to Revenue Receipts (IPRR)	4.85%	5.43%	5.85%	5.74%	5.64%	15%
Total Debt Stock as percentage of GSDP	15.83%	15.79%	16.99%	16.47%	17.86%	25%

Source: Various Budget Documents, Government of Odisha.

All the debt indicators are kept within the FRBM targets for the period 2015-16 to 2019-20 (see Table 9). The Fiscal Deficit is maintained well below the FRBM limit which is 3.00 per cent of GSDP which is within the limit prescribed under Odisha FRBM Act, 2005 except for the FY 2019-20. The year-end debt stock for the year 2015-16 to 2019-20 is less than the stipulated 25% limit. The Interest Payment to Revenue Receipts (IPRR) is well below the prescribe limit of 15%.

7. Off-Budget Borrowings

Off-budget/Extra Budgetary Resources (EBRs) are financial liabilities which are not part of the official budget calculations. These are indirect borrowings and excluded from the fiscal deficit calculations. However, it adds to the total debt of the government. Off-Budget borrowings are part of the budgetary exercise to ensure utilization of funds in a more systematic and planned manner to meet the developmental needs of the state. It helps in enlarging the resource envelope of the state through convergence of budgetary resources. It provides more flexibility in terms of maturity and cost of funds.

District Mineral Foundation (DMF), compensation to the State under Section 21(5) of the MMDR Act deposited with Odisha Mineral Bearing Areas Development Corporation (OMBADC), Welfare cess for Construction of workers & other cesses, different funds under various sectoral policies, Corporate Social Responsibility obligation, etc. are such off-budget resources in the state.

Off-Budget borrowing is budgeted at Rs. 7580 crore, which is 10.74 per cent of total programme expenditure of Rs. 70600 crore in FY 2019-20.

8. Debt Index of Odisha

Instead of ranking debt burden of states by aggregate debt indicators such as debt to GSDP ratio, per capita debt and cost of debt servicing, the ranking of debt burden is done on the basis estimated Composite Debt Index (DI) for the period from 2015-16 to 2018-19. Hence, to study the relative position of Odisha in terms Debt-GSDP ratio, per capita debt, debt servicing ratio, the study has computed the Debt Index of the states in India (18 major States). To this end, the study utilizes yearly data of 18 major Indian states for the period 2015-16 to 2018-19. Further, these states were classified into three homogenous categories comprising seven states as high income states (HIS), four middle income states (MIS), and seven low income states (LIS). The classification is based on the criterion of five year average (2012-13 to 2016-17) of per capita income measured by annual net state domestic product per capita (NSDPPCA) at constant prices for each state. These 18 sample states selected for present analysis are listed in Table 10.

Table 10: List of Major States

Category	States
HIS	Goa, Haryana, Maharashtra, Kerala, Gujarat, Karnataka, Tamil Nadu,
MIS	Punjab, Andhra Pradesh, Rajasthan, Chhattisgarh
LIS	Odisha, Jharkhand, Madhya Pradesh, Assam, West Bengal, Uttar Pradesh, Bihar

Note: Low Income States (LIS); Middle Income States (MIS); High Income States (HIS)

The relative distance method used to construct composite index is important as it is multi-dimensional in nature and covers several indicators. This study takes three major sub-indices viz. Debt Ratio Index (DRI), Per capita Debt Index (PDI) and Debt Servicing Index (DSI) reflecting various facets of debt performance. These three major sub-indices are combined to shape the Composite Debt Index (DI). The structure of DI is depicted in Table 11.

Table 11: Structure of Composite Debt Burden Index

Debt Index (DI)	<i>Major Sub-indices</i>	<i>Parameters</i>
	i. Debt Ratio Index (DRI)	The ratio of total debt to GSDP is computed to analyse the burden of debt of the state.
ii. Per capita Debt Index (PDI)	The per capita debt is computed to analyse the per capita burden of debt of the state.	

	ii. Debt Servicing Index (DSI)	The ratio of interest payments to revenue receipts (IP/RR) is used to analyse debt servicing position of the state.
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The ratio of debt to GSDP and per capita debt is computed to analyze the burden of debt of the state. The ratio of interest payments to revenue receipts (IP/RR) is used to analyze debt servicing position of the state. To identify the debt stabilization stage that the state belongs to, this study constructs a Debt Index which is a Composite Debt Index of 3 sub-indices: Debt Ratio Index (DRI), Per capita Debt Index (PDI) and Debt Servicing Index (DSI). To construct the sub-indices from the above identified parameters, the Relative Distance methodology is adopted. It is calculated as follows;

$$\text{Index (I)} = ((A - \text{Min}) / (\text{Max} - \text{Min})) * 100$$

Where, A refers to the actual value of the parameter for a given state. Max and Min are the maximum and minimum value of the corresponding parameter across the states in a specified period. The value of I will lie between 0 to 100 where 0 depicts best performance and 100 implies the worst performance. In other words, Higher the Debt Index indicates lower debt burden and higher debt sustainability.

Table 12: Composite Debt Index (DI): Relative Distance Method

States	2015-16 to 2018-19	
	Index (I)	Rank (R)
Odisha	9.75	4
Jharkhand	28.12	8
Madhya Pradesh	24.57	6
Assam	7.21	2
West Bengal	82.18	17
Uttar Pradesh	37.78	11
Bihar	36.11	10
Punjab	100.00	18
Andhra Pradesh	39.14	13
Rajasthan	61.04	15
Chhattisgarh	0.80	1
Goa	32.47	9
Haryana	52.37	14
Maharashtra	14.61	5
Kerala	62.80	16
Gujarat	27.47	7
Karnataka	9.26	3
Tamil Nadu	38.08	12

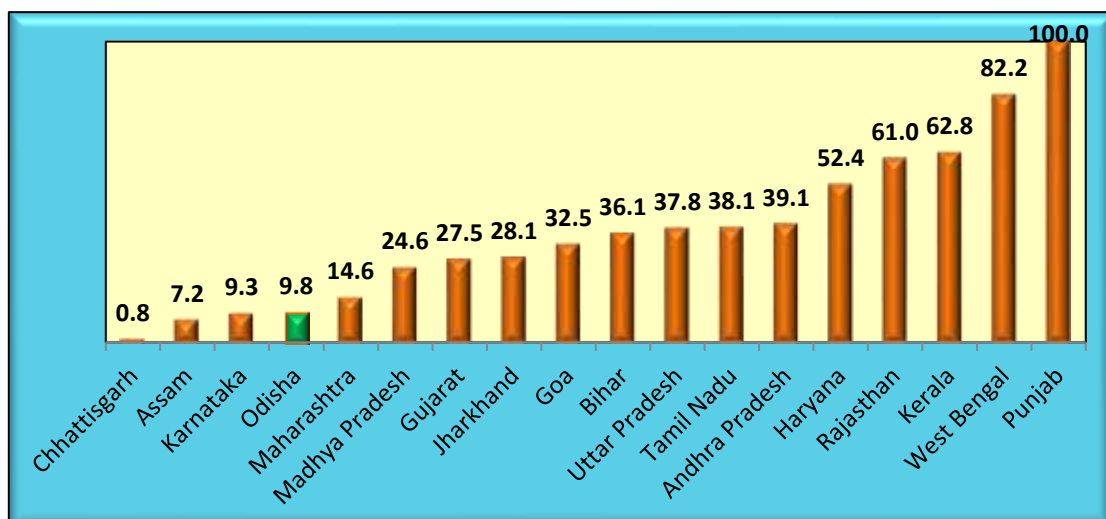
Low Income States (LIS) Average	32.25	
Middle Income States (MIS) Average	50.25	
High Income States (HIS) Average	33.87	
All State Average	38.79	

Source: Finance Accounts, C &AG and Budget Documents, various issues, Government of Odisha.

Debt Index constitutes the averages of Debt Burden Index (DBI), Per capita Debt Burden Index (PDI) and Debt Servicing Index (DSI). The Debt Index for all the states is presented in Table 12. There is a large variation in interstate performance in terms of different sub-indices in assessing the debt burden of states. The result of DI shows that, during this period, among the group of 18 states Chhattisgarh leads with the lowest value of DI followed by Assam, Karnataka and Odisha and were placed in the top four performers in terms of their debt burden. In this period, Punjab, West Bengal and Kerala are least performers and very high debt to GSDP ratio as well as IP/RR ratio has account for their pushing down to bottom positions and hence grieved with higher debt burden. The debt burden for LIS is lower than the MIS and HIS during the entire periods.

In terms of Debt Index, Odisha's index stood at 9.75 during 2015-16 to 2018-19, compares very well with respect to averages of LIS (32.25), MIS (50.25) and HIS (33.87). The rank of Odisha in debt index is fourth among all major states during this period. Therefore, Odisha has remained as best four performers in debt management among all states (see Figure 3).

Figure 3: Debt Index for the Period 2015-16 to 2018-19



Source: Various Budget Documents, Government of Odisha.

9. Debt Sustainability and FRBM Act

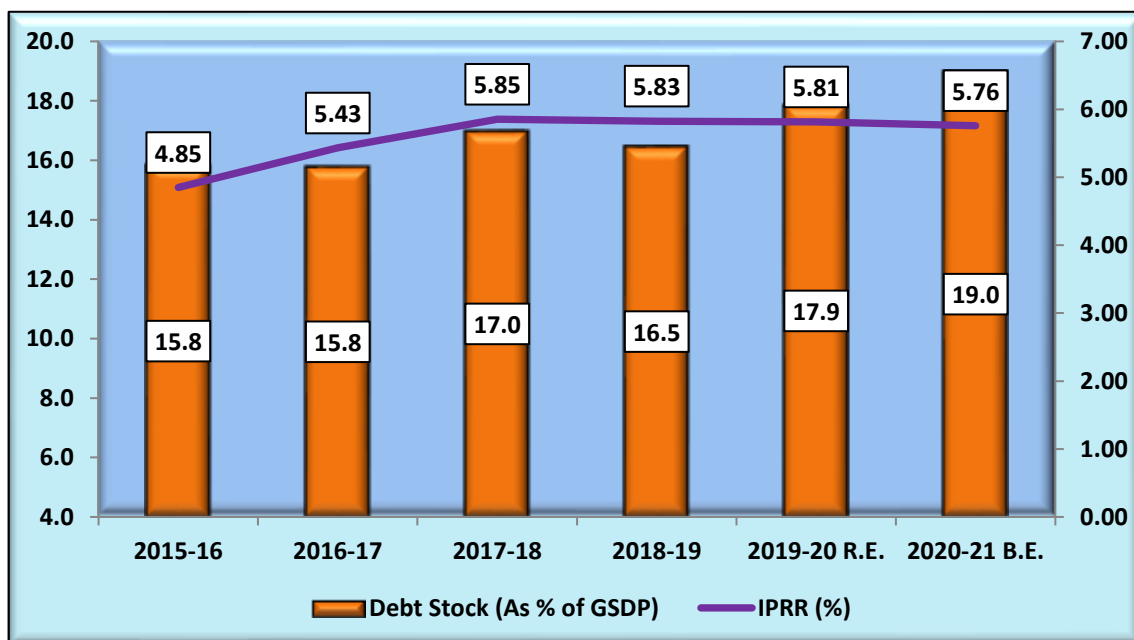
The Debt Stock ratio and Debt-Servicing ratio are two important fiscal parameters of debt sustainability. The Debt Stock ratio represented by Debt Stock as proportion of GSDP reflects the debt burden and debt servicing ratio represented by interest payment as proportion of Revenue Receipt reflects the interest payment burden of the State.

The total outstanding debt of the State Government as a proportion of GSDP declined steadily from 42.84% in 2005-06 to 17.9% in 2019-20, reflecting the states' adherence to a rule-based fiscal regime.

The interest payments to revenue receipts ratio (IPRR) has been decreased from 26.25% in 2005-06 to 5.81 % in 2019-20. The declining trend in IPRR reflects State's prudential debt management at lower cost.

Both DSR and IPRR have remained well below the FRBM limit of 25% and 15% respectively, indicating that the State is compliant to debt sustainability parameters.

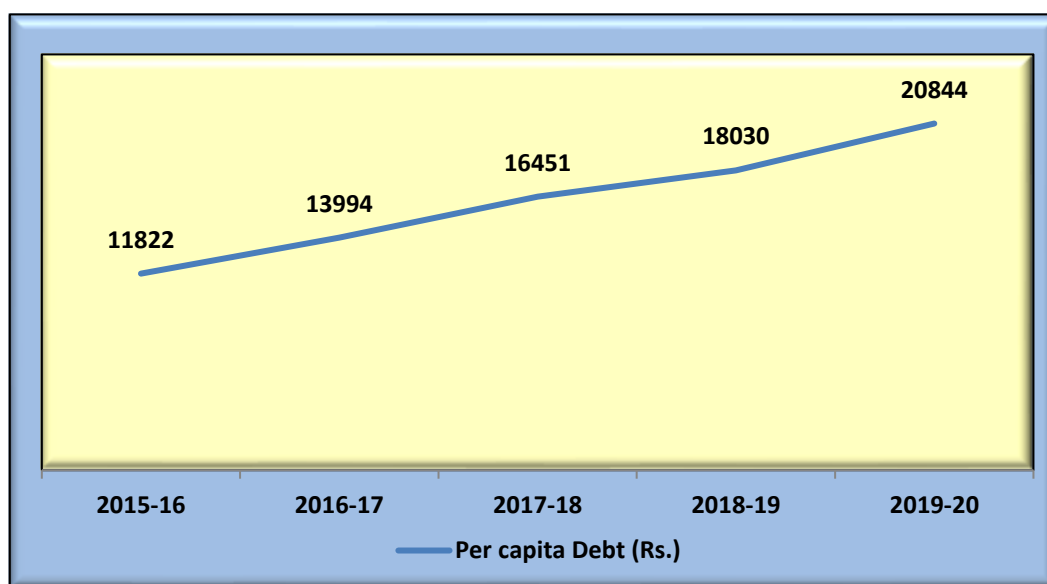
Figure 4: Trends in DSR & IPRR (%)



Source: Various Budget Documents, Government of Odisha.

The State's per capita debt burden has been measured by the per capita debt. It is evident from Figure 5 that, Odisha's per capita debt was Rs. 11822 during 2015-16 which has increased to Rs. 20844 during 2019-20, registering a compound annual growth rate of 15.2% during this period.

Figure 5: Per capita Debt (₹)



Source: Various Budget Documents, Government of Odisha.

During this period from 2005-06 to 2019-20, the compound average growth rate (CAGR) of nominal GSDP (12.94 %) has been more than both CAGR of outstanding debt (7.34 %) and CAGR of interest payment (4.22 %). Therefore, the growth in GSDP has counterpoised the growth in both outstanding debt as well as growth in interest payment. This has resulted into decline in the debt burden ratio and interest payment burden ratio (see Table 13).

Table 13: Debt Sustainability Parameters

(Rupees in crore)

Year	GSDP (at Current Prices)	Outstandin g debt at the end of the year	Interest Payment	Outstanding debt as % of GSDP	Interest payment as % of GSDP	Total Revenue Receipt	Interest Payment as % of RR
2005-06	85096	36456.45	3697.10	42.84	4.34	14084.72	26.25
2006-07	101839	37249.51	3188.43	36.58	3.13	18032.62	17.68
2007-08	129274	36311.61	3169.48	28.09	2.45	21967.19	14.43
2008-09	148491	36430.54	2889.81	24.53	1.95	24610.01	11.74
2009-10	162946	37730.04	3043.81	23.15	1.87	26430.21	11.52
2010-11	197530	39136.91	3061.46	19.81	1.55	33276.16	9.20
2011-12	230987	38589.37	2576.43	16.71	1.12	40267.02	6.40
2012-13	261700	37980.14	2807.23	14.51	1.07	43936.91	6.39
2013-14	296475	38666.24	2888.22	13.04	0.97	48946.85	5.90
2014-15	314250	43273.38	2810.27	13.77	0.89	56997.88	4.93
2015-16	328550	52017.33	3343.30	15.83	1.02	68941.44	4.85
2016-17	393562	62135.46	4035.43	15.79	1.03	74299.39	5.43
2017-18	434769	73864.66	4988.34	16.99	1.15	85204.29	5.85

Year	GSDP (at Current Prices)	Outstandin g debt at the end of the year	Interest Payment	Outstanding debt as % of GSDP	Interest payment as % of GSDP	Total Revenue Receipt	Interest Payment as % of RR
2018-19	495840	81675.32	5800.37	16.47	1.17	99564.12	5.83
2019-20 (RE)	533822	95359.10	6440.00	17.86	1.21	111785.25	5.76
2020-21 (BE)	596280	113237.10	7160.00	18.99	1.20	124300.00	5.76

10. Debt Swap Scheme (DSS)

The DSS was in operation since 2002-03 to prepay high cost loans contracted from the central government, through low cost market borrowings and proceeds from small savings. Accordingly, these loans were swapped with additional market borrowings of the states and their net small savings proceeds.

11. Debt Consolidated and Relief Facility (DCRF)

The DCRF, recommended by the FC-XII, had two components of relief, viz., debt consolidation and debt write-off. Debt consolidation provided for consolidation of all central loans (from the MoF) contracted by the states until March 31, 2004 and outstanding as on March 31, 2005 into fresh loans for 20 years to be repaid in 20 equal instalments carrying a lower interest rate of 7.5 per cent, subject to the condition that the state government concerned enacted its FRBM Act. Repayments due from states during the period 2005-06 to 2009-10 on these loans were eligible for write-off. The quantum of debt write-off was linked to the absolute amount by which the revenue deficit was reduced in each successive year during the award period. The Government of Odisha availed debt relief of Rs. 1909.45 crore @ Rs. 381.89 crore per annum from 2004-05 to 2009-10 (12th FC). Besides, 13th Finance Commission has waived GoI loans from ministries other than Ministry of Finance amounting to Rs. 63.01 crore outstanding as on 2011-12 and Rs.22.00 crore during 2013-14 and 2014-15. The debt write-off scheme was also linked to absolute reduction of the revenue deficit with a set of conditions. Odisha has successfully availed full benefit of the DCRF Scheme by fulfilling all required conditions.

12. State Development Loans (SDLs)

SDLs are the borrowings by the State Governments by issuing bonds in the open market. Reserve Bank of India conducts and manages this open market borrowing programs of the

States. Borrowing through SDLs happens through a yield-based auction system. Eligible players identified by the RBI such as Commercial Banks, Financial Institutions, Mutual Funds, Insurance Companies, Primary Dealers etc. participate in the auction process by quoting their yield based upon the market information. The auction process is carried out through both competitive and non-competitive bidding. Retails, firms, RRBs, co-operative banks are eligible to participate through non-competitive route and the rest are to participate through competitive route. There is a ceiling for the retails at 5% of the notified amount. The yield of the SDL is determined by the RBI based upon the quotes received from the eligible players through electronic platform. This yield is treated as market yield and this yield is the coupon rate of the respective State Governments which they have to pay to the buyers of the bond semi-annually. The redemption value is paid at the end of the maturity period. This coupon rate is also applicable to the non-competitive bidders though they remain outside the auction process. Government of Odisha had not availed market borrowing through SDL since 2005-06. After a long gap, it has started borrowing through SDLs since 24th February 2015. The market borrowings of the Government of Odisha are reported in Table 14 for the last five financial years.

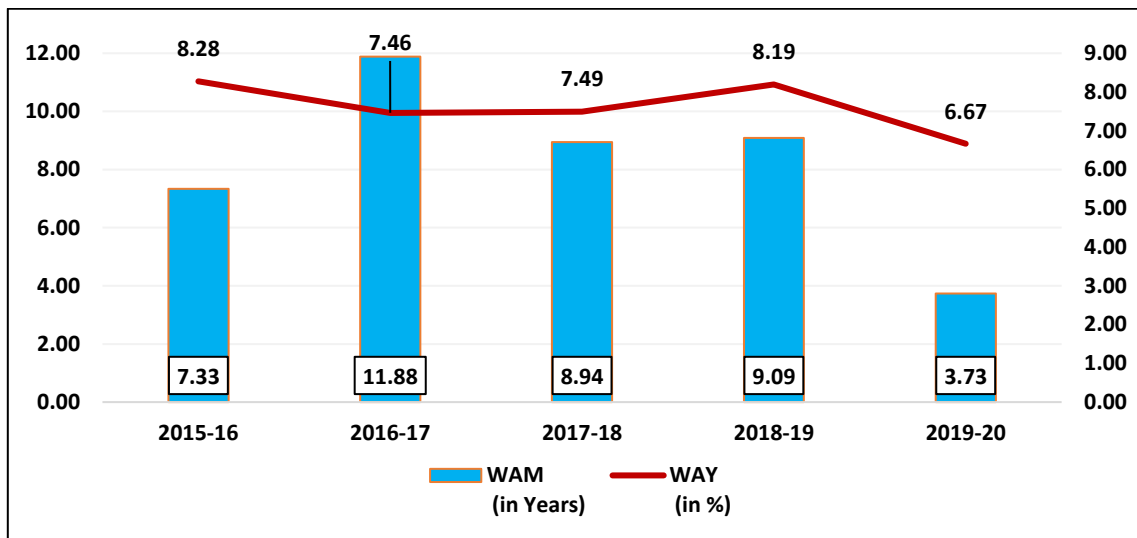
Table 14: A Profile of State Development Loans (SDLs)

Date	Tenure (Years)	Notified Amount (Rs. in Crore)	Competitive Bids Received (Rs. in Crore)	Over Subscription (Times)	Weighted Average Yield (in %)	India 10-Yr G-Sec Yield (in %)
24-Nov-15	5	1000	4025	4.03	8.0277	7.703
8-Dec-15	6	500	450	0.90	8.1548	7.795
22-Dec-15	10	500	1387	2.77	8.2492	7.756
25-Jan-16	10	1500	2936	1.96	8.3545	7.805
23-Feb-16	5	1000	4416	4.42	8.48	7.822
24-May-16	10	500	2380	4.76	7.9959	7.466
28-Jun-16	15	700	2938	4.20	7.998	7.453
8-Aug-16	5	500	4285	8.57	7.5	7.173
23-Aug-16	10	500	1475	2.95	7.5695	7.158
8-Nov-16	10	500	3485	6.97	7.0895	6.796
22-Nov-16	15	500	1480	2.96	6.8629	6.307
13-Dec-16	10	1000	2680	2.68	7.068	6.423
10-Jan-17	6	500	3725	7.45	7.0171	6.398
24-Jan-17	19	1000	3050	3.05	7.2477	6.437
14-Feb-17	7	720	2105	2.92	7.5023	6.875
14-Mar-17	15	1200	1610	1.34	7.95	6.9
23-May-17	20	500	925	1.85	7.53	6.789
23-May-17	20	500	1850	3.70	7.5287	6.789
27-Jun-17	5	1000	5740	5.74	7.0994	6.463

25-Jul-17	4	1000	10810	10.81	6.9268	6.431
22-Aug-17	12	500	1495	2.99	7.299	6.535
12-Sep-17	15	1000	4910	4.91	7.4478	6.557
14-Nov-17	6	500	2565	5.13	7.3033	7.05
28-Nov-17	10	500	2295	4.59	7.6495	7.03
12-Dec-17	12	500	2678	5.36	7.7978	7.191
16-Jan-18	6	1000	955	0.96	7.9546	7.552
27-Feb-18	5	500	1890	3.78	8.0678	7.666
13-Mar-18	3	500	3710	7.42	7.6087	7.653
20-Mar-18	4	500	2625	5.25	7.7679	7.615
10-Apr-18	3	500	2340	4.68	7.5053	7.379
8-May-18	10	500	1705	3.41	8.1523	7.58
22-May-18	5	500	1350	2.70	8.3227	7.809
5-Jun-18	20	500	1375	2.75	8.2784	7.834
26-Jun-18	25	500	1435	2.87	8.3421	7.829
10-Jul-18	5	500	2955	5.91	8.4828	7.9
24-Jul-18	5	500	1365	2.73	8.4106	7.784
28-Aug-18	4	500	3645	7.29	8.3575	7.895
11-Sep-18	15	500	1980	3.96	8.79	8.182
26-Feb-19	4	1000	2800	2.80	7.7482	7.587
23-Apr-19	3	1000	2676	2.68	7.7306	7.473
23-Jul-19	5	500	2915	5.83	6.92	6.464
23-Jul-19	10	500	1055	2.11	7.0222	6.464
15-Oct-19	5	500	3080	6.16	6.72	6.66
22-Oct-19	4	500	2885	5.77	6.5085	6.7
11-Nov-19	3	500	2115	4.23	6.2542	6.561
26-Nov-19	4	500	4415	8.83	6.4901	6.478
28-Jan-20	5	500	2275	4.55	6.8	6.575
17-Feb-20	2	1000	9335	9.34	5.7679	6.387
23-Mar-20	2	1000	1800	1.80	6.4495	6.379
23-Mar-20	3	1000	2200	2.20	6.686	6.379
7-Apr-20	2	500	3470	6.94	5.8769	6.414
7-Apr-20	4	500	1175	2.35	6.6192	6.414
13-Apr-20	1.5	500	2630	5.26	5.5792	6.495
13-Apr-20	2.5	500	2880	5.76	5.9711	6.495

Source: https://www.rbi.org.in/scripts/BS_PressReleaseDisplay.aspx and <https://in.investing.com/rates-bonds/india-10-year-bond-yield-historical-data>

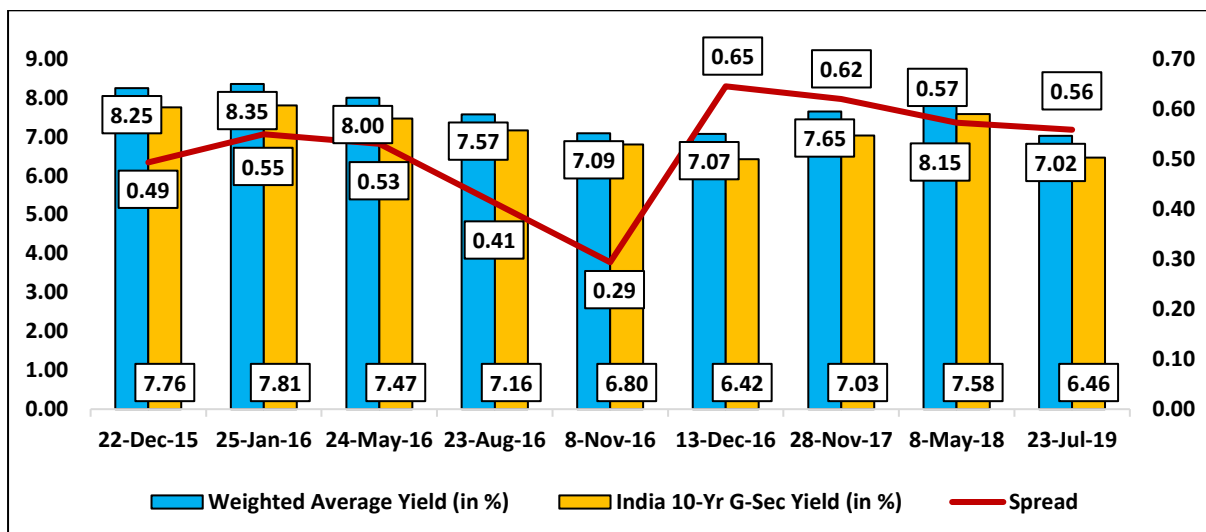
Figure 6: Weighted Average Yield (WAY) and Weighted Average Maturity (WAM) of SDL Yield over Last 5 Years



Source: https://www.rbi.org.in/scripts/BS_PressReleaseDisplay.aspx

Though there exists a positive relationship between WAY and WAM, WAY is second lowest (7.46%) with WAM of 12 years in FY2016-17. The WAM of SDLs has declined by threefold to approx. 4 years in FY2019-20 from 12 years in FY2016-17. In the recent times (i.e., FY 2019-20 onwards), the State has opted for SDLs with lower maturity (see Figure 6).

Figure 7: Spread Analysis (Comparison of 10 year SDL Yield and 10 year G-Sec Yield over Last 5 Years)



Source: https://www.rbi.org.in/scripts/BS_PressReleaseDisplay.aspx and <https://in.investing.com/rates-bonds/india-10-year-bond-yield-historical-data>

The details of yield on 10-year SDLs and 10-year G-Sec in terms of issuance during the period FY2015-16 to FY2019-20 are given in Figure 7. The weighted average yield of 10-

year SDL was 8.25% on 22nd December 2015 auction, which has decreased to 7.02% (by 123 basis points) on 23rd July 2019 auction. The difference (spread) between weighted average yield of 10-year SDL and 10-year G-Sec Yield has decreased to 0.29% on 8th November 2016 auction as compared to 0.49 % observed on 22nd December 2015 auction. However, it has increased to 0.56 % on 23rd July 2019 auction (see Figure 7).

13. Sustainable Debt Level

Using Domar Model¹, the stabilization condition can be expressed for sustainable Debt-GSDP ratio in terms of the ratio of interest payments to GSDP. An interest payment to GSDP ratio indicates the debt servicing capacity of the economy. Interest payments in any year are obtained from the product of the interest rate (r) and the closing debt stock of the previous year (D_{t-1}). Defining interest payments as (IP), we have

$$IP_t = rD_{t-1} \dots \dots (1)$$

In terms of GSDP (Y) ratios,

$$\frac{IP_t}{Y_t} = r \frac{D_{t-1}}{Y_t} \dots \dots (2)$$

But $Y_t = (1 + g)Y_{t-1}$ where g is the growth rate of GSDP

$$\frac{IP_t}{Y_t} = r \frac{D_{t-1}}{(1 + g)Y_{t-1}} \dots \dots (3)$$

$$(ip)_t = \left(\frac{r}{1 + g} \right) d_{t-1}$$

Where, $ip_t = \frac{IP_t}{Y_t}$, $d_{t-1} = \frac{D_{t-1}}{Y_{t-1}}$

As debt is stabilized at $d_t = d_{t-1} = d^*$ and $(ip)_t = (ip)^*$

$$d^* = (ip)^* \frac{(1 + g)}{r} \dots \dots (4)^2$$

Based on the past trend, the interest payment to GSDP ratio is estimated at 1.12%, estimated nominal growth in GSDP at 11% and cost of borrowing (interest rate) at 6%. So, the sustainable Debt-GSDP ratio is calculated at 20.7%.

¹ Domar (1944), The American Economic Review, Vol. 34, No. 4, pp. 798-827.

² Rangarajan, C & Srivastava, D.K (2005), EPW, July 2, pp.2919-2933

14. Conclusion

The debt position of the state has witnessed a significant improvement between the period 2015-16 to 2019-20, reflecting the impact of both favourable economic conditions and policy efforts by the state government. The debt sustainability parameters also indicate that the debt position of the state is sustainable during this period.

Despite significant improvement in the debt position of the state governments during the period 2015-16 to 2019-20, the recent growth slowdown and volatility in the financial markets have raised fresh concerns about state's financial health. In fact, the slowdown in growth momentum due to the Covid-19 pandemic outbreak has implications for the revenue raising capacity of the state, which may also constrain the debt servicing capacity, while also increasing the borrowing requirements and which may lead to marginal deterioration in debt position of the State.

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