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## **FRBM Act and Fiscal Performance: A case study of Assam State Finance**

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### **Abstract**

*Deteriorating fiscal indicators at both central and state level during 1990s has been a major cause of concern for both policy makers and researchers in India. The states have initiated fiscal reforms to bring fiscal discipline at the state level. Similarly, Assam has also initiated a series of fiscal reform measures. In this back drop the paper examines the fiscal performance of Assam after the implementation of the Fiscal Responsibility and Budget Management (FRBM) Act with the help of a Composite Index called the Assam Fiscal Performance Index (AFPI), as a metric. The study evaluates the period from 2000-2001 to 2021-22 to analyze the impact of fiscal reforms. The findings suggest an overall improvement in fiscal discipline post the FRBM Act. However, the study emphasizes the continued necessity for Assam to prioritize deficit management and enhance its revenue sources for sustained financial stability. The paper highlights the significance of striking a balance between expenditure and revenue for long-term fiscal health.*

**Key words:** Fiscal Consolidation, Composite Fiscal Performance Index, FRBM Act

### **1. Introduction:**

In India Fiscal consolidation has gained priority in the union budget 2003-04; Jha (2003) accordingly said that fiscal consolidation has the potential of reviving sentiment on the capital market and economy. He said that the program of fiscal consolidation must be integrated within the overall program of tax and expenditure reform. He also added that to attain a sustainable fiscal consolidation there should be a substantial increase in India's tax/GDP ratio which requires a substantial increase in the tax base. Similarly, Qasim et.al (2015) also said that fiscal consolidation is very important to achieve fiscal soundness for the economy and accordingly fiscal consolidation policy was adopted by Pakistan in the 1990s and is stressing both expenditure and revenue side consolidation.

Assam also experienced considerable fiscal volatility in the late 1990s like the rest of the Indian states however, Assam got a huge respite after being considered as a special

category status in 1990-91, when the pattern of financing state plans changed from 30:90 to 90:10. However the successive implementation of state pay commission played havoc with the state finance. The rise in expenditure commitments in the form of salaries, pensions, interest payments, and unsustainable deficits in the revenue account took the state toward fiscal insolvency. Thus, Assam enacted the Assam FRBM Act in 2005, which reversed the downward spiral and enabled the state to achieve a fiscal surplus. Despite the commendable attainments the fiscal health of the state is still under continuous threat (Barua et al 2013).

## **2. Literature Review:**

**a. Fiscal Performance: Assessment and Evaluation:** The fiscal crisis of the 1990s engulfed almost all the Indian states which leads to the adoption of different fiscal policies by the government. There has been a series of studies conducted by various authors concerning fiscal performance providing a macro picture of all the state's fiscal position in time series form however there are few popular works which are restricted to states. The fiscal performance of Gujarat during the period 1980-2008 has been discussed by Agrawal (2016). He used various statistical and mathematical techniques for the analysis of data like proportions and growth rates, ratio analysis, and regression analysis. Similarly, Dash (2011) attempted to measure the fiscal performance of Tripura a 'special category state' over the period 1990-91 to 2009-10 to see whether the fiscal performance of the state from different dimensions such as deficit management, revenue generation, expenditure management, and debt servicing, has improved after the implementation of FRBM (Fiscal Responsibility and Budget Management) Act. He found that the fiscal performance of the state has improved after implementing the FRBM Act. Again Das (2011) gives the picture of the fiscal position of Odisha from the period 1990-91 to 2008-09. He found that the fiscal condition of the state deteriorated after the second half of the 1990s after which the state took various measures such as tax reform, cutting down expenditure on developmental projects, and introduced the FRBMA 2005 to achieve fiscal consolidation. As a result, there was rapid growth of the economy starting from the early 2000s, but the slash in development expenditure is inimical to the long-run growth of the country so the author suggested that the government should undertake measures to reap the benefits of rapid economic growth for raising the tax/GSDP ratio. Another study by Maurya (2013) made a detailed analysis of the Uttar Pradesh fiscal position during the 1990s and 2000s. The fiscal and revenue deficit and debt were very high which call for the enactment of FRBM in 2004 to contain the deficits within a limit in each time frame.

A study on the overall fiscal health of Assam was studied by Barua et.al (2013) during the period 2001-02 to 2011-12. It examined the key deficits, their trends, and resultant implications on state finance and attempted to inspect the reforms and restructuring in state finance and analysed their implications on fiscal decentralization, retrieval and consolidation of PSEs, and the revival of the strategic power sector.

**b. The fiscal crisis in Assam:** A study on Assam was conducted by Srivastava et al. (1999) and covered the years 1986-1987 to 1996-1997. They emphasized that the shift in spending towards non-capital and non-discretionary expenditures was the cause of the serious

imbalance that had emerged in the state's fiscal profile. They discovered that in 1996–1997, non-discretionary spending made up roughly 17% of the gross domestic product (GSDP), leaving limited room for state development spending. On the revenue side, their study identified three factors—increasing reliance on government funding, a sharp reduction in the growth rate of sales tax, and a considerable decline in the contribution of non-tax revenue—as the main causes of the revenue decline. They discovered that the State Level Public Enterprises had a nearly 0% rate of return on capital invested. Based on her investigation into budgetary spending in Assam, Choudhury (2002) discovered that the revenue sources were woefully inadequate to cover the significant expenditure obligations. The state was forced to rely on borrowings because of the significant increase in budgetary expenses. The fact that revenue expenditure on tax collection and interest payments were substantially higher in Assam compared to other states is evidence that the state was unable to utilize the restricted income sources effectively. In its report on Assam from 2002, the Government of India made some observations about the state's financial situation. One of the biggest flaws of the state economy was determined to be a persistent fiscal deficit, where public borrowing outpaced private borrowing and increased macroeconomic risk. Additionally, the state was prevented from investing in laying a stronger foundation for economic growth and enhancing social progress due to the fiscal crisis, money misallocation, and wasteful use of resources. They supported shifting the government's spending priorities in favor of measures that would promote growth and development, like spending on infrastructure and capital projects.

**2. c. FRBM Targets and Attainments:** Assam enacted FRBM on 13th May 2005 and set the target to eliminate revenue deficit, reduce fiscal deficit to 3% and restrict total debt stock of the state government to 45% (percent) of Gross Domestic Product (GDP) within five years by 31st March 2010 according to GOA (2005). According to Barua et al. (2013), the Assam FRBM Act aims at fiscal stability and sustainability and to enhance efficiency and transparency in budget management. To achieve the targets, set by their respective FRBM Acts most of the states has cut their developmental expenditure. According to Dash (2011) Tripura government has been successful in achieving the FRBM target in 2007-08 and the state is better after implementing the FRBM Act. Similarly, Das (2011) found that the Odisha Government has also been successful in achieving its target and in the year 2005-06 it recorded a revenue surplus and in the succeeding year it also recorded fiscal surplus. After the enactment of the Assam FRBM Act in 2005, the state account which was running in deficit in both fiscal and revenue accounts made a tremendous improvement in its fiscal position. All the FRBM targets for the period of the Twelfth Finance Commission were fulfilled except for the year 2009-10 when the surplus turned into a deficit due to an increase in government expenditure and poor recovery cost of merit goods. Accordingly, all the FRBM targets for the Thirteenth Finance Commission were also fulfilled except for containing the Debt-GSDP ratio within the permissible limit of 28.2 percent by 31st March 2011. Barua et al (2013) also found that there was a considerable decrease in Contingent Liabilities of the State Government, thus Assam has achieved the goal of fiscal consolidation by fulfilling almost all the criteria of the FRBM Act until 2011-12.

### **3. Research Gap:**

From the above literature it has been found that no specific and recent study on fiscal consolidation of a 'special category state' Assam has been carried out and thus there is a scope to evaluate the performance of fiscal indicators after the enactment of Assam FRBM Act 2005.

### **4. Objective of the study**

This paper is an attempt to examine the overall fiscal performance of the state during the period of 2000-01 to 2021-22 and seeks to analyse the fiscal performance of the state after the enactment of the Assam FRBM Act.

**5. Methodology and Data Analysis:** The study is entirely based on the data obtained from the secondary sources. The relevant data were collected from the various statistical reports and publications of the Government of India, the Government of Assam, and the Reserve Bank of India. The data on revenue, expenditure, debt, and deficit were obtained from the Statistical Handbook of Assam published by the Directorate of Economics and Statistics, the Government of Assam; the Report of the Comptroller and Auditor General of India on the State of the Finance of Assam and the Handbook on Statistics on Indian States, published by the Reserve Bank of India.

The broad objective of this paper is to measure the fiscal performance of Assam in terms of deficit management, revenue generation and finally how the state is maintaining its expenditure and servicing debt to examine whether the fiscal performance of the state is improving or not after implementing the fiscal reform program. The study period is 21 years i.e 2000-01 to 2021-22. To measure the fiscal performance a Composite Fiscal Performance Index for Assam has been developed known as Assam Fiscal performance Index (AFPI) following the approach of Archana Dholakia (2005). AFPI is consisting of three individual indices such as (A) Deficit Indicator Index (DII), (B) Own Revenue Effort Index (OREI) and (C) Expenditure and Debt Servicing Index (EDSI). Each indicator indices are consisting of ratios of fiscal indicators. (A) Deficit Indicator Index (DII) is consist of i) Gross Fiscal Deficit as a proportion of Total Expenditure (GFD/TEX), ii) Revenue Deficit as a proportion of Net Fiscal Deficit (RD/NFD) and iii) Capital Outlay as a proportion of Net Fiscal Deficit (CO/NFD). (B) Own Revenue Effort Index (OREI) is consist of i) Own Tax Collection as Proportion of Revenue Expenditure (OT/REX) and ii) Own Non-Tax Collection as a Proportion of Revenue Expenditure (ONT/REX) and (C) Expenditure and Debt Servicing Index is consist of i) Non-Developmental Revenue Expenditure as a proportion of Revenue Receipts (NDRE/RR), ii) Interest Payment as a proportion of Revenue Expenditure (IP/REX) and iii) Debt Repayment as a proportion of Central Fiscal Transfers received by the state (DR/GCFT) To develop the composite index following steps have been followed. We have constructed the composite index by following the methodology developed by Morris and McAlpin in 1982 which is used to construct Physical Quality of Life Index (PQLI). In the construction process first above mentioned eight key fiscal ratios are calculated (See Appendix Table-1). Secondly, each ratio has been calculated for each year i.e., for 2000-01 to 2021-22 and converted indices following the

methodology of Morris and McAlpin (Appendix Table-2). The worst and best values of each indicator were identified. For each indicator the performance of the state in each year was put on a 0 to 100 scale where, 0 represents an absolutely defined worst performance and 100 represents an absolutely defined best performance and to aid the calculations, one unit point was added to the best values of the indicators. Thus, the formula to calculate Index is as follows:  $\text{Indicator Index} = (\text{Actual Value} - \text{Minimum Value}) / (\text{Maximum Value} - \text{Minimum Value})$  In the third steps, the individual indicator indexes have been calculated taking simple average of number of ratios under each head of index. The justification for using a multiple indicator model to evaluate the fiscal performance is because the selection of only one indicator for measuring fiscal discipline is unjustified. This is an easy method to find out the performance of the state, as an increase in the value of an indicator index would necessarily mean improvement in the fiscal performance and vice versa. Once the indicator index is formed, at last the composite index is calculated as a simple average of the indicator indices.  $\text{Composite Index} = \sum \text{Individual Indicator Index of each year} / \text{Number of Individual Indicators}$  The three indicator indices of Assam for the years under study are presented in Table-2 and the average of these indices are taken to construct the composite index presented in Table-3. According to the value of composite index the years are ranked as the year with highest index value is 1 and the year with lowest value is 22.

## 6. Fiscal Performance of Assam

### 6.1 Fiscal Performance indicators

**Table-1**  
**Fiscal Performance Indicators (As a Percentage of GSDP)**

YEAR	FISCAL DEFICIT/SURPLUS (CRORE)	REVENUE DEFICIT/SURPLUS	Outstanding Debt to GDP ratio
2000-01	-4.89	-2.47	27.78
2001-02	-4.33	-2.63	31.29
2002-03	-2.54	-0.88	30.18
2003-04	-3.48	-1.71	33.16
2004-05	-4.76	-0.68	31.92
2005-06	0.62	2.61	30.99
2006-07	1.10	3.42	30.13
2007-08	1.11	3.63	28.41
2008-09	1.73	4.72	28.88
2009-10	-4.21	-1.40	29.61
2010-11	-1.77	0.05	28.49
2011-12	-1.31	0.74	27.29
2012-13	-1.10	1.12	20.97
2013-14	-2.37	0.14	19.34
2014-15	-2.95	-0.49	19.44
2015-16	1.32	2.39	18.74

2016-17	-2.41	-0.06	18.54
2017-18	-3.30	-0.48	17.8
2018-19	-1.54	2.13	18.87
2019-20	-4.30	-0.63	21.55
2020-21	-3.56	0.11	25.38
2021-22	-4.58	-0.63	27.78

Source: Calculated by author from the data collected from Finance Account, Audit Report, CAG

From the above table it is observed that, Assam has registered fiscal deficit in most of the years except for 2005-06 to 2008-09 and 2015-16. where we can see the highest revenue surplus amounting to 1.73 percent of GSDP in 2008-09. We can see from the above table that after the implementation of FRBMA fiscal deficit has gradually reduced over the years except for 2009-10 where fiscal deficit has increased to 4.21 percent of GSDP. But we can also see that Assam fiscal deficit is well within the target of FRBMA except for the year 2019-20 and 2021-22.

After the implementation of FRBMA revenue deficit has also reduced drastically and has been surplus for most of the years except for the year 2009-10 where revenue deficit was 1.40 percentage of GSDP which in the next year showed a surplus of 0.05 which further increased to 1.12 in the year 2012-13 and to 2.39 percent in 2015-16 and showed a deficit of 0.63 in recent year due to many factors one significant factor being COVID -19. Coming to the Debt to GSDP ratio we can see that Assam is quite within the FRBMA target and it has been successful in reducing the outstanding debt to GSDP ratio from 33.16 percent in 2003-04 to 17.8 percent in 2017-18. Which further tend to increase to 27.78 in 2021-22.

## 6. 2 Fiscal Performance based on individual Indicator Indices

**Table-2**  
**Different Indices and Year wise ranking on the basis of performance**

Year	Deficit Indicator index (DII)		Own Revenue Effort Index (OREI)		Expenditure and Debt Servicing Index (EXDEI)	
	Value	Rank	Value	Rank	Value	Rank
2000-01	27.31	1	-10.68	1	59.90	4
2001-02	25.10	3	-10.81	20	65.40	1
2002-03	20.08	13	-10.78	9	62.34	2
2003-04	22.16	8	-10.79	14	61.72	3
2004-05	23.65	6	-10.78	8	50.11	7
2005-06	-13.53	22	-10.74	4	47.60	9
2006-07	-6.07	19	-10.73	2	43.26	13
2007-08	-7.87	21	-10.75	6	43.60	12
2008-09	-6.27	20	-10.74	3	41.15	14
2009-10	23.98	5	-10.78	12	57.78	5

2010-11	17.97	15	-10.78	13	45.80	10
2011-12	17.97	16	-10.77	7	48.73	8
2012-13	18.24	14	-10.78	10	35.59	18
2013-14	20.25	12	-10.78	11	34.24	21
2014-15	21.07	10	-10.81	21	35.07	20
2015-16	-2.10	17	-10.79	16	30.74	22
2016-17	20.38	11	-10.80	17	36.69	15
2017-18	22.90	7	-10.79	15	44.12	11
2018-19	21.85	9	-10.75	5	35.32	19
2019-20	26.20	2	-10.80	18	36.68	16
2020-21	24.34	4	-10.81	19	36.38	17
2021-22	-3.26	18	-10.83	22	53.34	6

Source: Calculated by author from the data collected from Finance Account, Audit Report, CAG

The following Table-2 reports that the fiscal performance of the state in terms of deficit management was worst in the year 2005-06. In the next year the state performed slightly better but on the next year i.e., 2007-08 the performance has become worse than the previous year. The state continued to manage the deficit effectively after the year 2005-06 with slight fluctuations till 2020-21 with low performance again in the year 2021-22 in comparisons to its previous years. the deficit management was found to be best performance year in terms of deficit management in the year 2000-01 over the time period 2000- 2022.

The Own Revenue Effort Index (OREI) shows that the year 2021-22 was the worst performance year in terms of revenue augmentation by the state on its own effort. After the implementation of FRBMA we could see highest improvement in the year 2006-07. In the next year the performance become well but again in the year 2009-10 and 2011-12 deteriorated. The performance continues to become better from one year to another up to the year 2018-19 but that year the performance deteriorated.

Expenditure and Debt Servicing Index (EXDEI) reveals that the best performance year was 2001-02 in terms expenditure and debt servicing over the time period 2000-01 to 2021-22. The performance started to deteriorate continuously after the year 2006-07 with little fluctuations which has been seen to improve much in the year 2021-22. If we see the performance after the implementation of FRBMA it improved till 2011-12 and again it started to deteriorate continuously till the 2015-16 which recorded to be the worst performing year.

### 6.3 Fiscal Performance based on Composite Index

Finally, the composite index i.e., Assam Fiscal Performance Index (APFI) reveals that the best fiscal performance year for the state Assam in terms of deficit management, revenue augmentation and expenditure and debt servicing is 2001 -02 and the worst performance year is 2015-16(see Table3). To discuss the fiscal performance, the time period 2000-01 to 2021-22 can be divided in to four phases. The first phase is 2000-01 to 2004-05. In this phase

the performance has deteriorated over the years till 2004-05. In the second phase i.e from 2005-06 to 2011-12 we could see an improvement till 2008-09 after that a significant Improvement was recorded till 2011-12. but the performance deteriorated in the next phase which is from 2012-13 to 2016-17 with highest deterioration in the year 2015-16. The last phase is 2016-17 to 2021-22. In this stage, though the performance improved in the year 2016-17 again it has deteriorated in the next year 2017-18 with slight improvement during 2020-21 then again deteriorated in 2021-22. Fiscal situation has improved over the years but it is still under continuous threat.

**Table-3**  
**Assam Fiscal Performance Index (AFPI)**

YEAR	Assam Fiscal Performance Index (AFPI)	
	Value	Rank
2000-01	25.51	2
2001-02	26.56	1
2002-03	23.88	4
2003-04	24.37	3
2004-05	20.99	6
2005-06	7.77	21
2006-07	8.82	18
2007-08	8.33	19
2008-09	8.05	20
2009-10	23.66	5
2010-11	17.66	9
2011-12	18.64	8
2012-13	14.35	16
2013-14	14.57	15
2014-15	15.11	14
2015-16	5.95	22
2016-17	15.42	13
2017-18	18.74	7
2018-19	15.47	12
2019-20	17.36	10
2020-21	16.64	11
2021-22	13.09	17

Source: Calculated by author from the data collected from Finance Account, Audit Report, CAG

## 7. Conclusion and policy implications:

The findings of the study reveal that Assam, like many other Indian states, experienced significant fiscal volatility during the 1990s. Factors such as poor tax administration, low

tax base, inadequate non-tax revenue, and a sudden increase in expenditure contributed to the fiscal imbalance. The implementation of successive state pay commissions further strained the state's finances, leading to unsustainable deficits in the revenue account.

To address the fiscal crisis, Assam enacted the Assam Fiscal Responsibility and Budget Management (FRBM) Act in 2005, which aimed to reverse the downward spiral and achieve fiscal stability. The analysis of fiscal performance before and after the enactment of the Assam FRBM Act showed significant improvements in the state's fiscal position. But again, in the recent years we could see deteriorating fiscal health of the state.

While Assam achieved commendable fiscal consolidation and fulfilled most of the FRBM targets, the state's fiscal health remains under continuous threat. The findings of this study emphasize the need for sustained efforts to maintain fiscal discipline and address structural issues such as tax administration, revenue generation, and expenditure management. Balancing fiscal consolidation with the promotion of economic growth and social development should be a priority for policymakers.

It is recommended that the government of Assam, in collaboration with the central government, continue to pursue comprehensive fiscal reforms, including improving tax administration, expanding the tax base, and rationalizing expenditure. Furthermore, the state should explore ways to mobilize additional resources for developmental projects and invest in sectors that can contribute to sustainable economic growth. It is also recommended to shift the government's spending priorities in favour of measures that would promote growth and development, like spending on infrastructure and capital projects.

## **References:**

1. Agrawal, S. (2016), 'Gujarat Economic and Fiscal Performance: A Comparative Analysis with NSC States', *Journal of Social Science*, Department of Higher Education Government of Gujarat.
2. Barua, N. A., Goswami, N., and Dutta, P. (2013), *Evaluation of State Finances with respect to Assam*, (unpublished report) A study funded by Fourteenth Finance Commission.
3. Das, A. (2011), 'Odisha's Fiscal Consolidation Path Trimming the Fat or Cutting the Muscle?' *Journal of Department of Analytical and Applied Economics*, Volume 15, Pp. 33-50.
4. Dash, A. K. (2011), 'Fiscal Performance of Special Category States in India: A Case Study of Tripura State Finance,' *EuroEconomica*, 29(3)/2011 Pp. 121-132.
5. Dholakia, R. H. (2008), 'Fiscal Space with States and the Sixth Pay Commission', *Economic and Political Weekly*, 43(19). Pp. 16-20.
6. Dutta, P. (2012), 'A Study of State Finances and Fiscal Reforms in Assam: Post Reform Experiences and Challenges'. PhD thesis, Indian Institute of Technology Guwahati, Assam.

7. Dutta, P. and Dutta, M. K. (2014) 'Fiscal and Debt Sustainability in a Federal Structure: The Case of Assam in North East India' Romanian Journal of Fiscal Policy, Volume 5, Issue 1(8) Pp. 1-19.
8. Dutta, P. (2018), An Analysis of Health Expenditure in Assam in Recent Decades, International Journal of Science and Research (IJSR), 7(5). Pp. 1500-1502.
9. Government of Assam (2005), The Assam Fiscal Responsibility and Budget Management Act, 2005, Finance Department Dispur, Government of Assam.
10. Maurya, N. K. (2013), Debt Sustainability of a Sub-national Government: An Assessment of the State Finances of Uttar Pradesh. Working paper 213, Giri Institute of Development Studies, Lucknow.
11. Mundle, S.M., Bhanumurthy, N. R., and Das, S. (2010), Fiscal Consolidation with High Growth: A Policy Simulation Model for India. Working paper no. 2010-73, National Institute of Public Finance and Policy New Delhi.
12. Qasim, A. W., Kemal, M. A., Siddique, O. (2015), Fiscal Consolidation and Economic Growth A Case Study of Pakistan. PIDE working paper No. 124, Pakistan Institute of Development Economics Islamabad, Pakistan.
13. Thomas, T. M. (2006), 'Why Do the States Not Spend? An Exploration of the Phenomenon of Cash Surpluses and the FRBM Legislation,' Economic and Political Weekly, 41(48) PP.4965-4976.
14. Jha, R. (2003), 'Fiscal Consolidation', Economic and Political Weekly, Vol. 38, No. 12/13, Pp.1102-1103.

## Appendix

**Table-1:  
Fiscal Indicators Ratios of Assam (%)**

YEAR	GFD/TEX	RD/NFD	CO/NFD	OT/REX	ONT/REX	NDRE/RR	IP/REX	DR/GCFT
2000-01	-0.214	0.444	-0.320	0.482	0.082	0.452	0.138	0.102
2001-02	-0.194	0.597	-0.348	0.227	0.078	0.490	0.155	0.241
2002-03	-0.119	0.302	-0.477	0.272	0.097	0.458	0.175	0.241
2003-04	-0.152	0.450	-0.408	0.245	0.112	0.454	0.171	0.245
2004-05	-0.154	0.096	-0.719	0.265	0.105	0.371	0.137	0.217
2005-06	0.030	6.036	4.341	0.307	0.139	0.349	0.143	0.050
2006-07	0.055	3.504	2.303	0.304	0.162	0.317	0.132	0.060
2007-08	0.054	3.989	2.609	0.264	0.168	0.325	0.119	0.058
2008-09	0.084	2.909	1.800	0.291	0.160	0.307	0.112	0.073
2009-10	-0.169	0.325	-0.635	0.235	0.130	0.453	0.086	0.070
2010-11	-0.080	-0.026	-0.970	0.258	0.103	0.355	0.083	0.057
2011-12	-0.057	-0.535	-1.445	0.288	0.108	0.381	0.078	0.085
2012-13	-0.047	-0.786	-1.323	0.283	0.085	0.275	0.073	0.080
2013-14	-0.105	-0.048	-0.693	0.281	0.085	0.266	0.069	0.058
2014-15	-0.124	0.148	-0.645	0.242	0.062	0.275	0.060	0.140
2015-16	0.075	1.984	0.980	0.273	0.074	0.236	0.071	0.073
2016-17	-0.111	0.022	-0.831	0.245	0.088	0.289	0.060	0.059

2017-18	-0.147	0.141	-0.802	0.279	0.073	0.351	0.058	0.047
2018-19	-0.070	-1.288	-2.161	0.289	0.144	0.275	0.068	0.084
2019-20	-0.188	0.143	-0.866	0.248	0.083	0.286	0.067	0.079
2020-21	-0.157	-0.031	-1.017	0.266	0.045	0.279	0.081	0.058
2021-22	0.193	-0.138	1.020	0.237	0.043	0.421	0.073	0.057

Source: Calculated by author from the data collected from Finance Account, Audit Report, CAG

**Table-2:**  
**Formula used for conversion of Indicators in to Individual indices**

Sl/No	Indicators	Best Value (=100)	Worst value (=0)	Formula
1	GFD/TEX	-0.214-1=-1.214 (2000-01)	0.193(2021-22)	$\frac{0.193 - AV}{0.193 + 1.214} \times 100$
2	RD/NFD	-1.288-1=-2.288 (2018-19)	6.036(2005-06)	$\frac{6.036 - AV}{6.036 + 2.288} \times 100$
3	CO/NFD	4.341+1=5.341 (2005-06)	-2.161(2018-19)	$\frac{AV + 2.161}{4.341 + 2.161} \times 100$
4	OT/REX	0.482+1=1.482 (2000-01)	0.227(2001-02)	$\frac{AV - 0.227}{1.482 - 0.227} \times 100$
5	ONT/REX	0.162+1=1.162 (2006-07)	0.043(2021-22)	$\frac{AV - 0.043}{1.162 - 0.043} \times 100$
6	NDRE/RR	0.236-1=0.764 (2015-16)	0.490(2001-02)	$\frac{0.490 - AV}{0.490 - 0.764} \times 100$
7	IP/REX	0.058-1=0.942 (2017-18)	0.175(2002-03)	$\frac{0.175 - AV}{-0.942} \times 100$
8	DR/GCFT	0.245+1=1.245 (2003-04)	0.047(2017-18)	$\frac{AV - 0.047}{1.245 - 0.047} \times 100$

Source: Calculated by author from the data collected from Finance Account, Audit Report, CAG