

**Q4 FY23 GDP GROWTH AT 5.5%: FY23 GDP GROWTH LIKELY TO SURPASS 7%, MANUFACTURING SECTOR TO REBOUND****Issue No. 07, FY24  
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The variegated patterns of growth emerging across the globe is bringing forth unprecedented challenges before policy makers, regulators and economists in assessing the real rates of projected growth, not only during the current year i.e. 2023 but continuing through 2024 and 2025 as the inflation trajectory management for central banks has been elongated after the surprising turn of events last year. Clearly, many central banks will have to sit and watch the paint dry while bracing themselves for enhanced pass-through of geo-political and climate related shocks, apart from the usual suspects like burden of debt servicing in rising interest rate regime, money and currency market upheavals, accelerated spending required on energy and mobility transition and anchoring a threshold along quality job availability fitting the skill sets of a younger, experience centric population.

Amidst this global hullabaloo, India is expected to continue its showdown in pursuing a different pathway of zeroing in on drivers of growth, looking for a renewed surge in resilient manufacturing while supporting services sector to embrace enhanced efficiency. Locally, domestic consumption and investment stand to benefit from stronger prospects for agricultural and allied activities, strengthening business and consumer confidence, and strong credit growth while supply responses and cost conditions are poised to improve as inflationary pressure is easing. The Union Budget 2023-24's emphasis on capital expenditure is expected to crowd-in private investment, strengthen job creation and demand, and raise our growth potential. RBI has estimated Q4FY23 Real GDP growth to be 5.1% and full year FY23 estimates by NSO is 7.0%. For 2023-24, RBI is projecting GDP growth at 6.5% with Q1 is pegged at 7.6%. **SBI's ANN (Artificial Neural Network) model, based on 30 high frequency indicators from key sectors, and tuned/trained to project the GDP numbers forecasts the quarterly GDP growth for the Q4FY23 at 5.5%. At this rate, India's GDP growth for FY23 is likely at 7.1%.**

World Economic Outlook (WEO) report from IMF in April 2023 revised the baseline growth forecast from 3.4% in 2022 to 2.8% in 2023, before settling at 3.0% in 2024. AEs are expected to see an especially pronounced growth slowdown, from 2.7% in 2022 to 1.3% in 2023. Surprisingly, China's GDP is expected to witness a rebound, growing at 5.2% in 2023 and 4.5% in 2024, compared to 3.0% in 2022. Given the intensity/level of distrust towards the mainland from the global community, could China use its pricing prowess in bulk manufacturing as a hook to lure the corporates, playing along their quest for maintaining stronger bottom lines on a quarterly basis? Such a recourse, if it gains winds, would sure be a checkmate to the genuine efforts made in last 2-3 years to isolate the country, highlighting its vile intentions.

Global headline inflation in the baseline case is set to fall from 8.7% in 2022 to 7.0% in 2023 on the back of lower commodity prices though underlying (core) inflation is likely to decline more slowly. **Meanwhile, India Inc. continues to front lead the economic turnaround while embracing better operational and financial efficiency. In Q4FY23, around 1700 listed entities reported top line growth of 12%, while PAT grew by around 19% as compared to the same period previous year. Same set of companies reported EBIDTA growth of around 23% in Q4FY23.**

Corporate results, ex BFSI, for Q4FY23 shows both top line and bottom-line growth of around 10%, while EBIDTA grew by 7% as compared to Q4FY22. Further, it is pertinent to mention that corporate margin, which was continuously under pressure for last few quarters, shown sign of improvement in Q4FY23. **As reflected in results of around 1500 listed entities ex BFSI, EBIDTA margin, on aggregate basis, improved from 13.96% in Q4FY22 to 14.34% in Q4FY23.**

Green shoots are also emerging on foreign capital inflows in capital markets with YTD FIIs inflows in FY24 touching \$6Bn, a reversal of trend from 2022. Start-ups financing has been hit due to banking turmoil in the US, in particular failure of niche banks though it also offers a gearing up pedestal to domestic FIs to ring fence the financial needs of these changelings internally to ensure the sweet spot enjoyed by India grows in a disruptive and disproportionate manner.

**GDP GROWTH & OUTLOOK: Q4 FY23**

- ◆ Global activity has continued to show resilience, supported by robust service sector expansion . IMF in World Economic Outlook (WEO) April 2023 has revised the baseline growth forecast from 3.4% in 2022 to 2.8% in 2023, before settling at 3.0% in 2024. AEs are expected to see an especially pronounced growth slowdown, from 2.7% in 2022 to 1.3% in 2023. India’s growth is estimated to fall from 6.8% in 2022 to 5.9% in 2023 and 6.3% in 2024. While, China’s GDP is expected to grow at 5.2% in 2023 and 4.5 in 2024, compared to 3.0% in 2022.
- ◆ Global headline inflation in the baseline is set to fall from 8.7% in 2022 to 7.0% in 2023 on the back of lower commodity prices but underlying (core) inflation is likely to decline more slowly.
- ◆ In India, domestic consumption and investment stand to benefit from stronger prospects for agricultural and allied activities, strengthening business and consumer confidence, and strong credit growth. Supply responses and cost conditions are poised to improve as inflationary pressure is easing. The Union Budget 2023-24’s emphasis on capital expenditure is expected to crowd-in private investment, strengthen job creation and demand, and raise India’s potential growth.
- ◆ RBI has estimated Q4FY23 Real GDP growth would be 5.1% and full year FY23 estimated by NSO is 7.0%, . For 2023-24, RBI is projecting at 6.5% with Q1 at 7.6%.
- ◆ **GDP Growth as per SBI composite leading indicator (CLI):** The CLI Index (a basket of 43 leading indicators which includes parameters from almost all the sectors) based on monthly data shows flat in economic activity in Q4, compared to Q3.

**SBI ANN NOWCASTING MODEL**

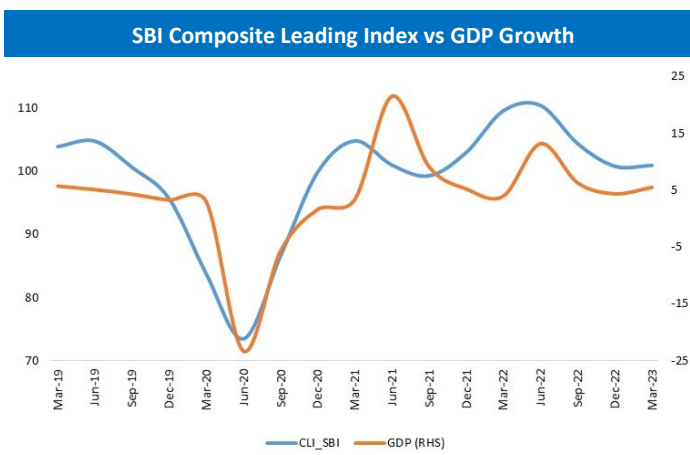
- ◆ SBI Artificial Neural Network (ANN) model which reflect the behavior of human brain, allows computer programs to recognize patterns and solve problem with machine learning.
- ◆ An Artificial neural network is a computational network based on biological neural networks that construct the structure of the human brain. Similar to a human brain has neurons interconnected to each other, artificial neural networks also have neurons that are linked to each other in various layers of the networks. These neurons are known as nodes.

Real GDP Projections		
	SBI	RBI/NSO
FY23 Q4 P	5.45%	5.1%
<b>FY23 P</b>	<b>7.1%</b>	<b>7.0%</b>
<b>FY24 P</b>	<b>6.2%-6.3%</b>	<b>6.5%</b>

Source: RBI; SBI Research

Mapping of Leading Indicators with GDP Growth			
Year	Quarter	% of indicators showing acceleration	GDP Growth (%)
FY18	Q1 FY18	59	6.1
	Q2 FY18	70	5.3
	Q3 FY18	71	6.7
	Q4 FY18	80	8.9
FY19	Q1 FY19	73	7.5
	Q2 FY19	73	6.5
	Q3 FY19	63	6.2
	Q4 FY19	48	5.7
FY20	Q1 FY20	41	5.1
	Q2 FY20	35	4.3
	Q3 FY20	34	3.3
	Q4 FY20	39	2.9
FY21	Q1 FY21	19	-23.4
	Q2 FY21	29	-5.7
	Q3 FY21	50	1.6
	Q4 FY21	59	3.4
FY22	Q1 FY22	75	21.6
	Q2 FY22	70	9.1
	Q3 FY22	61	5.2
	Q4 FY22	61	4.0
FY23	Q1 FY23	88	13.2
	Q2 FY23	76	6.3
	Q3 FY23	69	4.4
	Q4 FY23	68	-

Source: SBI Research



Source: SBI Research

- ANN comprises of Node layers containing of An Input layer, hidden layers, and an output layer. Each individual node is composed of input data, weights, a bias (threshold) and an output. ANNs rely on training data to learn and improve their accuracy over time.
- Once input layer is determined and weights are assigned, all inputs are multiplied with their respective weights and then summed , afterward the output is passed through an activation function , which determines the output. If that output exceeds a given threshold, it activates the node passing data to the next layer in the network, thereby making output of one node becoming the input of next node.

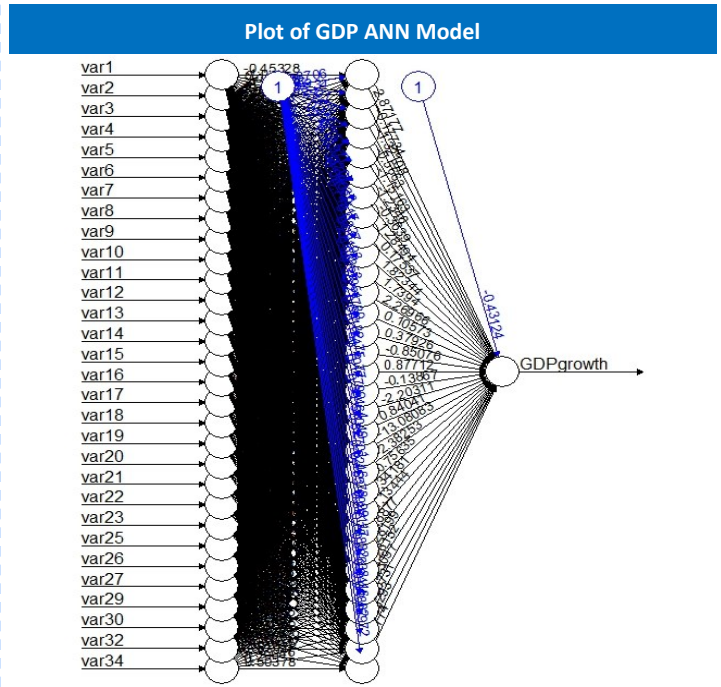
$$\sum_{i=1}^n w_i x_i + bias = w_1 x_1 + w_2 x_2 + w_3 x_3 + bias$$

$$Output = \begin{cases} 1 & \text{if } \sum_{i=1}^n w_i x_i + bias \geq 0 \\ 0 & \text{if } \sum_{i=1}^n w_i x_i + bias < 0 \end{cases}$$

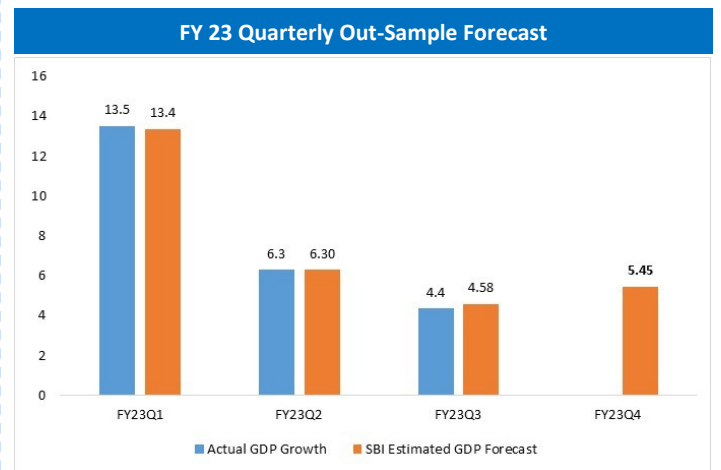
- We have developed a ANN model with 30 high frequency indicators. ANN has been trained for the quarterly GDP data from 2011Q4 to 2020Q4. The in - sample forecast performance of the model in the training period has been precise.
- Out of Sample Forecast Performance, of the last three quarters of FY23 has also been precise. On the basis of the ANN model, we forecast that the quarterly GDP growth for the Q4FY23 would be at 5.5%.

**CORPORATE RESULTS ROBUST, BANKS AIDED**

- In Q4FY23, around 1700 listed entities, reported top line growth of 12%, while PAT grew by around 19% as compared to the same period previous year. Same set of companies reported EBIDTA growth of around 23% in Q4FY23.
- Corporate results, ex BFSI, for Q4FY23 shows, both top line and bottom-line growth of around 10%, while EBIDTA grew by 7% as compared to Q4FY22.
- Further, it is pertinent to mention that corporate margin, which was continuously under pressure for last few quarters, shown sign of improvement in Q4FY23. As reflected in results of around 1500 listed entities ex BFSI, EBIDTA margin, on aggregate basis, improved from 13.96% in Q4FY22 to 14.34% in Q4FY23.



Source: SBI Research



Source: SBI Research

Qtr.	Rs in crore			EBIDTA Margin %	Growth % (YoY)		
	Net Sales	EBIDTA	PAT		Net Sales	EBIDTA	PAT
Q4FY20	1321402	66091	15988	5.00%			
Q1FY21	847287	88668	971	10.46%			
Q2FY21	1184166	199323	112157	16.83%			
Q3FY21	1374044	234382	126936	17.06%	-1	35	58
Q4FY21	1572680	256828	162508	16.33%	19	289	916
Q1FY22	1399820	247137	127880	17.65%	65	179	13063
Q2FY22	1632594	269390	175014	16.50%	38	35	56
Q3FY22	1808870	275784	162656	15.25%	32	18	28
Q4FY22	1974550	275590	187507	13.96%	26	7	15
Q1FY23	2112567	264254	141429	12.51%	51	7	11
Q2FY23	2156660	235292	137116	10.91%	28	-14	-23
Q3FY23	2152011	257099	139738	11.95%	15	-9	-16
Q4FY23	1856539	266147	192241	14.34%	10	7	10

Source: SBI Research; Cline; around 3000 listed entities ex BFSI; for Q4FY23 around 1500 companies and compared with same set of companies for PY

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