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CURRENT AFFAIRS

19 AUGUST

KK/AJ

MOODY'S RATING

SOURCE: TH , MOODY'S , FINANCIAL EXPRESS , LIVEMINT

WHY IN NEWS?

Moody's Investors Service has reaffirmed India's sovereign rating as '**Baa3**' with a stable outlook. The agency has highlighted its anticipation that India's economic growth will surpass that of all other G20 economies for at least the next two years. Nevertheless, Moody's has pointed out that the restriction of civil society and political opposition, along with the growing tensions between different groups, contribute to a less favourable evaluation of political risk and institutional quality.

ABOUT 'Baa3' RATING:

1. **Baa3** represents the **lowest rating** within the investment grade category.
2. Obligations with a Baa rating are exposed to a **moderate level of credit risk.**
3. Baa-rated obligations are categorized as having a medium-grade status and may exhibit certain speculative traits, as per Moody's rating system.
4. In **2017, Moody's elevated India's sovereign rating to Baa2**, marking the first such increase since 2004. However, the **rating was subsequently downgraded to Baa3 in 2020.**

FACTORS THAT COULD LEAD TO A DOWNGRADE OF RATING:

1. Moody's, headquartered in New York, suggests that if **political tensions intensify or if checks and balances continue to erode**, which **could harm India's prospects for long-term growth**, it's probable that a downgrade might occur.
2. **If growth remains consistently weaker** than current projections, this would lead to a **continual increase in the debt load**, thereby diminishing the fiscal strength of the sovereign and causing the rating to decline.
3. Additionally, **in case there is a revival of stress in the financial sector** that is not promptly and effectively

Moody's	S&P	Fitch		
Aaa	AAA	AAA	Prime	
Aa1	AA+	AA+	High grade	
Aa2	AA	AA		
Aa3	AA-	AA-		
A1	A+	A+	Upper medium grade	
A2	A	A		
A3	A-	A-		
Baa1	BBB+	BBB+	Lower medium grade	
Baa2	BBB	BBB		
Baa3	BBB-	BBB-		
Ba1	BB+	BB+	Non-investment grade speculative	"Junk"
Ba2	BB	BB		
Ba3	BB-	BB-		
B1	B+	B+	Highly speculative	
B2	B	B		
B3	B-	B-		
Caa1	CCC+	CCC	Substantial risk	
Caa2	CCC		Extremely speculative	
Caa3	CCC-		Default imminent with little prospect for recovery	
Ca	CC	CC		
	C	C		
C				
/	D	D	In default	
/				

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resolved, this would exert negative pressure on the rating.

POSITIVE SIGNS IN THE REPORT:

1. The rating agency has expressed **approval for the government's management of the overall fiscal situation**, its emphasis on **infrastructure development**, and the implementation of **digital public infrastructure.**

SOVEREIGN RATINGS FOR INDIA

Agency	Rating	Meaning	Outlook
Moody's	**Baa3**	Lowest investment	**Stable**
S&P	**BBB-**	Lowest investment	**Stable**
Fitch	**BBB-**	Lowest investment	**Negative**

RATIONALE FOR CHANGE

- Receding financial risks to allow growth to support debt stablisation
- An economic recovery is underway
- Downside risks to growth from subsequent coronavirus infection waves mitigated by rising vaccination rates
- Selective use of restrictions on economic activity, as seen during the second wave

2. Moody's has indicated that the affirmation and stable outlook are based on **India's economy continuing to grow at a rapid pace** in comparison to global standards, even though potential growth has diminished over the past 7-10 years.

3. While the Reserve Bank of India (RBI) has projected a real GDP growth rate of 6.5 percent for fiscal year 2024, Moody's predicts that robust GDP growth will contribute to a gradual increase in income levels and overall economic resilience. This, in turn, will provide support for **gradual fiscal consolidation** and **the stabilization of government debt**, although at elevated levels.

NEGATIVE SIGNS IN THE REPORT:

1. While the Moody's report emphasized the increased effectiveness of macro policies, it raised concerns about the **deterioration of institutions and the escalation of political tensions**.
2. A recent incident that exemplifies these patterns occurred in the northeastern state of **Manipur, which ranks among India's most economically disadvantaged states.** This situation has resulted in at least 150 fatalities since May 2023 and played a role in the introduction of a no-confidence vote against Prime Minister Narendra Modi in August.
3. While it's improbable that heightened political polarization will substantially destabilize the government, the **escalating domestic political tensions** indicate a continued risk of **populist measures**, including at regional and local government levels. This risk persists alongside prevalent social challenges like poverty, income inequality, unequal access to education, and essential services.
4. Furthermore, the sporadic flare-ups of border disputes with neighbouring nations were an exceptional case among nations assessed to have a lower overall susceptibility to political risk.

MOODY'S ANALYSIS:

1. Moody's anticipates that **India's economic growth will surpass that of all other G20 economies for at least the upcoming two years**, propelled by domestic demand.
2. According to the agency, the **government's continuous emphasis on infrastructure expansion, reflected in the growing portion of capital expenditure in the Union Budget**, has

resulted in concrete enhancements in logistics performance and the Caliber of trade and transportation-related infrastructure.

3. This strategic focus has complemented the government's implementation of a **digital public infrastructure,** which has involved the widespread adoption of digital payments and data exchange. This implementation has not only improved the efficiency of public service delivery but has also facilitated the formalization of the economy and broadened the tax base.

4. Moody's also observed that the **banking system's financial robustness has significantly improved over the past three years**. This has allowed the private sector to leverage the optimistic domestic sentiment and direct resources toward capital formation, extending beyond the immediate recovery from the pandemic. The credit growth's resilience stands as evidence of this trend.

5. Over the extended term, Moody's noted that the **economy's capacity to substantially escalate manufacturing and augment job creation** will be restricted, constraining potential growth.

6. Despite encountering certain pressures to increase expenditures and counter higher inflation, the government has managed to achieve its fiscal deficit targets at the central government level over the last two years. This accomplishment has been facilitated by robust tax revenue.

WAY FORWARD:

➢ **Promote Civil Liberties:** Ensure protection and enhancement of civil society and freedom of political dissent to foster an open and democratic environment.

➢ **Mitigate Sectarian Tensions:** Implement policies that promote unity and inclusivity among different communities, reducing the impact of rising sectarian tensions.

➢ **Facilitate Political Dialogue:** Create platforms for constructive political discussions and debates, encouraging diverse perspectives and democratic engagement.

➢ **Strengthen Institutions:** Focus on improving the quality and efficiency of institutions through transparent governance and effective checks and balances.

INDIA SETS UP IT'S FIRST 3D-PRINTED POST OFFICE

SOURCE: IE , TH

WHY IN NEWS?

➢ **India's first 3D-printed post office** was virtually inaugurated by Union Minister Ashwini Vaishnaw in Bengaluru's Cambridge Layout on Friday. It's construction was completed in just 43days— two days ahead of the deadline.

➢ Invented more than four decades ago, 3D printing burst into the mainstream around the 2010s, when many thought it would become part of everyday life. The technology, however, was expensive, slow and prone to making errors. In recent years, many of these flaws have been corrected, making 3D printing more prevalent than ever before.

WHAT IS 3D PRINTING?

The method of 3D printing, commonly referred to as additive manufacturing, involves building three-dimensional objects layer by layer using computer-generated designs. It is an additive process in which layers of a material, such as plastic, composites, or biomaterials, are built up to create objects of different shapes, sizes, rigidities, and colours.

HOW IS 3D PRINTING DONE?

1. In order to engage in 3D printing, an individual requires a computer linked to a 3D printer. The process involves designing a 3D model of the desired object using computer-aided design (CAD) software and initiating the 'print' command. The remainder of the task is then managed by the 3D printer.

2. The construction of the desired item using 3D printers involves a layering technique, which contrasts with subtractive manufacturing methods.

3. A classic instance of subtractive manufacturing can be found in the renowned work of the Italian sculptor Michelangelo, who famously sculpted his masterpiece David by meticulously carving it from a single block of marble.

4. In contrast, 3D printers create objects from the foundation upward by systematically layering materials until the final product accurately resembles the envisioned design.

5. The process of a 3D printer resembles that of a conventional inkjet printer in the direct 3D printing method. In this approach, a nozzle moves back and forth while depositing layers of wax or a plastic-like polymer. Each layer is allowed to dry before the next layer is added. This accumulation of hundreds or thousands of 2D prints atop each other results in the formation of a three-dimensional object.

ADVANTAGES AND DISADVANTAGES OF 3-D PRINTING:

Advantages of 3D Printing	Disadvantages of 3D Printing
Rapid Prototyping	Limited Material Options
Customization and Personalization	Size Constraints for Larger Objects
Reduced Material Wastage	Precision and Quality Variations
Complex Geometries Achievable	Initial Investment in Equipment and Software

Cost-Effective for Small Quantities	Post-Processing Requirements
On-Demand Production	Layered Texture on Finished Products
Accelerated Innovation	Limited Durability for Some Applications
Accessibility for Small-Scale Production	Intellectual Property Infringement Risk
Reduced Tooling Costs	Learning Curve for Design and Operation

APPLICATIONS OF 3-D PRINTING:

- ➢ **Healthcare:** Prosthetics, implants, surgical models, dental crowns.
- ➢ **Automotive:** Rapid prototyping, customized parts, concept cars.
- ➢ **Aerospace:** Lightweight components, complex geometries for aircraft and spacecraft.
- ➢ **Fashion:** Customized accessories, avant-garde designs.
- ➢ **Architecture:** Scale models, intricate building components.
- ➢ **Education:** Visual aids, learning tools.
- ➢ **Jewellery:** Design prototypes, intricate patterns.
- ➢ **Consumer Goods:** Unique product designs, limited-edition items.
- ➢ **Art and Sculpture:** Creative projects, unique art pieces.
- ➢ **Food:** Edible creations, intricate designs.

OTHER INITIATIVES:

Initiative	Description
Atal Innovation Mission (AIM)	AIM promotes the establishment of Atal Tinkering Labs in schools, encouraging students to explore 3D printing and innovation.
National Institute for Transformation and Upgradation through Additive Manufacturing (NITI Aayog)	NITI Aayog has established a task force to create a roadmap for the effective implementation of 3D printing in India.
Make in India Campaign	The campaign aims to boost manufacturing, including 3D printing, by promoting local production and innovation.
Start-up Incubators and Accelerators	Various incubators and accelerators support 3D printing start-ups by providing funding, mentorship, and resources.
Collaborations with Educational Institutions	Partnerships between industry and academic institutions encourage research and innovation in 3D printing.
Skill Development Initiatives	Training programs and workshops are organized to develop skills in 3D printing technologies and applications.

LIVESTOCK SECTOR IS CONSISTENTLY GROWING AT A HIGH COMPOUND ANNUAL GROWTH RATE (CAGR) OF 7.67% DURING 2014-15 TO 2021-22

SOURCE: PIB

WHY IN NEWS?

➢ Upadhyaya emphasized that the **livestock sector** has been **consistently growing at a high Compound Annual Growth Rate (CAGR) of 7.67% from 2014-15 to 2021-22** (at constant prices).

➢ The growth is attributed to various parameters within the Livestock Sector, including Dairy, Bovine (cattle), Poultry, Goatery, and Piggery.

➢ Notably, the livestock sector made a **significant contribution of approximately 30.19%** to the total **Gross Value Added (GVA)** of the agriculture and allied sectors during the year **2021-22,** measured at constant prices.

IMPORTANCE OF LIVESTOCK SECTOR FOR INDIA:

➢ **Economic Contribution:**
  o Livestock sector contributed around 30.19% to the total agriculture and allied sector Gross Value Added (GVA) during 2021-22.
  o It has consistently grown at a high Compound Annual Growth Rate (CAGR) of 7.67% from 2014-15 to 2021-22 (at constant prices).

➢ **Employment Generation:**
  o The sector provides livelihoods for a significant portion of the population, with millions of households engaged in animal husbandry and related activities.
  o It supports rural employment and helps reduce unemployment and underemployment.

➢ **Food Security and Nutrition:**
  o Livestock products like milk, meat, and eggs are important sources of protein and essential nutrients for the Indian population.
  o They contribute to addressing malnutrition and improving overall nutrition outcomes.

➢ **Diversified Income:**
  o Livestock rearing offers farmers diversified income sources, reducing their dependence solely on crop farming.
  o It acts as a risk mitigation strategy against fluctuations in crop yields and prices.

➢ **Rural Development:**
  o The livestock sector plays a vital role in the development of rural economies by generating income and improving infrastructure and services.
  o It can help bridge the urban-rural economic divide.

➢ **Export Potential:**
  o Livestock products like meat, dairy, and leather have significant export potential, contributing to foreign exchange earnings for the country.

CHALLENGES IN LIVESTOCK SECTOR IN INDIA:

Challenge	Data and Examples
Lack of Modern Infrastructure	Around 80% of livestock owners in India do not have access to veterinary services, affecting animal health.
Low Productivity	India's average milk yield per animal is around 1,084 kg/year, significantly lower than global standards.

Inadequate Animal Nutrition	Nearly 70% of India's livestock is undernourished due to the scarcity of balanced and quality feed.
Disease Outbreaks	Foot and Mouth Disease affects 60% of Indian cattle, leading to substantial economic losses.
Lack of Quality Breeding	The proportion of indigenous breeds with high genetic potential has declined to around 20% of the total cattle.
Inadequate Genetic Improvement	Less than 5% of the livestock population in India is under organized breeding programs for genetic enhancement.
Fragmented Land Holdings	Small and marginal farmers own around 64% of the operational holdings in the livestock sector.
Limited Access to Credit	Only 14% of the total rural households in India have access to formal credit sources for livestock activities.
Market Access and Value Chains	Around 90% of Indian farmers are not integrated into formal value chains, limiting their market access.
Lack of Training and Skill Development	Only 10-15% of farmers in India receive any form of training in modern livestock management practices.
Environmental Degradation	Overgrazing affects nearly 25% of the total land area in India, contributing to soil erosion and land degradation.

INITIATIVES TAKEN BY THE GOVERNMENT:

Initiative	Description
National Livestock Mission (NLM)	Aims to promote sustainable development of the livestock sector by enhancing productivity and quality.
Rashtriya Gokul Mission	Focuses on conserving and developing indigenous cattle breeds and improving their productivity.
National Programme for Bovine Breeding	Aims to enhance milk production by promoting scientific breeding and genetic improvement of cattle.
National Dairy Plan-I	Aims to increase milk productivity and promote clean milk production by enhancing infrastructure.
Kamdhenu Gau Vigyan Prachar Prasar Yojana	Aims to promote sustainable cattle rearing and address the nutritional needs of livestock.
National Kamdhenu Breeding Centres	Establishment of centers for the propagation of high genetic merit bulls to improve livestock quality.
Livestock Health and Disease Control	Schemes for controlling and eradicating livestock diseases through vaccination and health measures.
Skill Development and Training	Initiatives to provide training to farmers, veterinarians, and livestock entrepreneurs for skill enhancement.
National Animal Disease Control Programme	Aims to control and eradicate Foot and Mouth Disease and Brucellosis to enhance livestock productivity.
Dairy Processing and Infrastructure	Focuses on establishing modern dairy infrastructure and enhancing milk processing capacities.

WAY FORWARD:

- ➢ **Sustainable Practices:** Promote environmentally friendly and sustainable livestock management practices.
- ➢ **Research and Innovation:** Invest in research to enhance productivity, health, and value addition in the sector.
- ➢ **Skill Development:** Provide training to farmers in modern techniques and technologies.
- ➢ **Disease Management:** Strengthen disease control measures to safeguard livestock health.

➢ **Infrastructure Enhancement:** Develop modern facilities for processing and distribution of livestock products.

➢ **Market Linkages:** Establish better market connections for farmers to ensure fair pricing.