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India Economics

Monsoons 2005: A Problem of Plenty – Assessing the Economic Impact

- **Rains wreak havoc in Mumbai¹:** Over the last week, India's financial capital, Mumbai and surrounding region recorded one of its highest-ever rainfall levels, suffering from one of the worst floods in its history. With communication lines snapped, airports closed, and many lives lost, the financial hub of the country was shut down for nearly a week.
- **What caused the disaster?** Apart from the fact that the Indian Meteorological Department (IMD) failed to give any advance warning, what caused widespread damage was the ineffectiveness of the city's natural drainage system – a result of the process of rapid commercialization and industrialization. However, apart from the need to modernize weather forecasting technologies, we believe the lesson to be learnt is that commercialization is not without cost, and that nature can lash back.
- **Assessing the economic damage:** Maharashtra contributes over 11% to the country's GDP. The losses due to the floods are estimated at around Rs150bn on account of damage to stocks and a temporary stoppage in production facilities in and around Mumbai, the state's capital. But although Maharashtra's share in total tax collections is significant, it receives only a relatively small amount from the central government
- **We maintain our FY06 GDP growth forecast of 7.5%:** While the floods have temporarily disrupted production activities and may also result in a deceleration of exports in July as the JNPT port in Mumbai accounts for over 10% of exports, we believe the damage is not permanent. Given the continuation of the key growth drivers — investment cycle upturn, urban consumption and outsourcing — we are maintaining our FY06 GDP growth estimate of 7.5%, with non-farm growth likely to trend close to 9%.

The Mumbai deluge

Over the past week, the coastal city of Mumbai as well as surrounding regions suffered from one of the worst floods in its history. Beginning Tuesday 26 July, heavy rains (94.4cms – the most ever²) fell in the suburbs, submerging localities under 1-2 meters of water. In some areas, water levels rose to 5 meters, soon resulting in power failures, snapped phone-networks and traffic jams, and stranding people on the roads for close to 48 hours. The death toll has reached over 1,000, with more than 418 dead in Mumbai alone. Rehabilitation efforts continue, although citizens have expressed anger at the failure of the civic and state administrations.

¹ Commercial capital of the country, home to Bollywood, and one of the most populated cities in the world (population of 15mn), Mumbai is located in the coastal state of Maharashtra. The city, originally made up of seven isles, was merged to form a single landmass by 1845. It derives its name from Mumbadevi, a Hindu Goddess, and Aai, meaning 'Mother' in Marathi, the local language. After the British gained possession, the name was anglicized to Bombay, but officially changed once again to Mumbai in 1997.

² Prior to this, the highest recorded rainfall in India was in the north-eastern town of Cherrapunji, at 83.82cms in 1910

Why it happened

No warning

There was no advance warning from the Indian Meteorological Department regarding the cloudburst over North Mumbai on 26 July 2005. Consequently, while North Mumbai had 944mm of rainfall, South Mumbai recorded 73.4mm on Tuesday.

Did nature hit back?

Environmentalists have alleged that one of the key reasons for the floods is the process of commercialization in the northern parts of the city and encroachment of slums over storm water drains that have cut off the cities natural water outlets. Mangrove patches that provided a natural barrier against flooding have in many areas³ (Bandra-Kurla, Malad, Andheri, Goregaon and Borivali) been reclaimed for construction purposes. As can be seen in the map below, the overflow of Mumbai's three main lakes - Tulsi, Vihar and Powai - goes to the Mithi River. The reclamation of the mangroves around the Mithi River has reportedly upset the flow of floodwaters that would otherwise have drained into the sea.

Map of Mumbai

A clear North-South Divide indicates that rapid commercialization could have been responsible for the floods in North Mumbai



Source: Adapted from Wikipedia.

³ Please see "Flooding caused by Government's Greed, not God", Hindustan Times, July 31 2005.

The aftermath: financial and economic implications

Maharashtra contributes about 11% of India's GDP, and Mumbai is the chief engine of the state's growth. Reports⁴ peg total damage in the prime affected regions (Mumbai, Thane and Raigad) at Rs100bn, and another Rs50bn in the rest of Maharashtra.

Short-term Impact likely but no need to adjust full year numbers

While the floods have temporarily disrupted production, we believe that while the July/August numbers may be affected, activity levels will pick up in coming months and hence we are leaving our full-year GDP estimates unchanged.

Exports: As the JNPT port in Mumbai accounts for nearly 11% of exports, we could see a deceleration of exports in July, but with no damage to the port we maintain our 20%+ export growth rate for FY06.

Banking and finance: Insurance companies are likely to take a hit, while banks have been directed to be liberal and not apply punitive interest rates on loans to small businesses and farmers affected by the floods.

Oil and refining: There have been temporary shutdowns in the Reliance Industries unit at Patalganga as well as the Bharat Petroleum Corporation refinery in Mumbai.

Consumer goods: While consumer non-durables may be affected as stock is perishable, the impact on consumer durables (including autos) is likely to be limited, with a temporary disruption in inputs or transportation delays affecting sales.

Cement and airlines: Cement dispatches could see a slight slowdown but nothing significant as dispatches generally slow during the monsoon season. Some stock that was flooded may be destroyed. Airlines, which operated at less than 25% capacity utilization levels, could also see lower revenue numbers in July.

Pharmaceuticals and fertilizers: With the warehouses of many fertilizer and pharmaceutical plants – such as Pfizer, Cipla and Wockhardt – located in affected areas such as Thane and Bhiwandi, insurance companies could expect high claims.

IT and ITES: While some BPO units including centers in Pune were temporarily affected, this is not likely to have a meaningful impact.

Sugar: While it is still too early to ascertain the impact, the floods may affect the sugar cane crop, resulting in higher prices for sugar.

We maintain our FY06 GDP growth estimate of 7.5%: While the floods have temporarily disrupted production we believe the damage is not permanent. Giving the continuation of the key growth drivers - investment cycle upturn, urban consumption and outsourcing – we are maintaining our FY06 GDP growth estimate of 7.5% with non farm growth likely to trend close to 9%.

⁴ "Damage in Mumbai, Thane is Rs10000crore"; The Times of India, August 3rd, 2005

The lack of adequate support from the center is disheartening

Why Mumbai can't be Shanghai yet

Although Maharashtra is the biggest contributor to central government revenue – income taxes from Mumbai alone amount to Rs580bn – funds from the center to Mumbai total only Rs0.5bn. In comparison, Delhi receives over Rs60bn. This sits oddly with the government's recently voiced ambitions to convert Mumbai into a world-class city. As McKinsey & Co have pointed out in their recommendations⁵ to put Mumbai on par with international standards, there needs to be an enormous improvement in quality of life as well as in economic growth. Carrying out the recommendations would entail investments of at least US\$40bn, of which one-fourth must come from public sources.

The monsoons so far — a recap

On a cumulative basis, data released by the IMD indicate that rainfall for the entire season, ie, from 1 June to 27 July 2005, was 2% above normal. This is a marked development from the 15% deficiency reported at the end of June, and appears in line with IMD's second-stage forecast⁶, which suggested a 70% probability that rainfall this year would be normal.

Monsoon Watch – Distribution of Rainfall over Sub-Divisions

No of Sub-Divisions with rainfall	Cumulative for the period from 1 Jun 05 to:					
	26-Jul-00	25-Jul-01	24-Jul-02	30-Jul-03	28-Jul-04	27-Jul-05
Excess	15	13	2	10	2	11
Normal	14	11	14	22	17	20
Total	29	24	16	32	19	31
Deficient	7	11	16	4	16	5
Scanty	0	1	4	0	1	0
No rain	0	0	0	0	0	0
Total	7	12	20	4	17	5
Total Subdivisions	36	36	36	36	36	36

Source: IMD.

⁵ Bombay First and McKinsey and Company submitted recommendations to convert Mumbai into a world-class city to the government in September 2003. The document is entitled "Vision Mumbai".

⁶ For more details, please see "Monsoons 2005: Second Forecast Also Says Normal", dated 7 July 2005.

Disclosure Appendix

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