

Week of 31st May 2021

What's on our mind this week?

India's dawn of the digital payments era

Over the past week "Paytm", India's third largest e-commerce payments platform announced its plans to go public later during this year with an expected listing date in November 2021 coinciding with Indian festival Diwali. Paytm established itself as a platform for online bill payments and mobile recharge in 2009. It introduced the mobile wallet in 2014. The IPO process is expected to start in late June or early July this year. As per market estimates, Paytm is looking at an estimated valuation of USD25-30bn and expects to raise ~USD2.5-3bn which could potentially make this deal the largest ever capital fund raising in the history of Indian equity markets.

The company raised USD1bn in November 2019 in its latest financing round led by T.Rowe Price valuing the company at USD16bn. Paytm's IPO debut is expected to include a mix of new and already existing shares to meet the regulatory requirements. According to SEBI's regulations, 10% of the shares will have to be floated within two years while 25% will have to be within five years. Paytm's revenues rose by 1.3% to INR36,280mn (USD500mn) while its losses declined by 40% to INR29,420mn (USD405mn) in FY20.

As per research firm Bernstein's pre-IPO primer, Paytm's revenue base is expected to double to USD1bn by FY23 driven by strong growth in non-payments revenue which is expected to grow at 87% CAGR and contribute to 33% of revenues from current 20%. Paytm, a start-up based in Noida is currently backed by investors like Berkshire Hathaway, Softbank Group and Alibaba's Ant Group. Ant Group is the largest investor in Paytm with a 40% stake.

As per RedSeer Consulting, a major Private Equity, Internet and Growth Focused advisory based in India, digital payments are expected to grow by 3x from INR2,162tn (USD30tn) in FY20 to INR7,092tn (USD97tn) in FY2025. Within digital payments, mobile payments that currently account for 1% of digital payments at INR25tn (USD34bn) are expected to reach 3.5% of digital payments or INR250tn (USD3.5tn) by FY2025. The total mobile payment users who currently stand at about 160 million are expected to reach to around

800 million users over this period which is expected to create a strong growth opportunity for payment platforms in India. Digital and mobile payments in India have been growing alongside smartphone penetration which has risen from 2% in 2005 to 26% in 2015 and currently at 32% in 2020. This is expected to reach 36% by 2022.

We are closely watching the payments landscape in India and will evaluate the investment opportunity at the time of the IPO. We remain optimistic about the growth opportunities within this space while remaining watchful of the valuation and the competitive landscape. As per National Payments Corporation of India (NCPI) data as on February 2021, PhonePe (Walmart) processed 42.5% of all mobile payment transactions, while Google Pay processed 36.1%. Paytm is ranked number 3, accounting for a 14.8% market share, followed by Axis Bank App's at 2.8% market share and Amazon Pay at 1.9% market share. The NCPI has set out new guidelines for digital payment apps limiting their share in the overall volume of transactions at 30% in a bid to enforce parity in the country's fast-growing digital payments industry. The new rules, effective from the quarter beginning January 2021, also provide existing players with dominant market shares with a window of two years for compliance, in order to minimise friction for customers as per the regulatory body NCPI which is an umbrella organisation under the Reserve Bank of India.

Understanding climate-related risks is not only about forecasting the worst, it is also about knowing what to do when it happens: the Taiwan drought

The unexpected Covid outbreak in Taiwan is not the only factor currently troubling the islands' chipmakers. Taiwan has been facing its worst drought in more than half a century and it is having a more enduring effect on the semiconductor industry and the island's economy than people initially anticipated.

Many of the island's water reservoirs are currently at less than 20% of their capacity, with water levels falling below 10% for some, including reservoirs that are the primary sources of water for science parks.

The water shortage also impacts hydropower generation. Although hydropower only accounts for 2% of Taiwan's energy generation mix, it is the most ideal energy source to

meet sudden increases in energy demand. As the water-power nexus has partially led to rationing, hydropower can no longer be counted on to make up for the excess demand of both commercial and residential users who are now witnessing rolling blackouts across the island.

As Taiwan is one of the rainiest places in the world, historically water supply has never been an issue. This was an advantage for chipmakers as advanced semiconductor manufacturing is heavily dependent on a stable supply of high-quality freshwater. As this historical drought hits, the Taiwan government has decided to shut off irrigation across tens of thousands of acres of farmland, in order to prioritise precious water supply for its most important industry, semiconductors. In some cities, the government even started rationing water use by suspending water supplies for two days a week.

Meanwhile, the island top chipmakers including TSMC, United Microelectronics and Winbond have also initiated their own contingency plans to deal with the water shortage, including mobilising water trucks. TSMC has ordered over 100 water trucks for USD30m, which may just be the start of an inevitably rising water cost for the company. TSMC's other contingency plan includes a wastewater treatment plant capable of treating industrial water so it can be reused to make semiconductors. According to the company's latest sustainability report, it currently uses 156,000 tons of water a day and the treatment plant would be able to generate 67,000 tons of water that would flow back into the chipmaking process by 2024, about 43% of its need. However, the demand for water supply may increase significantly in the future and this may only bring marginal relief. A 200W EUV (Extreme Ultraviolet Lithography) system, which is required for manufacturing 7nm or below chips, requires 1,600 litres of water per minute for cooling down, whereas a conventional DUV (Deep Ultraviolet Lithography) machine which manufactures less advanced chips requires only 75 litres per minute. Therefore, as production focus shift towards more advanced chips (14nm or below), so will the chipmakers' needs for water, and in a dramatic way.

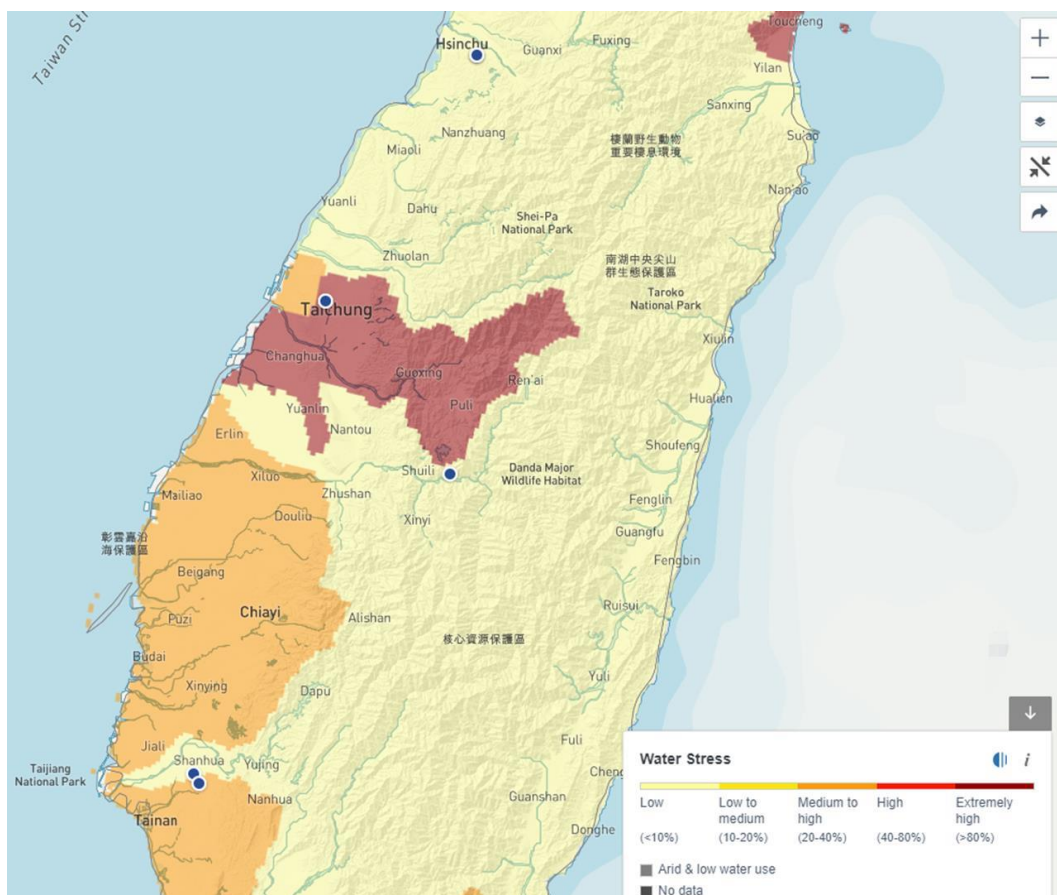
Despite offering an advanced level of disclosures in terms of ESG matters, TSMC nonetheless fails to thoroughly assess the potential water supply risk that could lead to operation disruption. In its 2020 CDP Water Security questionnaire, the company found "drought is the primary potential water risk although the likelihood of drought is

‘unlikely’ even though the WRI Aqueduct Water Risk Atlas reveals that many of the company’s foundries are located in medium to high water stress areas.

This would certainly not be unique to TSMC as other chipmakers and electronics manufacturing companies in Taiwan may soon experience operation disruptions due to water supply shortages and other climate-driven events. The matter may be worse for them as they have fewer resources and competencies to resolve the issue.

This is one of the examples where understanding and analysing a company’s ESG related disclosures is critical as it reveals a significant operational risk. We will continue monitoring the Taiwan drought situation and the contingency plans chipmakers are putting in place for the inevitable future occurrences of similar situations.

Location of TSMC Foundries Clusters



Source: WRI Aqueduct Water Risk Atlas – May 2021

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