Market Pulse

A monthly review of Indian economy and markets
This monthly publication is a review of major developments in the economy and financial markets during the month.

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Executive Summary

Rising inflation not a long-term worry, but inequality is

The Delta variant of the Coronavirus did put a spanner in the works for global markets in July as cases rose in the US, but not for long, as decent corporate earnings and further progress in the vaccine rollout proved reassuring of the economic recovery. China’s crackdown on its tech sector and private tutoring businesses added to the volatility in EMs (MSCI EM -6.7%), even as the MSCI World index rose 1.7%. Foreigners selling India in July (-US$1.7bn) after a stellar June did little to stem a rally that broadened into small and midcap stocks (NIFTY50 +0.3% vs. NIFTY Midcap +2.5%, and NIFTY SmallCap +8%), egged on by excited retail investors. The retail rally in India has not only led to significant interest (and gains) among small and midcaps this year (NIFTY MidCap +31% YTD and NIFTY SmallCap +42% YTD). NSE Indices has recently designed an index of the 250 stocks beyond the NIFTY500, the NIFTY MicroCap250 (page 60). The primary market is no different, with capital raised through IPOs being the highest this year since 2008. NIFTY50 currently trades on ~23x consensus earnings that are expected to be robust (FY22E at +30%).

As economies gradually inch towards an extended recovery with markets swimming in excess liquidity, concerns on the attendant problem of inflation continue to rise. Big central banks have acknowledged its presence, with focus shifting to managing expectations over the medium term. Indian markets have seen inflation above 4% for 21 months now, and above 6% for the second consecutive month—with the RBI maintaining an accommodative stance—while raising the FY21 CPI estimate by 60bps to 5.7%. Our Chart of the Month follows the rise of inflation through each step of the supply chain—from commodities to consumers—and explores how rising prices in one segment lead into inflation downstream. Reassuringly, while expectations have indeed increased in the near-term, they remain muted in the medium-term.

A defining pattern of the pandemic has been its differential impact on the economy. Illustratively, overall corporate tax paid fell in FY21 (vs. FY20, and below 50% in the Govt’s direct tax kitty for the first time in 30 years) but actually rose for listed companies. For the first time in India, listed companies actually paid more tax than their unlisted counterparts. We extended this result to within the listed space and found a similar size-based tax differential that got worsened in the pandemic. Size confers better funding access, shorter cash conversion cycles and in general, better endurance to economic hardship. Inequality indicators increased across all major segments in the listed space—the big simply performed better.

Active Covid cases have been on a steady downward slide in India (no longer exponential, but hyperbolic, or even harmonic) since the hellish days of May, even as cases have increased in the US, and South East Asia, among others. Let the lines dedicated to discussing the pandemic in this summary not be a measure of our comfort, though. As state upon state relaxes guidelines, the impending festive season needs to be watched carefully.

Our Insights section this month has five articles. Arguden Academy and SustainFinance ponder over the qualities essential for an asset manager with an ESG mandate. Another paper from the ISB Trading Lab explores how funds managers situated near climatic disaster zones perceive firms located in the same zones vis-à-vis others. Two papers by Baker and Bloom consider the information from newspapers in two innovative ways: Measuring market movements, and a quantification of economic policy uncertainty (Refer Figure 64). We round it up with one of the seminal papers in Behavioural Finance that shows how investor behaviour inconsistent with rationality lead to overreaction in markets.

There is relative certainty on the medium-term outcome of the current recovery (positive, in general); the path leading there is less so. As Indians limp their way into pre-Covid lives, they face high inflation, negative real rates, excess liquidity, falling savings, and rising inequality on one hand, while robust corporate profits and balance sheets, and reasonable bank NPAs on the other. An improving global demand also means an extended opportunity for exports. These are some of the angles we would continue to explore in the coming editions of the Market Pulse. As always, we welcome comments and suggestions.

Dr. Tirthankar Patnaik
Chief Economist
Stories of the month

Size-based differential in corporate tax payments in the COVID pandemic

India’s growth downtrend over the five-year period leading up to FY20 followed by the COVID-19 pandemic in the beginning of 2020 have severely weighed on the Government’s corporate tax kitty during this period. Corporate tax collections registered the lowest five-year moving CAGR of 5.4% in FY20 in last four decades, further worsening to -0.3% in FY21. Its share in the Government’s overall direct tax kitty fell to sub-50% for the first time in 30 years. This drop in corporate tax collections in FY21 has been primarily led by the unlisted space (-44% in FY21), while the listed companies on NSE and BSE combined have fared much better, surpassing the listed space for the first time in nine years (+17% in FY21). That said, the size-based differentiation even within the listed space has got exacerbated during the pandemic. The larger listed companies have reported better profitability and therefore higher corporate tax payments, thanks to their economies of scale, better access to funding, and lower cash conversion cycles. We have also analysed corporate tax inequality in the listed space using the Lorenz curve and Gini coefficients. Our analysis shows a much higher concentration of corporate tax payments in the smaller listed space (Listed ex Nifty 500) as compared to the Nifty 500 universe, with top 20% of the companies in the former making up for more than 95% share.

- **Govt.’s corporate tax kitty weighed down by growth slowdown and COVID-19 pandemic...** India’s growth trajectory was on a steady downward trajectory over the five-year period leading to FY20, with real/nominal GDP growth falling from 7.4%/11% to 4.0%/7.8%. This growth downturn is clearly reflected in the Centre’s fiscal balances, and particularly on corporate tax collections that grew at a mere 5.4% CAGR during FY15-20—the weakest five-year moving CAGR over the last four decades. The onset of COVID-19 pandemic in the beginning of 2020 and attendant lockdown restrictions added to the woes, leading to further drop in corporate tax collections (-19.9% in FY21). The share of corporate taxes to the Government’s overall direct tax kitty fell to sub-50% for the first time in 30 years in FY21.

- **...largely led by the unlisted and unorganised space:** The COVID-19 pandemic in beginning 2020 was initially expected to weigh significantly on earnings. However, an early and faster-than-expected recovery, proactive and aggressive fiscal and monetary support, and importantly, expense management led to earnings of the listed space performing well. Corporate tax payments by the listed space surged by ~17% in FY21, surpassing the unlisted space for the first time in nine years. The unlisted and unorganised space, however, got severely hit from the pandemic-induced demand and supply disruptions—as reflected from a 11% and 44% drop in corporate tax payments in FY20 and FY21 respectively.

- **Size-based differentiation within the listed space got accentuated in FY21:** Even as the listed space has fared much better than the unlisted space, the size-based differential even within the listed space has got exacerbated during the pandemic. Larger companies are in general better equipped to deal with economic downturns thanks to economies of scale, favorable access to funding, and shorter cash conversion cycles. During the pandemic, these companies have benefited at the expense of smaller listed and unlisted companies by capturing market share and aggressively managing expenses. This is evident from the quintile-wise corporate tax growth recorded by Nifty 500 companies, wherein the first quintile—the top 20%—recorded the highest 17.5% growth in corporate tax payments in FY21 as compared to a modest 1.3% growth registered by bottom two quintiles.
Additionally, the jump in Nifty 50 contribution to Government’s overall tax kitty was much steeper than Nifty 500 ex Nifty50 as well as the listed ex-Nifty50 universes.

- **Corporate tax inequality much worse in the smaller listed space**: We have constructed Lorenz curves (A graphical representation of inequality in a system) for Nifty 500 and rest of the listed space on NSE and BSE combined for last 10 years to see the extent of inequality that exists between the two samples. Our analysis shows that while both the samples have high inequality in corporate tax payments, the extent of inequality in the smaller listed space, i.e., total listed universe excluding Nifty 500 companies, is actually far higher. While the top 10% of the Nifty 500 companies made up ~70% of the total corporate tax payments by this sample, the concentration is much higher at 83% in listed space ex Nifty 500.

This difference in inequality between the two samples is also reflected in the Gini coefficient or Gini ratio—a statistical measure of deviation from perfect equality. The Gini coefficient ranges from 0 to 1, with 0 representing perfect equality (straight 45% line) and 1 representing perfect inequality. While the Gini coefficient of the Nifty 500 universe was 0.78 in FY21—the highest in last five years, it is much higher at 0.9 for the listed universe excluding Nifty 500 companies.
India’s growth downturn since FY15 weighed on Government’s finances: India’s growth trajectory has been on a steady downward trajectory over the last five years leading to FY20, with real/nominal GDP growth falling from 7.4%/11% to 4.0%/7.8%. This growth downtrend is clearly reflected in the Centre’s fiscal balances, and particularly on the corporate tax collections—single largest contributor to the Government’s tax kitty. Weaker corporate earnings in the wake of economic slowdown during FY15-FY20 have weighed on corporate tax collections, thereby leading to shortfalls in overall tax collections and the Government deviating from its budgeted targets during this period.

Overall corporate tax collections fell by 16.1% in FY20—the steepest drop in the previous 40 years. While a part of this is a consequence of economic slowdown and weak corporate earnings—corporate tax growth generally moves in-line with earnings growth—cut in corporate tax rates in September 2019 and the onset of COVID-19 pandemic towards the end of the year also weighed on corporate tax collections. In fact, the CAGR of 5.4% in corporate tax collections for the period FY15-FY20 is the lowest five-year moving CAGR over the previous four decades. The share of corporate tax collections in the Government’s overall direct tax kitty fell to 18-year lows of 53.7% in FY20, and further to 49.9% in FY21—the lowest in last three decades, thanks to severe economic ramifications caused by the COVID-19 pandemic.

**Figure 1: Nominal GDP vs. Government’s corporate tax collections**

![Nominal GDP vs. corporate tax collections graph](image)

**Source:** CMIE Economic Outlook, NSE.

**Figure 2: India’s growth downtrend over the last five years weighed on corporate tax collections**

![Growth in nominal GDP vs. corporate tax collections graph](image)
Figure 3: Moving five-year CAGR in corporate tax collections fell sharply in FY20 and further in FY21

![Graph showing nominal GDP, real GDP, and corporate tax collections over the years FY85 to FY21.]

Source: CMIE Economic Outlook, NSE.

Figure 4: Share of corporate tax collections in Government’s overall direct tax collections

![Graph showing the share of corporate tax collections against years FY80 to FY21.]

Source: CMIE Economic Outlook, NSE.

Figure 5: Corporate tax growth has moved in tandem with earnings growth in the Nifty 50...

Nifty 50: Corporate tax vs. PBT growth

![Graph showing Nifty 50 corporate tax vs. PBT growth from FY06 to FY21.]

Source: CMIE Prowess, NSE.

Figure 6: ...as well as Nifty 500 companies

Nifty 500: Corporate tax vs. PBT growth

![Graph showing Nifty 500 corporate tax vs. PBT growth from FY06 to FY21.]

Source: CMIE Prowess, NSE.
Sector-wise, Energy, Financials and Communication Services were the biggest laggards during FY15-20: Our analysis of corporate tax payments across companies within the Nifty 500 space shows that Energy, Financials and Communication Services were the biggest contributors to the drop in corporate tax payments seen during the five-year period ending March 2020, registering a CAGR of -2.7%, -0.3% and -14.7% during FY15-20. Energy and Financials together account for more than 40% to corporate earnings and corporate tax payments in the Nifty 500 universe. While the profits of the Energy sector were impacted owing to volatile crude oil prices and large inventory losses, Financial sector was hit by a huge surge in non-performing assets and consequent provisioning requirements during this period. Excluding these three sectors, corporate tax payments by the Nifty 500 companies grew by a CAGR of 3.9% during FY15-20.

Figure 7: Annual trend of sector-wise corporate tax growth in the Nifty 500 universe (%)

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Source: CMIE Prowess, NSE.

Figure 8: Annual trend of sector-wise share of corporate tax payments in the Nifty 500 universe (%)

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<td>13.1</td>
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<td>14.8</td>
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<td>13.4</td>
</tr>
<tr>
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<td>17.2</td>
<td>15.5</td>
<td>11.1</td>
<td>11.8</td>
<td>7.3</td>
<td>(0.6)</td>
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<tr>
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<td>7.4</td>
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<td>8.2</td>
<td>6.6</td>
<td>6.5</td>
<td>7.5</td>
<td>6.2</td>
<td>8.3</td>
<td>6.2</td>
<td>11.7</td>
<td>6.9</td>
</tr>
</tbody>
</table>

Source: CMIE Prowess, NSE.
Significant policy support and cost management came to the rescue against the COVID-19 pandemic in FY21 but only for the listed space...: The COVID-19 pandemic in beginning 2020 was initially expected to weigh significantly on earnings. However, an early and faster-than-expected recovery, proactive and aggressive fiscal and monetary support, and importantly, expense management led to earnings of the listed space performing well. This led to the share of corporate tax payments by the Nifty 50 and Nifty...
500 companies in the Government’s corporate tax kitty rising to more than 15-year high levels. In fact, it was the first time since FY05 (The beginning of our analysis) that Nifty 500 companies contributed more than 50% to overall corporate tax collections in FY21. Importantly, the size-based differentiation in corporate tax payments, that has always been existence to some extent, has exacerbated during the pandemic even within the listed space. This is reflected in a steeper jump in contribution of Nifty 50 companies to Government’s overall tax kitty in FY21 (+7.8pp to 16-year high of 30.5%) as compared to Nifty500 ex Nifty50 (+7.4pp to 20.7%) and listed (NSE + BSE) ex Nifty500 companies (+1.8pp to 10-year high of 5.7%).

Despite the policy support, adverse impact of the pandemic-induced lockdown and mobility restrictions and consequent supply chain disruptions was far severe on the unlisted and unorganised sector. This is reflected in a 44% drop in corporate tax payments by unlisted companies in FY21 and ~30% drop on a CAGR basis during FY19-21. The share of unlisted companies in overall corporate tax collections of the Centre fell to 17-year lows of 41.7% in FY21—the first sub-50% share in last nine years.

Large companies are better equipped to deal with economic downturns and have more favourable access to funding (equity, and especially debt). Their positions in supply chains and more favourable contracts also allow better shorter cash conversion cycles. During the COVID-19 pandemic, these companies have benefited at the expense of smaller listed/unlisted companies by capturing market share. They have managed to report strong growth in profitability despite a contraction in India’s GDP by changing their business models to suit the new COVID-appropriate environment and capturing market share from unorganized players. They have also meaningfully curtailed costs by cutting salaries/wages, renegotiating with vendors, saving on rental expenses, and minimizing administration/marketing expenses—all of which has helped boost profits for these companies in an otherwise economically lacklustre year.

**Figure 11: Growth in aggregate corporate tax collections for listed and unlisted companies**

<table>
<thead>
<tr>
<th>% Growth in corporate tax collections</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed</td>
</tr>
<tr>
<td>FY06</td>
</tr>
<tr>
<td>FY07</td>
</tr>
<tr>
<td>FY08</td>
</tr>
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<td>FY19</td>
</tr>
<tr>
<td>FY20</td>
</tr>
<tr>
<td>FY21</td>
</tr>
</tbody>
</table>

Source: CMIE Prowess, NSE.
Figure 12: Drop in corporate tax collections in FY21 primarily led by the unlisted space...

Corporate tax collections

![Graph showing corporate tax collections for listed and unlisted companies from FY05 to FY21](image)

Source: CMIE Prowess, NSE.

Figure 13: ...With its share falling to 17-year lows of 41.7% in FY21

Share in corporate tax collections

![Graph showing the share in corporate tax collections for listed and unlisted companies from FY05 to FY21](image)

Source: CMIE Prowess, NSE.

Figure 14: Share in overall corporate tax collections across listed space

![Graph showing the share in corporate tax collections across Nifty 50, Nifty500 ex Nifty50, and Listed ex Nifty500 from FY05 to FY21](image)

Source: CMIE Prowess, CMIE Economic Outlook, NSE.
Figure 15: Net working capital cycle of non-financial companies in the listed (NSE + BSE) space

The cash conversion cycles of larger companies are much shorter, thereby helping them manage their working capital much better as shown in the table below.

<table>
<thead>
<tr>
<th>No. of days</th>
<th>Decile 1</th>
<th>Decile 2</th>
<th>Decile 3</th>
<th>Decile 4</th>
<th>Decile 5</th>
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<th>Decile 7</th>
<th>Decile 8</th>
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<th>Decile 10</th>
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<td>89</td>
<td>94</td>
<td>100</td>
<td>123</td>
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<td>114</td>
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<td>129</td>
<td>129</td>
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<td>147</td>
<td>329</td>
<td>378</td>
<td>435</td>
<td>3023</td>
</tr>
</tbody>
</table>

Source: CMIE Economic Outlook, NSE.

...Even as corporate tax payments in FY21 remained below FY19 levels: Even as the listed universe has shown a strong growth in corporate tax payments in FY21, thanks to strong pre-tax profits amidst aggressive cost cutting initiatives and strong policy support, it is still down ~5% on a CAGR basis during FY19-21. Unlisted universe has fared much worse, recording a CAGR of -30% during this period. Effective corporate tax rate fell to a decadal low of 29% in the overall listed (NSE + BSE) universe, and to 13-year low of 24% and 26% for Nifty 50 and Nifty 500 companies, respectively.

Figure 16: Annual trend of effective corporate tax rate for the listed universe

Source: CMIE Prowess, NSE.
Figure 17: Sector-wise effective corporate tax rate in the Nifty 500 universe

<table>
<thead>
<tr>
<th>Sectors</th>
<th>FY12</th>
<th>FY13</th>
<th>FY14</th>
<th>FY15</th>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
<th>FY19</th>
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<th>FY21</th>
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<td>29</td>
<td>34</td>
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<td>39</td>
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<td>45</td>
<td>27</td>
</tr>
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<td>29</td>
<td>33</td>
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<td>29</td>
<td>32</td>
<td>40</td>
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</tr>
<tr>
<td>Nifty 500 ex-Energy &amp; Financials</td>
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<td>31</td>
<td>30</td>
<td>34</td>
<td>38</td>
<td>31</td>
<td>30</td>
<td>34</td>
<td>44</td>
<td>27</td>
</tr>
</tbody>
</table>

Source: CMIE Prowess, NSE.

Corporate tax share of top quintile in the Nifty 500 companies rose in FY21: Our analysis of corporate tax paid by each quintile, based on Market Capitalisation at the beginning of the period, of NSE 500 companies also corroborates our takeaway of larger companies showing better performance during the pandemic in FY21. The Nifty 500 companies in the first quintile—the top 20%—registered the highest 17.5% YoY growth in corporate tax payments in FY21, with its share in total corporate tax payments of the entire Nifty 500 universe rising from ~73% to ~75%. The bottom two quintiles performed the weakest, together registering a modest 1.3% growth in corporate tax payments in FY21, leading to their share dropping to 6.6% from 7.4% in FY20.

Figure 18: Quintile-wise growth in corporate tax paid by Nifty 500 companies

<table>
<thead>
<tr>
<th>Quintile</th>
<th>FY12</th>
<th>FY13</th>
<th>FY14</th>
<th>FY15</th>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
<th>FY19</th>
<th>FY20</th>
<th>FY21</th>
</tr>
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<td>3.2</td>
<td>11.0</td>
<td>9.4</td>
<td>(0.5)</td>
<td>8.1</td>
<td>8.1</td>
<td>16.8</td>
<td>(23.3)</td>
<td>17.5</td>
</tr>
<tr>
<td>Quintile 2</td>
<td>(19.3)</td>
<td>17.1</td>
<td>(7.3)</td>
<td>35.8</td>
<td>(7.0)</td>
<td>11.1</td>
<td>1.6</td>
<td>7.4</td>
<td>(17.4)</td>
<td>6.1</td>
</tr>
<tr>
<td>Quintile 3</td>
<td>(4.9)</td>
<td>9.0</td>
<td>(4.2)</td>
<td>8.4</td>
<td>(13.3)</td>
<td>21.5</td>
<td>14.3</td>
<td>14.0</td>
<td>(32.8)</td>
<td>15.0</td>
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<td>(2.4)</td>
<td>(3.1)</td>
<td>12.3</td>
<td>13.9</td>
<td>10.5</td>
<td>13.8</td>
<td>8.2</td>
<td>(20.4)</td>
<td>(0.9)</td>
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<td>(7.9)</td>
<td>18.5</td>
<td>10.7</td>
<td>15.4</td>
<td>7.9</td>
<td>5.9</td>
<td>21.3</td>
<td>(29.7)</td>
<td>4.4</td>
</tr>
</tbody>
</table>

Source: CMIE Prowess, NSE. *Quintiles are based on the market capitalisation at the beginning of the period.
Lorenz curves and Gini coefficients show a much higher corporate tax inequality in the smaller listed space: Even as the listed corporates have performed much better during the pandemic last year as compared to the unlisted and unorganised space, there is significant corporate tax inequality that exists even within the listed space. We have used the Lorenz curve to assess the degree to which corporate tax payments are concentrated in the bigger (Nifty 500) and the smaller listed (listed ex-Nifty 500) space. The Lorenz curve—originally used to demonstrate wealth or income inequality—is a graphical representation of unequal distribution in any system, in our case corporate tax payments by corporates. The farther away the actual distribution is from the straight 45-degree line—the line of equality, the higher is the level of inequality in the system.

We have constructed Lorenz curves for Nifty 500 and rest of the listed space on NSE and BSE combined for last 10 years to see the extent of inequality that exists between the two samples and how it has changed over the years. Our analysis shows that while both the samples have high inequality in corporate tax payments, the extent of inequality in the smaller listed space, i.e., total listed universe excluding Nifty 500 companies, is actually far higher. In the Nifty 500 universe, top 10% of the companies or ~50 companies contributed ~70% to the overall corporate tax payments in FY21—an increase from a nine-year low of 68.2% in the previous year. Importantly, the share of top 25 companies in overall corporate tax payments in the Nifty 500 universe rose in FY20 and further in FY21 to 54%. This is partly attributed to better performance reported by larger companies during this period of severe economic slowdown.

Corporate tax payments are far more concentrated in the listed space ex-Nifty 500, as depicted from the Lorenz curves, with top 5% and 10% companies accounting for ~66% and 83% of total corporate tax paid by this universe respectively. That said, even as the inequality is still very high, the degree has been coming off over the years. This difference in inequality between the two samples is also reflected in the Gini coefficient or Gini ratio—a statistical measure of deviation from perfect equality. The Gini coefficient ranges from 0 to 1, with 0 representing perfect equality (straight 45% line) and 1 representing perfect inequality. While the Gini coefficient of the Nifty 500 universe was 0.78 in FY21—
the highest in last five years, it was much higher at 0.9 for the listed universe excluding Nifty 500 companies.

**Figure 20**: Lorenz curves for corporate tax inequality for Nifty 500 companies over last 10 years

![Lorenz curves for corporate tax inequality](image)

Source: CMIE Prowess, NSE. * X axis is the cumulative share of companies from lowest to highest corporate tax paid.

**Figure 21**: Corporate tax share of companies in the NIFTY 500 Universe (Cumulative representation, FY12-21)

<table>
<thead>
<tr>
<th>Cumulative share of companies sorted from the highest to the lowest tax paid (%)</th>
<th>FY12</th>
<th>FY13</th>
<th>FY14</th>
<th>FY15</th>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
<th>FY19</th>
<th>FY20</th>
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<td>99.2</td>
<td>99.3</td>
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<tr>
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<td>99.6</td>
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<td>99.4</td>
<td>99.6</td>
<td>99.7</td>
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<td>100.0</td>
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<tr>
<td>100</td>
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<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: CMIE Prowess, NSE. The table above shows the share of corporate tax paid against cumulative share of companies sorted from the highest to the lowest tax paid in the Nifty 500 universe.
Figure 22: Lorenz curves of corporate tax inequality for the listed universe (NSE + BSE) excluding Nifty 500 companies over last 10 years

Figure 23: Corporate tax share of listed companies ex NIFTY500 (Cumulative representation, FY12-21)

<table>
<thead>
<tr>
<th>Cumulative share of companies from the highest to the lowest corporate tax paid (%)</th>
<th>FY12</th>
<th>FY13</th>
<th>FY14</th>
<th>FY15</th>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
<th>FY19</th>
<th>FY20</th>
<th>FY21</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>74.3</td>
<td>75.4</td>
<td>72.5</td>
<td>72.4</td>
<td>75.5</td>
<td>66.0</td>
<td>74.1</td>
<td>65.4</td>
<td>68.5</td>
<td>65.8</td>
</tr>
<tr>
<td>10</td>
<td>86.9</td>
<td>87.2</td>
<td>86.5</td>
<td>86.6</td>
<td>88.8</td>
<td>83.4</td>
<td>87.5</td>
<td>82.5</td>
<td>84.3</td>
<td>83.1</td>
</tr>
<tr>
<td>15</td>
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<td>93.3</td>
<td>93.1</td>
<td>93.2</td>
<td>94.6</td>
<td>91.7</td>
<td>93.5</td>
<td>90.5</td>
<td>91.7</td>
<td>91.0</td>
</tr>
<tr>
<td>20</td>
<td>96.4</td>
<td>96.4</td>
<td>96.5</td>
<td>96.5</td>
<td>97.4</td>
<td>95.7</td>
<td>96.5</td>
<td>94.7</td>
<td>95.6</td>
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</tr>
<tr>
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<td>99.0</td>
<td>99.1</td>
<td>99.4</td>
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<td>99.8</td>
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<td>99.7</td>
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<tr>
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<td>100.0</td>
<td>100.0</td>
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<td>99.9</td>
<td>100.0</td>
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</tr>
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<tr>
<td>70</td>
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<td>100.0</td>
<td>100.0</td>
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<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>80</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>90</td>
<td>100.0</td>
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<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
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</tr>
<tr>
<td>100</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: CMIE Prowess, NSE. * X axis is the cumulative share of companies from lowest to highest corporate tax paid.
Figure 24: Gini coefficients of corporate tax inequality over last 10 years

Gini coefficients of corporate tax inequality over last 10 years

Source: CMIE Prowess, NSE.
COVID-19 Update: Concerns over third wave; pace of vaccine drive inconsistent

Daily infections have plateaued after declining steadily since reaching the peak of the second wave in mid-May. As of August 11th, 2021, daily cases recorded were ~40k, active cases were at ~380k and casualties at ~431k. The weekly growth rate of cases has fallen further to -17% from -15.8% in July. India is now adding 6.2% to global cases on a daily basis, and 6.1% to daily global casualties, while its share in confirmed cases stands at 15.5%. Concerns over the new Delta variant have risen as the number of cases reported have gradually increased.

The spread has been successfully contained after the second wave and states have increased the pace of vaccinations which will be key in keeping case numbers down as states ease restrictions. States that are recording the highest number of cases include Kerala, Maharashtra, Karnataka, Kerala, Tamil Nadu and Andhra Pradesh while Maharashtra, Karnataka, Delhi, and Tamil Nadu have seen the highest number of fatalities. All states except Kerala have successfully flattened their second wave with Kerala seeing some respite only recently. The test positivity rate in Kerala continues to be high while the North Eastern states of Manipur, Sikkim and Meghalaya have also reported higher test positivity rates of 13.2%, 10.9% and 8.8% since July.

Daily cases globally have been on the rise since mid-June at ~640k on August 12th after falling to ~360k around June 20th. This has been led by increasing cases in the U.S.A, with a majority of the spread amongst unvaccinated citizens, and the UK, where cases are under control for now. Cases in other European countries have been largely stable for now.

Even though the pace of vaccination has picked up as compared to pre-June numbers, it remains inconsistent. As of August 12th, 2021, India had vaccinated over 536.2 m people making it the country with the second highest doses of vaccines administered, after China. However, only 31.9% of the population has been partially vaccinated while 8.9% have been fully vaccinated. Advanced economies remain well ahead of emerging markets and developing economies. The pace of inoculation and coverage of population differs meaningfully across countries and factors viz. access to vaccines, population levels, income levels and health infrastructure.

Uttar Pradesh, Maharashtra, Rajasthan, Gujarat, Karnataka and Madhya Pradesh have vaccinated their state population aggressively. West Bengal and Bihar follow closely behind. District wise, Delhi, Bengaluru, Mumbai and Pune have partially vaccinated a substantial share of their population.

Alternative vaccines are gradually making their way to India. Russia’s Sputnik V is being administered at limited sites, the Johnson & Johnson and Moderna vaccines have received emergency approval. However, there is not much clarity on when they will start being administered here.

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1 The minor variations in data across tables and charts are due to different data sources.
Figure 25: COVID-19 vaccine doses administered in India

COVID-19 vaccines doses administered on a daily basis in m. (as of August 12th, 2021)

Source: covid19india.org

Figure 26: State-wise cumulative COVID-19 vaccine does

Total vaccines administered (in 000s) as of August 12th, 2021

Source: covid19india.org
Figure 27: State-wise percentage of population vaccinated

Percentage of population vaccinated as of August 12th, 2021

Source: covid19india.org
Figure 28: Covid-19 vaccine doses administered across countries

Vaccines administered country wise as of August 12th, 2021

Source: Our World in Data. Note: China has administered 1830 m doses in total, as of August 12th, 2021. Data regarding the number of fully and partially vaccinated people is unavailable.

Figure 29: Total vaccines administered in advanced economies, as of August 12th, 2021

Source: Our World in Data.

Figure 30: Total vaccines administered in EMDEs, as of August 12th, 2021

Source: Our World in Data. Note: China has administered 1830 m doses in total, as of August 12th, 2021. Data regarding the number of fully and partially vaccinated people is unavailable.
Figure 31: COVID-19 status—Worldwide (As on August 14th, 2021)

Source: ourworldindata.org.

Figure 32: Daily Coronavirus cases across countries (As on August 14th, 2021)

Source: ourworldindata.org.

Figure 33: COVID-19 stats in top 10 affected countries in terms of total cases (As on August 15th, 2021)

<table>
<thead>
<tr>
<th>Countries</th>
<th>Total cases ('000)</th>
<th>Share in total cases globally (%)</th>
<th>New cases ('000)</th>
<th>Total deaths ('000)</th>
<th>Share in total deaths globally (%)</th>
<th>Active cases ('000)</th>
<th>Share in total active cases globally (%)</th>
<th>Recovery rate (%)</th>
<th>Total cases/mn population</th>
<th>Total deaths/mn population</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>37,633</td>
<td>18.1</td>
<td>106</td>
<td>638</td>
<td>14.6</td>
<td>6,828</td>
<td>39.5</td>
<td>80.2</td>
<td>112,951</td>
<td>1,916</td>
</tr>
<tr>
<td>India</td>
<td>32,225</td>
<td>15.5</td>
<td>33</td>
<td>432</td>
<td>9.9</td>
<td>390</td>
<td>2.3</td>
<td>97.5</td>
<td>23,097</td>
<td>2,657</td>
</tr>
<tr>
<td>Brazil</td>
<td>20,364</td>
<td>9.8</td>
<td>14</td>
<td>569</td>
<td>13.0</td>
<td>576</td>
<td>3.3</td>
<td>94.4</td>
<td>95,045</td>
<td>2,657</td>
</tr>
<tr>
<td>Russia</td>
<td>6,601</td>
<td>3.2</td>
<td>22</td>
<td>170</td>
<td>3.9</td>
<td>546</td>
<td>3.2</td>
<td>89.1</td>
<td>45,210</td>
<td>1,166</td>
</tr>
<tr>
<td>France</td>
<td>6,471</td>
<td>3.1</td>
<td>31</td>
<td>113</td>
<td>2.6</td>
<td>472</td>
<td>2.7</td>
<td>91.0</td>
<td>98,891</td>
<td>1,722</td>
</tr>
<tr>
<td>UK</td>
<td>6,267</td>
<td>3.0</td>
<td>27</td>
<td>131</td>
<td>3.0</td>
<td>1,311</td>
<td>7.6</td>
<td>77.0</td>
<td>91,777</td>
<td>1,918</td>
</tr>
<tr>
<td>Turkey</td>
<td>6,079</td>
<td>2.9</td>
<td>19</td>
<td>53</td>
<td>1.2</td>
<td>420</td>
<td>2.4</td>
<td>92.2</td>
<td>71,214</td>
<td>623</td>
</tr>
<tr>
<td>Argentina</td>
<td>5,085</td>
<td>2.4</td>
<td>4</td>
<td>109</td>
<td>2.5</td>
<td>229</td>
<td>1.3</td>
<td>93.4</td>
<td>111,355</td>
<td>2,388</td>
</tr>
<tr>
<td>Colombia</td>
<td>4,868</td>
<td>2.3</td>
<td>3</td>
<td>123</td>
<td>2.8</td>
<td>53</td>
<td>0.3</td>
<td>96.4</td>
<td>94,535</td>
<td>2,396</td>
</tr>
<tr>
<td>Spain</td>
<td>4,711</td>
<td>2.3</td>
<td>9</td>
<td>83</td>
<td>1.9</td>
<td>669</td>
<td>3.9</td>
<td>84.0</td>
<td>100,709</td>
<td>1,765</td>
</tr>
<tr>
<td>World</td>
<td>208,143</td>
<td>100.0</td>
<td>560</td>
<td>4,375</td>
<td>100.0</td>
<td>17,277</td>
<td>100.0</td>
<td>89.6</td>
<td>26,703</td>
<td>561</td>
</tr>
</tbody>
</table>

Source: worldometers.info.
**Figure 34: COVID-19 cases in India (as of August 11th, 2021)**

COVID-19 Cases in India as of August 11, 2021

![Graph showing COVID-19 cases in India with confirmed cases increasing over time.](source: covid19india.org)

**Figure 35: COVID-19 daily cases in India (August 11th, 2021)**

Daily Cases (000s)

<table>
<thead>
<tr>
<th>Last seven days</th>
<th>New Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>38,029</td>
</tr>
<tr>
<td>06-Aug</td>
<td>38,705</td>
</tr>
<tr>
<td>07-Aug</td>
<td>39,068</td>
</tr>
<tr>
<td>08-Aug</td>
<td>36,036</td>
</tr>
<tr>
<td>09-Aug</td>
<td>27,426</td>
</tr>
<tr>
<td>10-Aug</td>
<td>38,376</td>
</tr>
<tr>
<td>11-Aug</td>
<td>41,586</td>
</tr>
</tbody>
</table>

Source: covid19india.org
Figure 36: COVID-19 active cases in India (August 11th, 2021)
Active cases in India peaked on May 8th, 2021 during the second wave but have continued on a steady downward trajectory since then. Daily cases now fluctuate around the 40,000 mark.

Daily cases recorded in India have plateaued after continuing on a downward trajectory post the peak of the second wave. Most states curbed the spread of the second wave with
state specific restrictions. As of August 11th, 2021, daily cases recorded were 41,586 (Source: covid19india.org). Kerala and Maharashtra currently have a significantly higher number of active cases but while Maharashtra’s cases are on a steadily decline, Kerala has seen some respite in daily cases only recently.

The country’s total and daily share of incremental cases, as of September 30th, 2020, was 19% and 27% respectively which fell to 10% and 3% respectively by January 31st, 2021. However, India’s second wave in cases resulted in a sharp jump in India’s daily share to more than 50% and share of total confirmed cases has to 50% and 15.1% on May 15th, 2021 respectively. On August 12th, 2021, these figures were at 6.2% and 15.5%. While India’s mortality rate initially dropped from 1.4% to 1.1% during the second wave, it has risen to 1.3%. Our daily share of global deaths was 6.1% on August 12th, 2021, an increase from 4.8% seen at the end of July. Total deceased cases could be higher than reported due to limited capacity of testing and the poor condition of health infrastructure in rural areas.

**Figure 38: India’s share of the global cases and deaths**

![Graph showing the share of global cases and deaths in India](worldometers.info, covid19india.org)
Figure 39: India’s share of the global coronavirus cases (daily and total)

<table>
<thead>
<tr>
<th>Date</th>
<th>World Daily</th>
<th>India Daily</th>
<th>India Total</th>
<th>World Total</th>
<th>India Daily Share</th>
<th>India Total Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>29-Feb</td>
<td>1,446</td>
<td>0</td>
<td>3</td>
<td>6,612</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>31-Mar</td>
<td>75,337</td>
<td>146</td>
<td>1,397</td>
<td>779,093</td>
<td>0.2%</td>
<td>0.2%</td>
</tr>
<tr>
<td>30-Apr</td>
<td>81,818</td>
<td>1,801</td>
<td>34,863</td>
<td>3,130,737</td>
<td>2.2%</td>
<td>1.1%</td>
</tr>
<tr>
<td>31-May</td>
<td>105,773</td>
<td>8,782</td>
<td>190,609</td>
<td>5,998,835</td>
<td>8.3%</td>
<td>3.2%</td>
</tr>
<tr>
<td>30-Jun</td>
<td>173,337</td>
<td>18,641</td>
<td>585,481</td>
<td>10,239,259</td>
<td>10.8%</td>
<td>5.7%</td>
</tr>
<tr>
<td>31-Jul</td>
<td>289,732</td>
<td>61,242</td>
<td>1,695,988</td>
<td>17,356,471</td>
<td>21.1%</td>
<td>9.8%</td>
</tr>
<tr>
<td>31-Aug</td>
<td>261,172</td>
<td>69,921</td>
<td>3,691,166</td>
<td>25,233,053</td>
<td>26.8%</td>
<td>14.6%</td>
</tr>
<tr>
<td>30-Sep</td>
<td>324,096</td>
<td>86,821</td>
<td>6,312,584</td>
<td>33,685,132</td>
<td>26.8%</td>
<td>18.7%</td>
</tr>
<tr>
<td>31-Oct</td>
<td>473,618</td>
<td>46,963</td>
<td>8,184,082</td>
<td>45,711,629</td>
<td>9.9%</td>
<td>17.9%</td>
</tr>
<tr>
<td>31-Nov</td>
<td>496,892</td>
<td>31,118</td>
<td>9,462,809</td>
<td>62,778,734</td>
<td>6.3%</td>
<td>15.1%</td>
</tr>
<tr>
<td>30-Dec</td>
<td>747,664</td>
<td>21,822</td>
<td>10,266,674</td>
<td>81,926,995</td>
<td>2.9%</td>
<td>12.5%</td>
</tr>
<tr>
<td>31-Jan</td>
<td>513,060</td>
<td>13,044</td>
<td>10,747,091</td>
<td>103,130,698</td>
<td>3.0%</td>
<td>10.0%</td>
</tr>
<tr>
<td>28-Feb</td>
<td>322,449</td>
<td>15,614</td>
<td>11,111,978</td>
<td>114,644,539</td>
<td>4.8%</td>
<td>9.7%</td>
</tr>
<tr>
<td>30-Mar</td>
<td>564,208</td>
<td>53,480</td>
<td>12,149,335</td>
<td>126,974,931</td>
<td>9.5%</td>
<td>9.6%</td>
</tr>
<tr>
<td>30-Apr</td>
<td>886,822</td>
<td>386,555</td>
<td>18,762,976</td>
<td>149,019,351</td>
<td>43.6%</td>
<td>12.6%</td>
</tr>
<tr>
<td>30-May</td>
<td>388,837</td>
<td>152,734</td>
<td>28,047,534</td>
<td>168,669,044</td>
<td>39.3%</td>
<td>16.6%</td>
</tr>
<tr>
<td>30-Jun</td>
<td>382,203</td>
<td>45,951</td>
<td>30,362,848</td>
<td>180,078,454</td>
<td>12.0%</td>
<td>16.9%</td>
</tr>
<tr>
<td>29-Jul</td>
<td>656,308</td>
<td>44,230</td>
<td>31,572,344</td>
<td>194,847,048</td>
<td>6.7%</td>
<td>16.2%</td>
</tr>
<tr>
<td>12-Aug</td>
<td>641,319</td>
<td>40,081</td>
<td>32,116,848</td>
<td>207,849,110</td>
<td>6.2%</td>
<td>15.5%</td>
</tr>
</tbody>
</table>

Source: worldometers.info, covid19india.org.

Figure 40: India’s share of the global coronavirus deaths (daily and total)

<table>
<thead>
<tr>
<th>Date</th>
<th>World Daily</th>
<th>India Daily</th>
<th>India Total</th>
<th>World Total</th>
<th>India Daily Share</th>
<th>India Total Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>29-Feb</td>
<td>22</td>
<td>0</td>
<td>0</td>
<td>105</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>31-Mar</td>
<td>4,722</td>
<td>3</td>
<td>35</td>
<td>40,947</td>
<td>0.1%</td>
<td>0.1%</td>
</tr>
<tr>
<td>30-Apr</td>
<td>5,830</td>
<td>75</td>
<td>1,154</td>
<td>228,555</td>
<td>1.3%</td>
<td>0.5%</td>
</tr>
<tr>
<td>31-May</td>
<td>2,768</td>
<td>223</td>
<td>5,408</td>
<td>362,422</td>
<td>8.1%</td>
<td>1.5%</td>
</tr>
<tr>
<td>30-Jun</td>
<td>4,907</td>
<td>507</td>
<td>17,400</td>
<td>494,899</td>
<td>10.3%</td>
<td>3.5%</td>
</tr>
<tr>
<td>31-Jul</td>
<td>6,194</td>
<td>793</td>
<td>36,511</td>
<td>661,570</td>
<td>12.8%</td>
<td>5.5%</td>
</tr>
<tr>
<td>31-Aug</td>
<td>4,198</td>
<td>819</td>
<td>65,288</td>
<td>836,248</td>
<td>19.5%</td>
<td>7.8%</td>
</tr>
<tr>
<td>30-Sep</td>
<td>6,399</td>
<td>1,181</td>
<td>98,678</td>
<td>999,643</td>
<td>18.5%</td>
<td>9.9%</td>
</tr>
<tr>
<td>31-Oct</td>
<td>6,526</td>
<td>470</td>
<td>122,111</td>
<td>1,179,890</td>
<td>7.2%</td>
<td>10.3%</td>
</tr>
<tr>
<td>30-Nov</td>
<td>8,564</td>
<td>482</td>
<td>137,621</td>
<td>1,450,169</td>
<td>5.6%</td>
<td>9.5%</td>
</tr>
<tr>
<td>30-Dec</td>
<td>14,976</td>
<td>299</td>
<td>148,738</td>
<td>1,783,126</td>
<td>2.0%</td>
<td>8.3%</td>
</tr>
<tr>
<td>31-Jan</td>
<td>14,092</td>
<td>127</td>
<td>154,312</td>
<td>2,230,317</td>
<td>1.0%</td>
<td>7.0%</td>
</tr>
<tr>
<td>28-Feb</td>
<td>9,918</td>
<td>108</td>
<td>156,603</td>
<td>2,544,070</td>
<td>1.1%</td>
<td>6.2%</td>
</tr>
<tr>
<td>31-Mar</td>
<td>12,174</td>
<td>459</td>
<td>162,927</td>
<td>2,786,089</td>
<td>3.8%</td>
<td>5.8%</td>
</tr>
<tr>
<td>30-Apr</td>
<td>14,922</td>
<td>3,498</td>
<td>208,330</td>
<td>3,134,652</td>
<td>23.4%</td>
<td>6.6%</td>
</tr>
<tr>
<td>30-May</td>
<td>8,092</td>
<td>3,128</td>
<td>329,100</td>
<td>3,623,115</td>
<td>38.7%</td>
<td>9.1%</td>
</tr>
<tr>
<td>30-Jun</td>
<td>8,068</td>
<td>817</td>
<td>398,454</td>
<td>3,904,157</td>
<td>10.1%</td>
<td>10.2%</td>
</tr>
<tr>
<td>29-Jul</td>
<td>11,533</td>
<td>555</td>
<td>423,217</td>
<td>4,164,831</td>
<td>4.8%</td>
<td>10.2%</td>
</tr>
<tr>
<td>12-Aug</td>
<td>9,568</td>
<td>583</td>
<td>429,965</td>
<td>4,372,798</td>
<td>6.1%</td>
<td>9.8%</td>
</tr>
</tbody>
</table>

Source: worldometers.info, covid19india.org.
Total confirmed cases in a state can be misleading since area, population and population density need to be taken into account as well. States that saw the virus spreading early on during the first wave include Maharashtra, Kerala and Delhi but were able to bring their case load under control. These states also saw surges after festivals in August and November but were on a steady downward trajectory from December to February, before the second wave began. Kerala, Maharashtra, Karnataka, Tamil Nadu and Andhra Pradesh currently have the highest number of active cases. All states except Kerala have successfully flattened their second wave with Kerala seeing some respite only recently.

Mortality rates have remained at 1.3% over the last month after falling to 1.2% during the second wave. Recovery rates have marginally increased to 97.4% in July. While the third COVID-19 wave seems imminent, medical professionals believe it won’t be as severe as the second wave seen in March-May. However, most states are preparing to ramp up health infrastructure in preparation for another crisis.
Figure 41: COVID-19 Cases Panel in India across States (Confirmed, Recovered, Active) as of August 11th, 2021

States by Status

```
<table>
<thead>
<tr>
<th>Status</th>
<th>Active</th>
<th>Confirmed</th>
<th>Recovered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andhra Pradesh</td>
<td>18,417</td>
<td>1,987,051</td>
<td>13,582</td>
</tr>
<tr>
<td>Chhattisgarh</td>
<td>1,557</td>
<td>1,003,439</td>
<td>13,545</td>
</tr>
<tr>
<td>Delhi</td>
<td>494</td>
<td>1,436,889</td>
<td>25,068</td>
</tr>
<tr>
<td>Karnataka</td>
<td>22,851</td>
<td>2,922,875</td>
<td>36,881</td>
</tr>
<tr>
<td>Kerala</td>
<td>175,958</td>
<td>3,610,193</td>
<td>21,120</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>64,670</td>
<td>134,364</td>
<td>937,002</td>
</tr>
<tr>
<td>Odisha</td>
<td>9,813</td>
<td>990,075</td>
<td>6,683</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>20,382</td>
<td>2,581,094</td>
<td>34,395</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>505</td>
<td>1,708,836</td>
<td>22,776</td>
</tr>
<tr>
<td>West Bengal</td>
<td>10,163</td>
<td>1,535,899</td>
<td>18,258</td>
</tr>
</tbody>
</table>
```

Source: covid19india.org
Figure 42: COVID-19 Confirmed cases across major states, as of August 11th, 2021

Source: covid19india.org

Figure 43: COVID-19 Active cases across major states, as of August 11th, 2021

Source: covid19india.org
Figure 44: COVID-19 Recovered cases across major states, as of August 11th, 2021

<table>
<thead>
<tr>
<th>State</th>
<th>Recovered</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>31,252,611</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>6,166,620</td>
</tr>
<tr>
<td>Kerala</td>
<td>3,415,595</td>
</tr>
<tr>
<td>Karnataka</td>
<td>2,863,117</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>2,525,317</td>
</tr>
<tr>
<td>Andhra Pradesh</td>
<td>1,955,062</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>1,685,555</td>
</tr>
<tr>
<td>West Bengal</td>
<td>1,507,278</td>
</tr>
<tr>
<td>Delhi</td>
<td>1,411,327</td>
</tr>
<tr>
<td>Chhattisgarh</td>
<td>988,337</td>
</tr>
</tbody>
</table>

Source: covid19india.org

Figure 45: COVID-19 recovery rate across major states, as of August 11th, 2021

<table>
<thead>
<tr>
<th>State</th>
<th>Recovery Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rajasthan</td>
<td>99.0</td>
</tr>
<tr>
<td>Gujarat</td>
<td>98.8</td>
</tr>
<tr>
<td>Haryana</td>
<td>98.7</td>
</tr>
<tr>
<td>Madhya Pradesh</td>
<td>98.7</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>98.6</td>
</tr>
<tr>
<td>Bihar</td>
<td>98.6</td>
</tr>
<tr>
<td>Chhattisgarh</td>
<td>98.5</td>
</tr>
<tr>
<td>Andhra Pradesh</td>
<td>98.4</td>
</tr>
<tr>
<td>Odisha</td>
<td>98.3</td>
</tr>
<tr>
<td>Delhi</td>
<td>98.2</td>
</tr>
</tbody>
</table>

Source: covid19india.org
There remains a divergence between mortality rates of different states. Punjab, Uttarakhand, Maharashtra and Nagaland have recorded noticeably higher fatality rates than the national average with rates of 2.7%, 2.2%, 2.1% and 2.1%. It is important to note that Punjab has had a high case fatality rate since the pandemic began. Additionally, Uttarakhand has recorded a higher case fatality ratio for the last couple of months which is a worrying sign. States like Kerala, Telangana, Andhra Pradesh and Odisha have managed a low CFR of 0.5%, 0.6%, 0.7% and 0.7% respectively.

**Figure 46: COVID-19 Deceased cases across major states, as of August 11th, 2021**

<table>
<thead>
<tr>
<th>State</th>
<th>Deceased</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>429,702</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>134,364</td>
</tr>
<tr>
<td>Karnataka</td>
<td>36,881</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>54,395</td>
</tr>
<tr>
<td>Delhi</td>
<td>25,068</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>22,776</td>
</tr>
<tr>
<td>West Bengal</td>
<td>18,256</td>
</tr>
<tr>
<td>Kerala</td>
<td>18,120</td>
</tr>
<tr>
<td>Punjab</td>
<td>16,325</td>
</tr>
<tr>
<td>Andhra Pradesh</td>
<td>13,582</td>
</tr>
</tbody>
</table>

Source: covid19india.org
The differentiating factor in containing the spread of the virus across countries continues to be the extent of testing. Uttar Pradesh, Maharashtra, Karnataka and Tamil Nadu have conducted the most number of tests so far but their testing intensity is low as compared to states like Delhi, Kerala and Goa who have covered 122%, 83% and 72% of their population respectively. Madhya Pradesh, Rajasthan and West Bengal and continue to do poorly with respect to testing with 18.6%, 17% and 16.7% testing intensities respectively.

While the test positivity rate in Kerala continues to be high at 14.4%, the North Eastern states of Manipur, Sikkim and Meghalaya have reported higher test positivity rates of 13.2%, 10.9% and 8.8% for the last couple of months.
Figure 48: Daily COVID-19 tests in India, as on August 11th, 2021 (the trend line denotes 7DMA)

COVID-19 Daily Tests in India

<table>
<thead>
<tr>
<th>Date</th>
<th>Tested</th>
<th>DailyTests</th>
</tr>
</thead>
<tbody>
<tr>
<td>05-Aug</td>
<td>476,533,650</td>
<td>1,753,314</td>
</tr>
<tr>
<td>06-Aug</td>
<td>478,316,964</td>
<td>1,722,221</td>
</tr>
<tr>
<td>07-Aug</td>
<td>480,039,185</td>
<td>1,728,047</td>
</tr>
<tr>
<td>08-Aug</td>
<td>481,767,232</td>
<td>1,511,313</td>
</tr>
<tr>
<td>09-Aug</td>
<td>483,278,545</td>
<td>1,777,962</td>
</tr>
<tr>
<td>10-Aug</td>
<td>485,056,507</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: covid19india.org

Figure 49: Testing intensity across states as of August 12th, 2021

Testing intensity (%) across states, as of August 12th, 2021

Source: covid19india.org
Figure 50: COVID-19 Test Positivity Rate (TPR) across major states, as of August 11th, 2021

We have highlighted the divergence in the rate of infection across states since the pandemic hit India. In order to understand the growth trends, we consider growth in terms of the number of days it would take to double the cases. The so-called doubling-rate (2x) rate is a widely used metric for measuring rapid growth.

Most states have seen huge rise in the number of days to double their current confirmed cases, after a sharp fall due to the second wave. India's 2x rate has risen to 701 days on as of August 11th, 2021, making steady progress from 188 days as of June 9th as compared to 41 days on May 12th. Kerala's doubling rate, has fallen to 147 days from 175 days on July 10th, 2021. Odisha and Andhra Pradesh are also on the lower end with doubling rates of 730 and 881 days respectively. The doubling rate of deceased cases is the worst in Odisha and Kerala at 80 and 109 days respectively.

Source: covid19india.org

**Infection spread across states**

We have highlighted the divergence in the rate of infection across states since the pandemic hit India. In order to understand the growth trends, we consider growth in terms of the number of days it would take to double the cases. The so-called doubling-rate (2x) rate is a widely used metric for measuring rapid growth.

Most states have seen huge rise in the number of days to double their current confirmed cases, after a sharp fall due to the second wave. India's 2x rate has risen to 701 days on as of August 11th, 2021, making steady progress from 188 days as of June 9th as compared to 41 days on May 12th. Kerala’s doubling rate, has fallen to 147 days from 175 days on July 10th, 2021. Odisha and Andhra Pradesh are also on the lower end with doubling rates of 730 and 881 days respectively. The doubling rate of deceased cases is the worst in Odisha and Kerala at 80 and 109 days respectively.
Figure 51: COVID-19 Doubling Rate: Confirmed cases across major states, as of August 11th, 2021

Source: covid19india.org

Figure 52: COVID-19 Doubling Rate: Deceased cases across major states, as of August 11th, 2021

Source: covid19india.org
District-level trends

Active cases have now plateaued in all parts of the country, led by the districts that were first hit by the second wave. The number of districts with 1000+ active cases has fallen to 49 as of August 11th, 2021 from 75 on July 10th, 2021 while only 6 districts have more than 10,000 cases. Rural areas were hit harder during the second wave as compared to the first but insufficient testing might not reveal the true extent of the spread. Vaccine hesitancy continues to be a hurdle in rural areas of the continue.

Figure 53: COVID-19 confirmed cases across districts, ranked by confirmed cases as of August 11th, 2021

Figure 54: COVID-19 active cases across districts, ranked by confirmed cases as of August 11th, 2021

Figure 55: Dispersion of COVID-19 active cases and deaths across districts

Source: covid19india.org
Figure 56: COVID-19 cases across districts, ranked by Active Cases as of August 11th, 2021

Source: covid19india.org
Figure 57: COVID-19 Case Fatality Rate (CFR) across districts, ranked by Active Cases as of August 11th, 2021

Source: covid19india.org
Figure 58: COVID-19 Active cases trend across districts ranked by Active Cases as of August 11th, 2021

Source: covid19india.org
Demystifying the inflation conundrum: Transient or Persistent?

The COVID-induced global lockdowns in early 2020 ignited massive supply chain disruptions, thereby paving the way for a colossal loss of global demand. Subsequently, oil prices tumbled significantly and trickled down to consumer prices, leading to a drop in global consumer price inflation between Jan’20 and May’20. Since May’20, however, commodity prices and inflation in many countries have been marching upwards. While a part of this increase was largely on expected lines as economies recovered from the worst of the COVID-19 pandemic, the sheer magnitude has surprised on the upside. This is due to a confluence of demand-supply factors that have played in along with the base effects. A sharp rebound in global demand accompanied by a slower normalization of supply chains has sent input prices soaring to new highs. This, in turn, has now seeped into global consumer prices as well.

Financial markets, however, tell a different story. Despite a higher-than-expected surge in US inflation over the last couple of months, the US 10-year and 30-year bond yields have moderated since April. This primarily reflects escalating concerns about a potential peaking of growth in the US. Through this report, we have tried to address the elephant in the room, i.e., whether these inflationary pressures can be claimed as transitory or more persistent than regarded.

Our analysis shows that the recent spike in inflationary pressures is more transitory in nature due to the following factors:

1. Wage growth remains subdued,
2. Recent acceleration in core inflation in the US reflects supply-side disruptions rather than rapid exhaustion of spare capacity, and
3. While near-term household inflation expectations have spiked, medium-term expectations remain muted.

As such, at the current juncture, forces such as demand outpacing supply, sustained wage growth in excess of labor productivity, and de-anchoring of expectations that hold the potential to generate a more persistent rise in inflation remain well contained. Nevertheless, we acknowledge that there are lingering upside risks that can keep inflation trajectory elevated for longer than expected, particularly in the wake of continued supply-side disruptions.

- **Global Inflation plunged at the onset of the pandemic...** The pandemic-induced global lockdowns in early 2020 ignited massive supply chain disruptions, thereby leading to a significant deterioration in global demand. Consequently, oil prices plummeted sharply to levels last seen in 2002. Alongside, key commodity indices such as CRB, Baltic Dry, LME, and S&P GSCI also tumbled to multi-year lows. This plunge in commodity prices then trickled down to consumer prices, leading to a drop in global consumer price inflation by 1% between Jan’20 and May’20—the feature that was more prominent in advanced economies (AEs) than in emerging market and developing economies (EMDEs). While the drop in consumer price inflation in the US was quite steep at ~240bps during Jan-May’20, that in EMDEs like India, Indonesia, Korea, Philippines and Mexico was relatively benign. The drop that was first led by an oil price plunge later got accentuated by a demand collapse caused by income losses due to stringent restrictions imposed by several countries to contain the spread of the virus. However, supply disruptions did offset some of the disinflationary pressures across the globe.

- **...But recovered sharply from May lows:** Since May’20, commodity prices and inflation in many countries have been marching upwards. While a part of this increase was largely on expected lines as economies recovered from the worst of the COVID-19 pandemic, the sheer magnitude has surprised on the upside. This is due to a confluence of demand-supply factors that have played in along with the base effects. A sharp rebound in global demand as indicated by the surging new orders, accompanied by the slower normalization of supply chains as evident from the lengthened Supplier Delivery Times reported by firms in Business Surveys, has
sent input prices soaring to new highs. Global demand rebound has been mainly on account of swift re-opening and robust vaccination drives as well as massive stimulus measures announced by countries across the globe. This, in turn, has now seeped into global consumer prices and started posing challenges for the central banks, who are now caught off guard in a policy dilemma with inflation breaching their targets and economic growth recoveries faltering amidst a resurgence of cases and fresh restrictions across major geographies.

- **US inflation has rebounded faster and sooner than after any previous recession since the 1950s:** Recessions usually set off a decline in global inflation that last several quarters beyond the trough of the recession and well into the recovery. While assessing the previous episodes of recessions since the 1950s in the US and the subsequent inflation trajectory before, during and after the recession, it can be clearly deciphered that the decline in inflation during 2020 was the most muted and least protracted of any of the recessions. The increase in inflation since Q2 2020 has been sharper and sooner than the pickup witnessed after previous recessions since 1950.

- **Surging commodity prices has been the major driver of consumer price inflation for all economies:** In most AEs and EMDEs, inflation has picked up since last year in line with the rise in oil and other commodity prices. Temporary supply shortages in specific sectors, including semiconductors and shipping, and signs of skills shortages for some small businesses, are also contributing to the higher input cost pressures as apparent in business surveys. Looking within the drivers of inflation data compiled by the OECD for most AEs, surging prices in the transport segment as well as increase in prices of housing, utilities and other fuels segments have contributed the most to the recent inflation prints. However, for EMDEs, a significant jump in food prices amid shortages alongside the surge in global food inflation has been the topmost contributor to higher inflation prints. Surging commodity prices, weaker currencies, increase in indirect taxes and regulated electricity prices in a few EMs have also added to price pressures.

- **Bond market suggests a potential peaking of growth in the US:** Financial market developments indicate that despite a sharp rise in the US inflation (in fact, higher than expected) in the last couple of months, the US 10-year and 30-year bond yields have moderated since April. This is largely on account of escalating concerns about the fact that growth in the US economy has peaked. Market participants are now expecting the economy to witness sequential moderation in the second half of this year amidst renewed resurgence in cases. This is then likely to be followed by much more noticeable slowdown in the first half of 2022 as fiscal support fades. This is evident from the US weekly ECRI leading index and ZEW indicator of economic sentiment that have moderated recently.

- **Concluding Remarks:** We cannot call the existing inflationary pressures to be persistent yet because of the following factors: 1) Despite a recent uptick in wage growth in the United States, wages of individuals, observed 12 months apart in the Atlanta Federal Reserve’s Wage Growth Tracker, do not indicate broader pressure in the labor market, 2) The recent acceleration in core inflation in the US (accounted for mostly by increases in prices of used cars, lumber, and air travel) largely reflects pandemic-related disruptions rather than rapid exhaustion of spare capacity, and Multitude of demand and supply side factors have been driving prices higher since May 2020. In most AEs and EMDEs, inflation has picked up since the last year in line with the rise in oil and other commodity prices.
lastly, 3) While short-run (1 year) inflation expectations of US Households as indicated by University of Michigan have spiked but longer-term (5 years) remains subdued. Thus, at the current juncture, forces that hold the potential to generate a more persistent rise in inflation remain well contained. According to the recent BIS bulletin, “Global Reflation?”, these forces are 1) sustained demand in excess of supply, 2) sustained wage increases in excess of labor productivity growth, and 3) a de-anchoring of inflation expectations. We perceive the current inflationary trends to be transient but also acknowledge that there are lingering upside risks that can keep it elevated for longer than expected. That said, a more persistent pickup in inflation cannot be ruled out. Intensifying supply-side disruptions, especially related to global supply chains, could lead to further price increases.

Figure 59: COVID-induced global lockdowns in early 2020 were quick to send commodity indices tumbling to multi-year lows, but they made a quick comeback from May onwards after re-opening and stimulus measures
### Figure 60: Commodity Return Quilt depicts the sharp recovery in commodities post 2020...

<table>
<thead>
<tr>
<th>Year</th>
<th>Silver</th>
<th>Gold</th>
<th>Palladium</th>
<th>Platinum</th>
<th>Nickel</th>
<th>Copper</th>
<th>Tin</th>
<th>Zinc</th>
<th>Crude BFO</th>
<th>Platinum</th>
<th>Nickel</th>
<th>Gold</th>
<th>Palladium</th>
<th>Zinc</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>71.54%</td>
<td>6.60%</td>
<td>11.86%</td>
<td>13.46%</td>
<td>-8.05%</td>
<td>14.96%</td>
<td>42.07%</td>
<td>28.73%</td>
<td>50.77%</td>
<td>41.39%</td>
<td>78.32%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>Crude BFO</td>
<td>41.21%</td>
<td>-0.96%</td>
<td>3.42%</td>
<td>12.90%</td>
<td>-11.59%</td>
<td>12.12%</td>
<td>37.06%</td>
<td>23.38%</td>
<td>10.98%</td>
<td>26.99%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>Palladium</td>
<td>35.95%</td>
<td>-8.25%</td>
<td>2.71%</td>
<td>11.07%</td>
<td>-11.76%</td>
<td>10.17%</td>
<td>27.07%</td>
<td>17.83%</td>
<td>7.97%</td>
<td>26.51%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>Gold</td>
<td>27.60%</td>
<td>-9.89%</td>
<td>-2.48%</td>
<td>2.34%</td>
<td>-14.28%</td>
<td>8.48%</td>
<td>24.01%</td>
<td>4.55%</td>
<td>4.65%</td>
<td>2.78%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>Tin</td>
<td>27.08%</td>
<td>-11.05%</td>
<td>-2.62%</td>
<td>-1.30%</td>
<td>-15.57%</td>
<td>6.06%</td>
<td>22.45%</td>
<td>2.99%</td>
<td>0.97%</td>
<td>0.27%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>Copper</td>
<td>16.49%</td>
<td>-11.56%</td>
<td>-5.58%</td>
<td>-3.04%</td>
<td>-16.43%</td>
<td>Aluminum</td>
<td>-1.49%</td>
<td>21.20%</td>
<td>-0.04%</td>
<td>6.69%</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2017</td>
<td>Platinum</td>
<td>11.00%</td>
<td>-13.58%</td>
<td>-9.81%</td>
<td>-6.86%</td>
<td>-24.45%</td>
<td>10.12%</td>
<td>-0.96%</td>
<td>6.31%</td>
<td>3.04%</td>
<td>1.28%</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2018</td>
<td>Aluminum</td>
<td>5.35%</td>
<td>-16.35%</td>
<td>-14.75%</td>
<td>-10.20%</td>
<td>-27.32%</td>
<td>9.65%</td>
<td>4.85%</td>
<td>10.33%</td>
<td>-8.36%</td>
<td>20.46%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>Nickel</td>
<td>3.44%</td>
<td>-18.59%</td>
<td>-16.83%</td>
<td>-10.67%</td>
<td>-30.97%</td>
<td>12.89%</td>
<td>0.41%</td>
<td>8.32%</td>
<td>-11.67%</td>
<td>19.44%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>Zinc</td>
<td>3.32%</td>
<td>-24.37%</td>
<td>-25.36%</td>
<td>-20.50%</td>
<td>-45.93%</td>
<td>17.17%</td>
<td>9.15%</td>
<td>-13.94%</td>
<td>-35.64%</td>
<td>7.26%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Refinitiv Datastream, NSE.

### Figure 61: ...as was the case after the Global Financial Crisis

<table>
<thead>
<tr>
<th>Year</th>
<th>Lead</th>
<th>Nickel</th>
<th>Silver</th>
<th>Copper</th>
<th>Tin</th>
<th>Zinc</th>
<th>Crude BFO</th>
<th>Platinum</th>
<th>Nickel</th>
<th>Gold</th>
<th>Palladium</th>
<th>Zinc</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>5.20%</td>
<td>15.50%</td>
<td>47.06%</td>
<td>71.24%</td>
<td>43.51%</td>
<td>139.56%</td>
<td>Crude BFO</td>
<td>Platinum</td>
<td>64.42%</td>
<td>24.45%</td>
<td>11.73%</td>
<td>50.77%</td>
</tr>
<tr>
<td>2002</td>
<td>Gold</td>
<td>15.22%</td>
<td>27.86%</td>
<td>70.17%</td>
<td>31.60%</td>
<td>82.92%</td>
<td>Copper</td>
<td>46.64%</td>
<td>24.43%</td>
<td>8.97%</td>
<td>44.35%</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>Aluminum</td>
<td>9.50%</td>
<td>22.17%</td>
<td>62.22%</td>
<td>26.83%</td>
<td>70.41%</td>
<td>Copper</td>
<td>18.47%</td>
<td>15.00%</td>
<td>15.91%</td>
<td>43.32%</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>Platinum</td>
<td>4.51%</td>
<td>17.98%</td>
<td>41.41%</td>
<td>9.74%</td>
<td>61.42%</td>
<td>Silver</td>
<td>10.93%</td>
<td>22.33%</td>
<td>40.09%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>Silver</td>
<td>4.50%</td>
<td>17.84%</td>
<td>36.21%</td>
<td>9.36%</td>
<td>58.48%</td>
<td>Platinum</td>
<td>14.54%</td>
<td>14.54%</td>
<td>40.09%</td>
<td></td>
<td></td>
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<tr>
<td>2006</td>
<td>Copper</td>
<td>13.26%</td>
<td>15.63%</td>
<td>33.71%</td>
<td>9.22%</td>
<td>36.76%</td>
<td>Gold</td>
<td>13.66%</td>
<td>2.00%</td>
<td>22.64%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>Crude BFO</td>
<td>-14.70%</td>
<td>12.93%</td>
<td>27.61%</td>
<td>8.38%</td>
<td>35.60%</td>
<td>Lead</td>
<td>13.34%</td>
<td>13.34%</td>
<td>30.08%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>Palladium</td>
<td>-16.95%</td>
<td>7.75%</td>
<td>21.66%</td>
<td>6.55%</td>
<td>32.81%</td>
<td>Platinum</td>
<td>10.05%</td>
<td>-4.54%</td>
<td>25.22%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>Zinc</td>
<td>-17.44%</td>
<td>7.33%</td>
<td>20.95%</td>
<td>4.40%</td>
<td>27.91%</td>
<td>Nickel</td>
<td>20.83%</td>
<td>-27.00%</td>
<td>25.76%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>Nickel</td>
<td>-21.28%</td>
<td>7.02%</td>
<td>14.44%</td>
<td>-10.07%</td>
<td>22.78%</td>
<td>Platinum</td>
<td>1.61%</td>
<td>-41.82%</td>
<td>25.65%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Refinitiv Datastream, NSE.
Figure 62: Slump in CPI during Jan-May was more prominent in AEs and so has been the rebound

Figure 63: While for Emerging Markets, the decline was not secular and so has been the rebound
Figure 64: As Global Economic Policy Uncertainty reduced substantially in 2021...

Source: Economic Policy Uncertainty.com, NSE

Figure 65: ...and OECD Composite Leading Index rose to the highest level since July 2018 in June 2021...

Source: OECD, NSE
Figure 66: CITI Global Inflation surprise index surged significantly, indicating that the magnitude of surge in inflation across the globe was more than expected.

Source: Refinitiv Datastream, NSE.

Figure 67: A sharp rebound in global demand as indicated by the surging new orders......

Source: Refinitiv Datastream, NSE.
Figure 68: ...accompanied by the slower normalisation of supply chains as evident from the lengthened Supplier Delivery Times and lower inventories reported by firms in Business Surveys....

Source: Refinitiv Datastream, NSE

Figure 69: ...has sent input prices soaring to new highs across the globe

Source: Refinitiv Datastream, NSE
Figure 70: Chip lead times, the gap between ordering a semiconductor and taking delivery, increased by seven days to 18 weeks in May from the previous month, an indication that chipmakers’ struggles to keep up with demand are worsening.

Source: Susquehanna Financial Group, Bloomberg Article

Figure 71: All commodity indices have ratcheted sharply over a year on account of sharp rebound in global demand, bolstered by massive stimulus measures adopted across globe (Jul’20=100)

Source: Refinitiv Datastream, NSE
Figure 72: Barring safe-haven commodities, all other commodities’ prices have soared on global risk-on rally (Jul’20-100)

Source: Refinitiv Datastream, NSE

Figure 73: Shipping cost rates have soared in recent months due to the conjunction of booming demand for consumer durables from Asia and supply-side bottlenecks created by sanitary restrictions in ports and terminals (Jul’20=100)

Source: Refinitiv Datastream, NSE
Figure 74: With surging input prices seeping into consumer prices, a few central banks have raised rates

Figure 75: With higher inflation and lower policy rates, real rates are negative for most of the economies....

Source: Refinitiv Datastream, BIS, NSE
Figure 76: ...except for China, Indonesia, Russia, and Turkey

Source: Refinitiv Datastream, NSE. Real rates are calculated as a difference of policy rate and consumer price inflation.

Figure 77: While assessing the previous episodes of recessions since 1950s in US & the subsequent inflation trajectory before, during and after the recession, it can be clearly deciphered that the decline in inflation during the 2020 was the most muted and least protracted of any of the recessions.
Figure 78: For most AEs, surging prices in the transport segment coupled with the increase in prices of Housing, Water, electricity, gas, and other fuels segment have contributed the most to the recent inflation prints.

**United States**

- Miscellaneous goods and services
- Education
- Communication
- Health
- Housing, water, electricity, gas and other fuels
- Alcoholic beverages, tobacco and narcotics
- All Items

**United Kingdom**
Source: OECD Database
For Emerging Market economies, significant increase in food prices amid shortages and the surge in global food inflation have been the topmost contributor to higher inflation prints. Alongside, surging commodity prices coupled with the past depreciation of currencies and increases in indirect taxes and regulated electricity prices in a few EMs have also added to price pressures.

Figure 79: For Emerging Market economies, significant increase in food prices amid shortages and the surge in global food inflation have been the topmost contributor to higher inflation prints. Alongside, surging commodity prices coupled with the past depreciation of currencies and increases in indirect taxes and regulated electricity prices in a few EMs have also added to price pressures.
Source: OECD Database, Refinitiv Datastream
Figure 80: Similar story is playing out in India as well with Food and fuel component contributing the most in surge

Source: Refinitiv Datastream

Figure 81: Despite a sharp rise in US inflation (in fact, higher than expected) in the last couple of months, the US 10-year and 30-year bond yields have moderated since April.

Source: St. Louis Fred

Figure 82: This is largely on account of escalating concerns about the fact that growth in US has peaked, the economy will slow a bit in the second half of this year, then much more noticeably in the first half of 2022 as fiscal support fades. This is evident from US weekly ECRI leading index....
Figure 83: ...and ZEW indicator of economic sentiment for US that has moderated recently.
Figure 84: Alongside, ZEW indicator of inflation suggests that inflation has peaked in US and Eurozone

Source: Refinitiv Datastream

Figure 85: US labour market is still not out of the woods as labor force participation rate has not gained much traction yet

Source: St. Louis Fred
Figure 86: Despite a recent uptick in wage growth in the United States, wages of individuals in the Atlanta Federal Reserve’s Wage Growth Tracker do not indicate broader pressure in the labor market.

Source: Refinitiv Datastream
Figure 87: While short run (1 year) inflation expectations of US Households as indicated by University of Michigan have spiked but longer term (5 year) remains subdued.

Source: Refinitiv Datastream

Figure 88: Five-year breakeven inflation rate has moderated from May levels

Source: Refinitiv Datastream

Figure 89: US GDP has made a full recovery but not the labor market

Source: St. Louis Fred, NSE
New product: Nifty Microcap 250 Index

Introduction

The listed stocks universe on NSE has grown considerably over time due to deepening of the capital markets resulting in more companies getting listed on the exchange. More than 1600 companies are listed on the Main Board of NSE as of June 30th, 2021, compared to ~900 companies listed 15 years ago in 2006. These listed stocks can broadly be classified based on their market capitalization as Large cap, Mid cap, Small cap and Micro cap. Large cap, Mid cap and Small cap stocks have always been tracked and analyzed by market participants and stocks analysts and have also been covered by various equity indices that show the performance of these market segments across market phases. For instance, Nifty 100 covers large cap, Nifty Midcap 150 covers the midcap segment and Nifty Smallcap 250 covers the small cap segment, while Nifty 500 encompasses all three segments together. However, Micro-cap stocks which are broadly defined as stocks with market capitalization smaller than those of small cap stocks, have unfortunately not received equal market attention nor are tracked through any popular index. Microcap companies (stocks beyond the Nifty 500 constituents) are crucial to the economy from both a growth and employment point of view, but often do not get the same kind of representation as larger companies.

For example, the Financial Services and IT sectors which are vital to economic growth are well represented in the Nifty 500, accounting for substantial weight. However, other sectors including Industrial Manufacturing and Chemicals which are also critical for the economy, do not have the same degree of representation in the large, mid or small cap indices due to their small size. For example, the Industrial Manufacturing and Chemicals sectors account for only ~3% and ~2% weight in the Nifty 500 Index respectively. The Nifty Microcap 250 Index, recently launched by NSE Indices Ltd., provides investors a gauge to track this lesser represented segment by providing performance of NSE's listed micro-cap stocks beyond the existing Large, Mid and Small-cap segments. Building on the previous point, the weights of the Industrial Manufacturing and Chemicals sectors stand at ~14% and ~6% respectively in the Nifty Microcap 250 Index vs. their relatively low weights in the Nifty 500 Index. Overall, the Nifty Microcap 250 Index has a more balanced distribution of sectors compared to the Nifty 500 Index. It plugs the current research gap, providing researchers and investors insights into how microcap stocks are performing across time.

Figure 90: Coverage of NSE’s listed universe across broad market

Source: NSE Indices. Data obtained between the period Jan 1st, 2021 to June 30th, 2021. The above image is representative only and has not been drawn to scale. *Stocks with listing history less than 3 months and stocks not classified in any index currently with overall 6-month average full market capitalization rank <=350 have been excluded from the eligible universe for the calculations above. #Weighted average constituent turnover is obtained as the weighted average of 6-month ADT of constituents weighted by the constituent weights in the respective indices as on June 30th, 2021.

The report is prepared by the NSE Indices Limited. This report is available at the following link. https://archives.nseindia.com/content/indices/Nifty_Microcap_250_Index_Whitepaper.pdf
The Nifty Microcap 250 Index has outperformed the Nifty Smallcap 250 Indexover the short term and long term
The Nifty Microcap 250 Index has outperformed the Nifty Smallcap 250 Index over the last 1 year. Over the period of June 30, 2020 to June 30, 2021, the Nifty Microcap 250 Index returned 147.2% against 109.4% for the Nifty Smallcap 250 Index. Since inception, from April 1st, 2005 to June 30th, 2021, the Nifty Microcap 250 Index has outperformed the Nifty Smallcap 250 Index, returning 16.2% CAGR return against 15.5% CAGR for the latter.

The Nifty Microcap 250 Index has been more volatile than the Nifty Smallcap 250 Index over various time horizons considered in the figure above. For example, over the last 10 years, between June 30th, 2011 and June 30th, 2021, the Nifty Microcap 250 Index has had annualized volatility of 20.2% versus 19.0% for the Nifty Smallcap 250 Index.

Similarly, over the last one year, between June 30th, 2020 to June 31st, 2021, the Nifty Microcap 250 Index has delivered higher returns than the Nifty Smallcap 250 Index, but with higher annualized volatility of 20.4% compared to 18.3% for the Nifty Smallcap 250 Index.

Despite the higher volatility of the Nifty Microcap 250 Index versus the Nifty Smallcap 250 Index, the Nifty Microcap 250 Index has higher return-risk ratio over certain time horizons relative to the Nifty Smallcap 250 Index. For example, the return-risk ratio for the Nifty Microcap 250 Index over the 10-year period from June 30th, 2011 and June 30th, 2021 is 0.94 compared to 0.72 for the Nifty Smallcap 250 Index over the same period. Similarly, the Nifty Microcap 250 Index has a return-risk ratio of 7.23 versus 5.98 for the Nifty Smallcap 250 Index over the last one-year period from June 30th, 2020 to June 30th, 2021.
The Nifty Microcap 250 Index has outperformed the Nifty Smallcap 250 Index on a rolling return basis over long term horizons

**Figure 94: Betas and correlations of Nifty Microcap 250 Index with Nifty Smallcap 250 Index by calendar year**

<table>
<thead>
<tr>
<th>Year</th>
<th>Beta relative to Nifty Smallcap 250</th>
<th>Correlation with Nifty Smallcap 50</th>
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<tbody>
<tr>
<td>2005</td>
<td>1.13</td>
<td>0.96</td>
</tr>
<tr>
<td>2006</td>
<td>1.02</td>
<td>0.97</td>
</tr>
<tr>
<td>2007</td>
<td>1.04</td>
<td>0.95</td>
</tr>
<tr>
<td>2008</td>
<td>0.98</td>
<td>0.97</td>
</tr>
<tr>
<td>2009</td>
<td>1.01</td>
<td>0.97</td>
</tr>
<tr>
<td>2010</td>
<td>1.07</td>
<td>0.97</td>
</tr>
<tr>
<td>2011</td>
<td>1.02</td>
<td>0.97</td>
</tr>
<tr>
<td>2012</td>
<td>0.87</td>
<td>0.94</td>
</tr>
<tr>
<td>2013</td>
<td>0.87</td>
<td>0.94</td>
</tr>
<tr>
<td>2014</td>
<td>1.01</td>
<td>0.96</td>
</tr>
<tr>
<td>2015</td>
<td>1.07</td>
<td>0.97</td>
</tr>
<tr>
<td>2016</td>
<td>1.11</td>
<td>0.97</td>
</tr>
<tr>
<td>2017</td>
<td>0.98</td>
<td>0.95</td>
</tr>
<tr>
<td>2018</td>
<td>1.01</td>
<td>0.96</td>
</tr>
<tr>
<td>2019</td>
<td>1.04</td>
<td>0.95</td>
</tr>
<tr>
<td>2020</td>
<td>1.03</td>
<td>0.96</td>
</tr>
<tr>
<td>2021*</td>
<td>1.08</td>
<td>0.94</td>
</tr>
</tbody>
</table>


**Figure 95: Instances of outperformance of Nifty Microcap 250 Index vs Nifty Smallcap 250 Index on a daily rolling return basis**

<table>
<thead>
<tr>
<th>Percentage of total instances of outperformance and underperformance vs Nifty Smallcap 250 on daily rolling return basis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Investment Horizon</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>10 years</td>
</tr>
<tr>
<td>7 years</td>
</tr>
<tr>
<td>5 years</td>
</tr>
<tr>
<td>3 years</td>
</tr>
<tr>
<td>2 years</td>
</tr>
<tr>
<td>1 year</td>
</tr>
</tbody>
</table>

Source: NSE Indices. Instances of outperformance or underperformance calculated using daily rolling returns. Data as of June 30th, 2021.
The Nifty Microcap 250 Index has more often outperformed the Nifty Smallcap 250 Index over rolling return horizons greater than five years. From the table above, based on daily rolling returns, for a seven-year investment horizon, the Nifty Microcap 250 Index has outperformed the Nifty Smallcap 250 Index 64.8% of the time. The frequency of outperformance rises to 81.9% when we consider longer time horizon of 10 years. However, owing to the Nifty Microcap 250 Index’s higher volatility, the rolling return performance vs the Nifty Smallcap 250 Index is more mixed over shorter time frames of three years and below. For example, based on daily rolling returns, for a three-year investment horizon, the Nifty Microcap 250 Index has outperformed the Nifty Smallcap 250 Index only 39.8% of the time, but this figure rises to 57.0% for a one-year investment horizon.

For the seven-year investment horizon, based on daily rolling return analysis, the excess return of the Nifty Microcap 250 Index was in the range of 0-2% per annum for 2.9% of the instances, excess return ranged between 2-4% per annum for 17.5% of the instances, and excess return exceeded 4% per annum over the Nifty Smallcap 250 Index in 44.4% of the instances, leading to cumulative 64.8% instances of outperformance over the Nifty Smallcap 250 Index.

The Nifty Microcap 250 Index has outperformed the Nifty Smallcap 250 Index in nine out of the last 16 calendar years from 2005 onward. The Nifty Microcap 250 Index had its most consistent run of outperformance against the Nifty Smallcap 250 Index between 2012-2017, when it outperformed the Nifty Smallcap 250 Index for six years in a row. The Nifty Microcap 250 Index tends to underperform the Nifty Smallcap 250 Index in weak markets. Since 2005, the Nifty Microcap 250 Index has underperformed the Nifty Smallcap 250 Index in four out of the five years when the Nifty Smallcap 250 Index had negative returns.

The Nifty Microcap 250 Index has outperformed the Nifty 500 Index in eight out of the last 16 calendar years from 2005 onward. The Nifty Microcap 250 Index tends to outperform the Nifty 500 Index during strong bull market years and recoveries after a market crash. Since 2005, the Nifty 500 Index has returned greater than 35% in six calendar years and the Nifty Microcap 250 Index has outperformed the Nifty 500 Index in five out these six calendar years (outperformed in 2005, 2007, 2014 and 2017). However, the Nifty Microcap 250 Index has underperformed the Nifty 500 Index in bear markets when the Nifty 500 lost more than -20% in a calendar year (2008 and 2011). More recently, the Nifty Microcap 250 Index underperformed the Nifty 500 Index in 2018 and 2019 despite these being moderate return years for the Nifty 500 Index. The Nifty Microcap 250 Index returned -27% and -24% in 2018 and 2019 respectively, compared with -2% and 9% for the Nifty 500 Index over the same period.

All three indices suffered their maximum drawdown since inception during the GFC (Global Financial Crisis) of 2008-09. The maximum drawdown for the Nifty Microcap 250 Index was -78.9% compared to -72.8% and -63.7% for the Nifty Smallcap 250 Index and Nifty 500 Index respectively.
The Nifty Microcap 250 Index is currently overweight Power and Industrial Manufacturing sectors and underweight Services, Financial Services, and IT sectors relative to the Nifty Smallcap 250 Index

Figure 96: Performance of Nifty Microcap 250, Nifty Smallcap 250 and Nifty 500 Index by calendar year

Figure 97: Comparison of sector exposure between the Nifty Microcap 250 Index and Nifty Smallcap 250 Index (%) on June 30th, 2021

<table>
<thead>
<tr>
<th>Sector</th>
<th>Nifty Microcap 250 Index</th>
<th>Nifty Smallcap 250 Index</th>
<th>Nifty 500 Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial Manufacturing</td>
<td>14.7</td>
<td>12.1</td>
<td>2.5</td>
</tr>
<tr>
<td>Consumer Goods</td>
<td>13.1</td>
<td>12.3</td>
<td>11.9</td>
</tr>
<tr>
<td>Financial Services</td>
<td>11.6</td>
<td>14.3</td>
<td>31.2</td>
</tr>
<tr>
<td>Construction</td>
<td>6.8</td>
<td>5.4</td>
<td>2.7</td>
</tr>
<tr>
<td>IT</td>
<td>6.6</td>
<td>8.8</td>
<td>13.3</td>
</tr>
<tr>
<td>Power</td>
<td>6.6</td>
<td>1.4</td>
<td>2.5</td>
</tr>
<tr>
<td>Chemicals</td>
<td>6.3</td>
<td>6.5</td>
<td>1.7</td>
</tr>
<tr>
<td>Metals</td>
<td>6.0</td>
<td>5.0</td>
<td>4.0</td>
</tr>
<tr>
<td>Pharma</td>
<td>4.9</td>
<td>5.6</td>
<td>5.2</td>
</tr>
<tr>
<td>Automobile</td>
<td>4.3</td>
<td>2.8</td>
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<tr>
<td>Services</td>
<td>3.3</td>
<td>6.4</td>
<td>1.4</td>
</tr>
<tr>
<td>Telecom</td>
<td>2.8</td>
<td>1.4</td>
<td>1.7</td>
</tr>
<tr>
<td>Textiles</td>
<td>2.5</td>
<td>3.6</td>
<td>0.4</td>
</tr>
<tr>
<td>Consumer Services</td>
<td>2.3</td>
<td>3.7</td>
<td>1.8</td>
</tr>
<tr>
<td>Oil &amp; Gas</td>
<td>2.0</td>
<td>5.3</td>
<td>9.3</td>
</tr>
<tr>
<td>Cement &amp; Cement Products</td>
<td>2.0</td>
<td>2.0</td>
<td>2.6</td>
</tr>
<tr>
<td>Paper &amp; Jute</td>
<td>1.0</td>
<td>0.7</td>
<td>0.0</td>
</tr>
<tr>
<td>Fertilizer &amp; Pesticides</td>
<td>1.0</td>
<td>2.4</td>
<td>1.0</td>
</tr>
<tr>
<td>Media, Entertainment &amp; Publication</td>
<td>0.8</td>
<td>2.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Healthcare Services</td>
<td>0.7</td>
<td>1.8</td>
<td>0.9</td>
</tr>
<tr>
<td>Utilities</td>
<td>0.6</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

The Industrial Manufacturing sector is the largest sector in the Nifty Microcap 250 Index with 14.7% weight, followed by the Consumer Goods sector with 13.1% weight as of June 30, 2021. The Nifty Microcap 250 Index is overweight the Power and Industrial Manufacturing sectors by 5.2% and 2.6% respectively compared to the Nifty Smallcap 250 Index, while it is under-weight the Services, Financial Services and IT sector by -3.1%, -2.7% and -2.1% respectively relative to the Nifty Smallcap 250 Index. When we compare the sector weight deviations between the Nifty Microcap 250 Index and the Nifty 500 Index, we find the Nifty Microcap 250 Index is overweight the Industrial Manufacturing sector by 12.2% and the Chemicals sector by 4.5% compared to the Nifty 500 Index.

The Nifty Microcap 250 Index is under-weight the Financials sector by -19.6% and the Oil & Gas sector by -7.2% relative to the Nifty 500 Index. Overall, the standard deviation of sector weight differences between the Nifty Microcap 250 Index and the Nifty Smallcap 250 Index is 1.9 versus 5.8 for the Nifty 500 Index.

The Nifty Microcap 250 Index is slightly less diversified when compared to Nifty Smallcap 250 Index but more diversified than the Nifty 500 Index. It has a HHI (Herfindahl-Hirschman Index) value of 816.1 compared to 804.0 and 1489.8 for the Nifty Smallcap 250 and Nifty 500 Index respectively as of June 30, 2021. Lower HHI values indicate a more diversified portfolio.

The greater diversification of the Nifty Microcap 250 Index versus the Nifty 500 Index is also visible from the table above. For example, we observe that the top 10 stocks account for 14.1% weight of the Nifty Microcap 250 Index compared to 39.2% for the Nifty 500 Index. Similarly, the top 100 stocks account for 65.4% weight of the Nifty Microcap 250 Index compared to 79.3% for the Nifty 500 Index.

**Figure 98: Cumulative weight of stocks across the Nifty Microcap 250, Nifty Smallcap 250 and Nifty 500 Index (%)**

<table>
<thead>
<tr>
<th>Cumulative weight of stocks</th>
<th>Nifty Microcap 250 Index</th>
<th>Nifty Smallcap 250 Index</th>
<th>Nifty 500 Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top 10</td>
<td>14.1</td>
<td>11.3</td>
<td>39.2</td>
</tr>
<tr>
<td>Top 50</td>
<td>43.4</td>
<td>39.9</td>
<td>67.2</td>
</tr>
<tr>
<td>Top 100</td>
<td>65.4</td>
<td>65.0</td>
<td>79.3</td>
</tr>
</tbody>
</table>

The Nifty Microcap 250 index aims to track the performance of microcap stocks listed or permitted to trade on NSE. The index includes the top 250 companies Beyond Nifty 500 index constituents, selected based on their average full market capitalization.

Since April 01st, 2005 till June 30th, 2021, the Nifty Microcap 250 Index has returned 16.2% p.a. return vs 15.5% p.a. return of the Nifty Smallcap 250 Index.

The Nifty Microcap 250 Index has outperformed the Nifty Smallcap 250 Index on a rolling return basis using daily returns over long-term horizons. The Nifty Microcap 250 Index has outperformed the Nifty Smallcap 250 Index 64.8% and 81.9% of times over seven-year and 10-year periods respectively.

The Nifty Microcap 250 Index has a HHI value of 816.1 versus 804.0 for the Nifty Smallcap 250 Index indicating broadly similar level of diversification. The Nifty Microcap 250 Index is more diversified than the Nifty 500 Index which has a HHI value of 1489.8.

For more information on the Index methodology and factsheet, please visit us at www.nseindia.com.
Macro economy

Retail inflation remains steady in June

Headline CPI inflation remained broadly steady at 6.3% in June, positively surprising market expectations (Consensus: 6.6%; Source: Reuters). Increase in food & beverages and fuel inflation was almost entirely offset by a sharp drop in pan, tobacco & intoxicant inflation. Within food, the surge was primarily led by egg, oils & fats, fruits and pulses, even as most other categories have seen a moderation in price build-up. Core inflation rose by a modest 7bps MoM to a 35-month high of 6.3%, thanks to higher inflation in household goods & services, transport & communication, and education, partly offset by lower YoY increase in prices for recreation & amusement and personal care & effects. On a sequential basis (MoM), inflation hardened for the fifth month in a row, albeit at a moderated pace, reflecting gradual normalisation of supply chains that were disrupted by the deadlier second wave. After staying within the RBI’s tolerance limit of 6% for five consecutive months from Dec’20-Apr’21, June’s print marks the second consecutive month of inflation breaching the RBI’s limit & 21 consecutive months of it staying above 4% target.

Going ahead, while cost-push pressures emanating from higher commodity prices and logistics costs are likely to keep inflation at elevated levels, normalisation of operations in the wake of easing restrictions as well as anticipation of good precipitation in the coming months by IMD is likely to provide respite on inflation trajectory. However, a patchy progress of monsoon rains in July calls for caution as it does not auger well for kharif sowing and food prices. We expect the RBI to remain accommodative through the current financial year and maintain status quo on the policy repo rate. However, it may resort to reduction in policy rate corridor and/or gradual recalibration of surplus liquidity environment later this year, particularly if the growth-inflation dynamics turn unfavourable.

- **Retail inflation remained steady**: Headline CPI inflation remained broadly steady at 6.3% in June, positively surprising market expectations (Consensus: 6.6%; Source: Reuters). Increase in food & beverages and fuel inflation was almost entirely offset by a sharp drop in pan, tobacco & intoxicant inflation. Despite a strong base (7.9% in Jun’20), food and beverage inflation surged to a seven-month high of 5.6% YoY in Jun’21 (vs. 5.2% YoY in May). Alongside, inflation in the fuel & light group also spiked to a series high of 12.7% (vs. 11.9% in May) on account of rising global energy prices. Core inflation also registered a modest increase and came in at a 35-month high of 6.3%. On a sequential basis, while inflation hardened for the fifth month in a row, quantum of sequential surge moderated (0.6% MoM vs 1.7% MoM in May), reflecting gradual normalisation of supply chains that were disrupted by the deadlier second wave. While most of the categories witnessed a milder sequential increase in June prices relative to May, prices of a few categories like those of sin goods and housing witnessed a sequential decline.

- **Food and fuel inflation soared further**: While food and beverage inflation witnessed a broad-based surge in prices of all components on an annual basis, but the quantum of sequential surge moderated from 1.7% MoM in May to 1.2% MoM in June, attributable to a relatively modest sequential increase in all items except eggs (6.1% MoM) and vegetables (5.1% MoM). On the other hand, inflation in the fuel & light group spiked to a series high of 12.7% (vs. 11.9% in May). This is attributed to a low base (0.5% in Jun’20) and persistent surge in global energy prices. On sequential basis, prices in fuel and lightening group, rose by a modest 0.3% MoM against 2.4% MoM witnessed in May’21.

- **Core inflation continues to remain sticky**: Core inflation (headline inflation ex food and fuel) jumped by 7bps MoM to a 35-month high of 6.3% in June. On an annual basis, while inflation in the clothing category surged to a 79-month high of 9.3% inflation have surprised on the downside at 6.3%YoY against market expectations of 6.6%.
6.4% (vs. 5.3% in May), inflation in household goods & services rose to a 27-month high of 5.8% (vs. 3.7% in May) and inflation in education category rose to a 13-month high of 3.5% (vs. 1% in May), inflation in other components such as health, transport & communication, personal care & recreation witnessed a relatively softer annual surge in comparison to the previous month. On a sequential basis, prices of pan, tobacco, intoxicants moderated by 0.6%MoM, housing prices fell by 0.7%MoM and recreation activity prices dropped by a mere 0.1%MoM. While transport & communication inflation witnessed softer sequential surge from May, it remained at elevated levels, reflecting the impact of higher fuel prices and consequent pass-through to transport fares.

- **RBI to stay accommodative albeit far more cautiously:** After staying within the RBI’s upper tolerance limit of 6% for five consecutive months from Dec’20-Apr’21, June’s print marked the second month in a row of inflation breaching the RBI’s tolerance limit and 21 consecutive months of it staying above the 4% target. Going ahead, while cost-push pressures emanating from higher commodity prices and logistics costs are likely to keep inflation at elevated levels, normalisation of operations in the wake of easing restrictions and good precipitation in the upcoming months as anticipated by the IMD are likely to provide respite on inflation trajectory. However, a patchy progress of monsoon rains in July calls for caution as it does not auger well for Kharif sowing and food prices. On the policy front, we expect the RBI to remain accommodative through the current financial year and maintain status quo on the policy repo rate. However, it may resort to reduction in policy rate corridor and/or gradual recalibration of surplus liquidity environment later this year, particularly if the growth-inflation dynamics turn unfavourable.

### Figure 99: Consumer price inflation in June 2021 (%YoY)

<table>
<thead>
<tr>
<th>%YoY</th>
<th>Weight (%)</th>
<th>June-21</th>
<th>May-21</th>
<th>June-20</th>
<th>FY22TD</th>
<th>FY21TD</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food &amp; Beverages</td>
<td>45.9</td>
<td>6.3</td>
<td>6.3</td>
<td>6.2</td>
<td>5.6</td>
<td>6.6</td>
</tr>
<tr>
<td>Pan, Tobacco &amp; Intoxicants</td>
<td>2.4</td>
<td>3.4</td>
<td>10.0</td>
<td>11.3</td>
<td>7.7</td>
<td>7.8</td>
</tr>
<tr>
<td>Clothing &amp; Footwear</td>
<td>6.5</td>
<td>6.2</td>
<td>5.3</td>
<td>2.7</td>
<td>5.0</td>
<td>3.2</td>
</tr>
<tr>
<td>Housing</td>
<td>10.1</td>
<td>3.8</td>
<td>3.9</td>
<td>3.6</td>
<td>3.8</td>
<td>3.7</td>
</tr>
<tr>
<td>Fuel &amp; Light</td>
<td>6.8</td>
<td>12.7</td>
<td>11.9</td>
<td>0.5</td>
<td>10.8</td>
<td>1.7</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>28.3</td>
<td>7.3</td>
<td>7.3</td>
<td>6.1</td>
<td>6.9</td>
<td>5.8</td>
</tr>
<tr>
<td>Core CPI inflation</td>
<td>44.9</td>
<td>6.3</td>
<td>6.2</td>
<td>5.0</td>
<td>5.9</td>
<td>4.9</td>
</tr>
</tbody>
</table>

Source: CSO, NSE. NA = Not Available.

Note: 1 Headline inflation excluding food & beverages, pan, tobacco & intoxicants and fuel & light.
2 Inflation data for these components for April and May 2020 are based on the imputed index calculated by MOSPI.
Figure 100: Headline CPI inflation trend

Headline inflation remains little changed in June

- **CPI**
- **Food & Beverages**
- **Fuel & Light**
- **Core inflation**

Source: CMIE Economic Outlook, NSE

Figure 101: Real interest rates have remained negative for more than a year now

- **Repo rate (4% in Aug 21)**
- **4% (RBI's current long-term target, +/-2%)**
- **CPI inflation (6.3% in Jun 21)**

- **RBI adopts flexible inflation targeting (FIT)**
- **Demonetisation**
- **COVID-19 outbreak**

RBI's target band for headline CPI inflation

Source: Refinitiv Datastream, NSE
Figure 102: Category-wise contribution to India consumer price inflation (CPI)

India Consumer Inflation and Components (Jun 21)

Source: Refinitiv Datastream, NSE.

Figure 103: Category-wise contribution to India Food and Beverages inflation (CPI)

Source: Refinitiv Datastream, NSE.
Wholesale inflation moderates in June but core continues to rise

Wholesale inflation moderated to 12.1% in June 2021 following a rising streak over the previous five months, even as price build-up on a sequential basis continued for the 13th consecutive month. This was primarily on the back of lower food, minerals, and fuel inflation. Manufactured products inflation, on the other hand, inched up further to touch fresh record-high levels, primarily led by non-food products even as manufactured food inflation witnessed some moderation.

On a sequential basis, except for manufactured food products—accounting for 9% of the wholesale inflation basket—rest all other major categories witnessed a jump in prices. The gap between retail and wholesale inflation trajectory came off marginally after rising to record-high levels in the previous month. Even as increasing base henceforth signals a potential peaking out of wholesale inflation trajectory, higher crude oil and commodity prices, continued supply-side bottlenecks and below-normal monsoon may impart significant upside risks. This will gradually feed into retail prices, thereby keeping the retail inflation trajectory elevated in the near-term.

- **Wholesale inflation moderated in June:** Wholesale price inflation (WPI) positively surprised market expectations, albeit marginally, and moderated from the series-high level of 12.9% in May’21 to 12.1% in June. On a sequential basis, however, build-up in wholesale prices strengthened (+0.8% MoM vs. 0.5% MoM in May’21), with all major categories, except for manufactured food products registering an increase. The YoY moderation was primarily on the back of lower food, minerals, and fuel inflation. Manufactured products inflation, on the other hand, inched up further to touch fresh record-high levels.

- **Food and fuel provide respite to WPI inflation:** Primary articles inflation moderated for the second month in a row to 7.7% in Jun’21, partly supported by a sequentially higher base. This was primarily on the back of a lower inflation in food articles, minerals and crude, petroleum & natural gas, even as YoY price rise in non-food primary articles strengthened further. Within Primary articles, while food prices at the wholesale level rose by a relatively modest 3.1% YoY, it rose by 0.3% on a MoM basis. Non-food articles inflation rose to the fresh series-high level of 18.9% YoY, up 2.6% MoM. While crude, petroleum & natural gas inflation moderated from 80%/56% in Apr/May’21 to 36.3% in Jun’21, albeit off a relatively favorable base, the 2.3% MoM jump indicates continued build-up of price pressures. Fuel & power inflation inched down from the series-high level of 37.6% in the previous month to 32.8% in Jun’21, but jumped 2.9% on a MoM basis, largely on account of a steep 4.9% MoM increase in mineral oil prices, even as coal and electricity prices remained steady on a sequential basis.

Manufactured products inflation rose for the 13th consecutive month to touch fresh record-high levels of 10.9% in Jun’21, primarily led by a spike in non-food manufactured categories. While manufactured food products recorded an inflation of 13.3% vs. 15.2% in the previous month, inflation in non-food manufactured products inched up further to fresh series-high levels of 10.4%. On a sequential basis, build-up in price pressure in manufactured products continued, albeit at a moderate pace.

- **Gap between CPI and WPI inflation remains deep in the negative territory:** The gap between retail and wholesale price inflation reduced marginally in absolute terms from an eight-year high of -6.6% in May 2021 to -5.8% in June 2021. This marks the fourth consecutive month of negative differential between CPI and WPI. A relatively much steeper spike in WPI inflation trajectory over the last few months has been primarily on account of a) a much higher weight of food in the retail basket...
(45.9%) as compared to the wholesale basket (15.3%), where price rise has been relatively benign over the last few of months, and b) a higher weightage of manufactured goods in the wholesale basket (64.2%) as compared to the retail basket, where prices have witnessed a sharp increase, thanks to an unfavorable base, renewed supply-side pressures and higher commodity prices.

- **Wholesale inflation trajectory to soften over the coming months:** Even as increasing base henceforth signals a potential peaking out of wholesale inflation trajectory, higher crude oil and commodity prices, continued supply-side bottlenecks and below-normal monsoon may impart significant upside risks. This will gradually feed into retail prices, thereby keeping the retail inflation trajectory elevated in the near-term.

### Figure 104: Wholesale price inflation for June 2021 (%YoY)

<table>
<thead>
<tr>
<th>Weight (%)</th>
<th>J un-21</th>
<th>May-21</th>
<th>J un-20</th>
<th>FY22TD</th>
<th>FY21TD</th>
</tr>
</thead>
<tbody>
<tr>
<td>WPI</td>
<td>12.1</td>
<td>12.9</td>
<td>(1.8)</td>
<td>11.9</td>
<td>(2.3)</td>
</tr>
<tr>
<td>Primary articles</td>
<td>22.6</td>
<td>7.7</td>
<td>9.1</td>
<td>9.1</td>
<td>(1.1)</td>
</tr>
<tr>
<td>Food articles</td>
<td>15.3</td>
<td>3.1</td>
<td>4.3</td>
<td>2.1</td>
<td>4.0</td>
</tr>
<tr>
<td>Non-food articles</td>
<td>4.1</td>
<td>18.9</td>
<td>18.4</td>
<td>2.1</td>
<td>17.6</td>
</tr>
<tr>
<td>Minerals</td>
<td>0.8</td>
<td>11.9</td>
<td>22.1</td>
<td>8.4</td>
<td>18.0</td>
</tr>
<tr>
<td>Crude petroleum &amp; natural gas</td>
<td>2.4</td>
<td>36.3</td>
<td>56.1</td>
<td>(22.4)</td>
<td>55.5</td>
</tr>
<tr>
<td>Fuel &amp; power</td>
<td>13.2</td>
<td>32.8</td>
<td>37.6</td>
<td>(16.2)</td>
<td>30.3</td>
</tr>
<tr>
<td>Coal</td>
<td>2.1</td>
<td>0.7</td>
<td>0.7</td>
<td>1.9</td>
<td>0.7</td>
</tr>
<tr>
<td>Mineral oils</td>
<td>8.0</td>
<td>61.8</td>
<td>81.2</td>
<td>(27.0)</td>
<td>61.9</td>
</tr>
<tr>
<td>Electricity</td>
<td>3.1</td>
<td>10.0</td>
<td>5.8</td>
<td>(6.7)</td>
<td>4.2</td>
</tr>
<tr>
<td>Manufactured products</td>
<td>64.2</td>
<td>10.9</td>
<td>10.8</td>
<td>0.1</td>
<td>10.4</td>
</tr>
<tr>
<td>Food group</td>
<td>24.4</td>
<td>6.7</td>
<td>8.1</td>
<td>3.1</td>
<td>7.4</td>
</tr>
<tr>
<td>Source: CSO, CMIE Economic Outlook.</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

### Figure 105: WPI inflation trend

WPI inflation moderates in June

Source: CMIE Economic Outlook.

### Figure 106: Gap between wholesale and retail inflation

Gap between CPI and WPI inflation

Source: CMIE Economic Outlook.
Figure 107: India wholesale price inflation (WPI)

Source: Refinitiv Datastream, NSE.
Momentum of industrial recovery halts in May

The impact of lockdown restrictions was visible on industrial production, with IIP (Index of Industrial Production) rising by a lower-than-expected 29% YoY (Consensus: +32%). This was off a very low base of -33.4% in May’20. The pace of sequential moderation, however, came off in May, reflecting gradual lifting in a few states towards the end of the month. The two-year CAGR growth of -7% was the worst in last eleven months, depicting the halt in industrial recovery, primarily led by capital goods and consumer durables. That said, the severity of contraction was curtailed thanks to localised and less stringent restrictions imposed this time relative to last year and robust external demand. IIP growth during the first two months of the fiscal stood at 68.7% but off an extremely low base (-44.9% in FY21TD).

Going ahead, industrial production is expected to inch sequentially north owing to easing of restrictive measures across the nation coupled with persistent buoyancy in external demand. Business sentiments have also improved meaningfully as reflected in a surge in Manufacturing PMI deeper into the positive zone. Other high-frequency indicators such as GST collections, e-way bills and mobility indicators point to a significant recovery from the lows seen during the second wave. We maintain our FY22 GDP growth estimate at 9.2%. Deterioration in consumption demand particularly in the wake of an impending third wave and rising inflationary pressures, slowdown in pace of vaccinations and deterioration in global growth outlook remain key downside risks to our estimates.

- **IIP growth pointed to slowdown in industrial recovery:** Industrial production rose by a lower-than-expected 29% YoY in May 2021 vs. consensus estimate of 32%, but off a very low base (-33.4% in May 2020) growth. The pace of sequential moderation, however, came off in May, reflecting gradual lifting in a few states towards the end of the month. The two-year CAGR growth of -7% was the worst in last eleven months, depicting the halt in industrial recovery, primarily led by capital goods and consumer durables. That said, the severity of contraction was curtailed thanks to localised and less stringent restrictions imposed this time relative to last year and robust external demand. IIP growth during the first two months of the fiscal stood at 68.7% but off an extremely low base (-44.9% in FY21TD).

- **Manufacturing drove the two-year CAGR lower:** Manufacturing sector grew by a strong 34.5% YoY but off a very low base (-37.8% YoY in May’20). On a MoM basis, however, it fell by 9.5%, reflecting the impact of widespread reimposition of lockdown restrictions during the month. On a two-year CAGR basis, Manufacturing production dropped by 8.6%—the worst in 11 months segments. This was primarily led by a sharp drop in two-year CAGR in other transport equipment (-40.2%), beverages (-32.7%), computer, electronic & optical products (-31.1%), tobacco products (-27.5%), motor vehicles, trailers & semi-trailers (-26.6%), and leather & related products (-23.4%). In fact, all sub-categories within the manufacturing sector recorded a contraction on a two-year CAGR basis in May. Electricity production grew by a modest 7.5% in May 2021 but dropped by a 7% and 4.3% on MoM and two-year CAGR basis. Mining production grew by a robust 23.3% YoY and fell by a much lower 1% on a MoM basis. In fact, Mining is the only large sector to report a modest two-year CAGR of +0.6% in May.

- **Use-based classification showed a dip in consumption and investment demand:** Even as the overall industrial activity has held up despite renewed COVID-led restrictions, the use-based classification showed a sharper dip in consumption and investment demand. This is reflected from a steep 20.5% and 23.3% MoM drop in capital goods and consumer durables production respectively, even as both the sectors recorded a strong YoY growth on a depressed base. On a two-year CAGR basis, consumer durables production declined by 27.7%—the...
lowest in last 13 months, pointing to a significant deterioration in consumption demand. Capital goods production also fell by a huge 18.0% on a two-year CAGR basis and has witnessed sequential moderation for 23 months in a row, indicating persistence of a weak investment demand in the economy. Essential segments of the economy, however, have relatively held up well, as signalled from low single digit two-year CAGR contraction in production of primary and intermediate goods as well as consumer non-durable goods.

- **Industrial recovery to gain traction over coming months:** Going ahead, industrial production is expected to inch sequentially north owing to easing of restrictive measures across the nation coupled with persistent buoyancy in external demand. Business sentiments have also improved meaningfully as reflected in a surge in Manufacturing PMI deeper into the positive zone. Other high-frequency indicators such as GST collections, e-way bills and mobility indicators point to a significant recovery from the lows seen during the second wave. We maintain our FY22 GDP growth estimate at 9.2%. Deterioration in consumption demand particularly in the wake of an impending third wave and rising inflationary pressures, slowdown in pace of vaccinations and deterioration in global growth outlook remain key downside risks to our estimates.

### Figure 108: India industrial production for May 2021 (% YoY)

<table>
<thead>
<tr>
<th>%YoY</th>
<th>Weight (%)</th>
<th>May-21</th>
<th>Apr-21</th>
<th>May-20</th>
<th>FY22TD</th>
<th>FY21TD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IIP</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sector-based</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>indices</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mining</td>
<td>14.4</td>
<td>23.3</td>
<td>36.3</td>
<td>(20.4)</td>
<td>29.4</td>
<td>(23.6)</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>77.6</td>
<td>34.5</td>
<td>197.9</td>
<td>(37.8)</td>
<td>88.9</td>
<td>(51.7)</td>
</tr>
<tr>
<td>Electricity</td>
<td>8.0</td>
<td>7.5</td>
<td>38.5</td>
<td>(14.9)</td>
<td>21.6</td>
<td>(18.7)</td>
</tr>
<tr>
<td>Use-based</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary Goods</td>
<td>34.0</td>
<td>15.8</td>
<td>36.8</td>
<td>(19.6)</td>
<td>25.6</td>
<td>(23.0)</td>
</tr>
<tr>
<td>Capital Goods</td>
<td>8.2</td>
<td>85.3</td>
<td>1,042.9</td>
<td>(65.9)</td>
<td>243.4</td>
<td>(78.8)</td>
</tr>
<tr>
<td>Intermediate Goods</td>
<td>17.2</td>
<td>55.2</td>
<td>212.3</td>
<td>(39.7)</td>
<td>109.8</td>
<td>(51.1)</td>
</tr>
<tr>
<td>Infra/Construction Goods</td>
<td>12.3</td>
<td>46.8</td>
<td>596.1</td>
<td>(39.0)</td>
<td>149.4</td>
<td>(61.2)</td>
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<tr>
<td>Consumer Goods</td>
<td>28.2</td>
<td>20.1</td>
<td>201.1</td>
<td>(35.6)</td>
<td>77.0</td>
<td>(51.6)</td>
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<td>Consumer Durables</td>
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<td>98.2</td>
<td>1,880.0</td>
<td>(70.3)</td>
<td>315.0</td>
<td>(82.7)</td>
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<tr>
<td>Consumer Non-durables</td>
<td>15.3</td>
<td>0.8</td>
<td>94.9</td>
<td>(9.7)</td>
<td>33.7</td>
<td>(28.2)</td>
</tr>
</tbody>
</table>

Source: CSO, NSE.
Figure 109: India industrial production (3MMA)

Source: Refinitiv Datastream, NSE

Figure 110: Long-term industrial production trend (12MMA)

Source: Refinitiv Datastream, NSE
Figure 111: India industrial production use-based goods (3MMA)

Source: Refinitiv Datastream, NSE
Figure 112: India eight-core sector growth (3MMA)

Source: Refinitiv Datastream, NSE

Figure 113: Manufacturing as well as Services PMI improve in July following easing of COVID restrictions

Source: CMIE Economic Outlook, NSE.
Trade deficit widens in July on higher gold imports

According to the preliminary estimates released by Ministry of Commerce and Industry, India’s merchandise trade deficit widened further to a three-month high of US$11.2bn in July from US$9.7bn in the previous month, thanks to a stronger sequential surge in imports than in exports. Further re-opening of the economy and easing restrictions across states supported sustained recovery in imports which exhibited another month of strong sequential growth (11% MoM in Jul’21). Exports also grew by a robust 8% MoM, indicating persistent buoyancy in global demand bolstered by a robust economic recovery across major advanced economies and a few emerging economies. On a YoY basis, both exports and imports grew by a strong 48% and 60% respectively, thanks to a very low base given stricter lockdown restrictions in the same period last year. The sequential surge in imports was primarily led by oil (21% MoM) and gold (334% MoM), excluding which India’s import bill fell by 3% on a sequential basis, thereby indicating muted consumption impulses. The two-year CAGR of non-oil exports at a 44-month high of 14% far exceeds a mere 0.6% CAGR in core imports, reflecting a subdued domestic demand environment even before the pre-COVID period.

Going ahead, imports are expected to gain traction on easing lockdown restrictions, receding infections, increasing pace of vaccinations, rising commodity prices and a favourable base. In fact, even as export growth momentum is expected to continue, thanks to strong global recovery and continue policy support, import growth is expected to outpace export growth in the current fiscal year. Consequently, we expect current account balance to slip into deficit again from a surplus of 0.9% of GDP, with our estimate pegged 1% of GDP assuming average crude oil prices at $65/bbl. While foreign capital flows are expected to taper amid expectations of gradual policy normalisation, the Balance of Payments (BoP) is expected to remain in a comfortably surplus position.

The Indian Rupee depreciated by 1.3% in July, averaging at an 11-month, thanks to hardening oil prices and a strong dollar, partly offset by adequate forex reserves. While the Fed’s intention of continuing with an easy policy stance, citing the recent spike in inflation as transitory in nature, is likely to support EM currencies, including the INR, other key factors that are likely to dictate the FX outlook in the near-term include divergent growth trends in DM and EM regions, narrowing interest-rate differentials, uneven vaccination trends across the globe, impending Covid waves, and crude price movements. Nevertheless, continued build-up of FX reserves (US$621bn as on July 30th, +US$41bn in FY22 TD) and comfort on current account balance are likely to contain the depreciating pressures on the INR.

• Robust global demand continued to aid export growth momentum: Exports grew by a strong 48% YoY in Jul’21, thanks to a favourable base (-9.4% in Jul’20). While this may provide a distorted picture, the 44-month high two-year CAGR in exports of 16% in Jul’21 clearly elucidate persistent robustness in exports, reflecting the impact of a strong global demand recovery and relatively fewer restrictions on industrial activity during the second lockdown. On a sequential basis (MoM), exports witnessed a seven-month high uptick of 8.2%, buoyed by a sharp sequential growth of 39% (vs. -25% MoM in Jun’21) in export of petroleum products. Strong exports growth on a two-year CAGR basis has been primarily led by robust petroleum exports (+27%), even as non-oil exports also reported a strong two-year CAGR of 14%. While industrial exports like engineering goods (55%), petroleum (60.5%) and organic/inorganic chemicals (30%) showed stellar growth over July 2019 levels, consumption exports like spices (-19%), leather (-15%) and meat, dairy, and poultry products (-17%) remained lacklustre. In FY22TD (Apr-Jul), India’s merchandise exports grew by 73.5% YoY and 21.8% as compared to the same period in FY20.

• Imports continued to accelerate further, albeit at a slower pace than exports: India’s import bill also registered a strong 60% YoY growth in Jul’21 on a very low base (-28% YoY in July’20) and witnessed another month of strong sequential growth (11% MoM in Jul’21 vs. -9% MoM in Jun’21). This is primarily attributed to
further unlocking of the states in the wake of receding daily new covid cases. The sequential surge in imports was primarily led by oil (21% MoM) and gold (334% MoM), excluding which imports fell by 3% MoM, thereby indicating muted consumption impulses. On a two-year CAGR basis, imports grew by 7.1%, attributable to 15% and 57% surge in oil and gold imports respectively. However, the core imports remained subdued and grew by a mere 0.6% CAGR, reflecting a subdued domestic demand environment even before the pre-COVID period. While items like petrol products (32%), gold (145%) and pearls & precious stones (51%) showed significant traction over Jul’19 levels, industrial imports like transport equipment (-49%), machinery (-11.7%) remained anaemic.

- **Trade deficit widened further in July:** Merchandise trade deficit widened from US$9.4bn in June to a three-month high US$11.2bn in July, thanks to a much steeper sequential surge in imports (11%) as compared to exports (8%). This was against the deficit of US$5.3bn reported for the same period last year. Trade deficit during April-July of FY22 (US$42bn) has swelled significantly by US$27bn as compared to the year-ago period (US$15bn), as imports were hit much more severely than exports last year owing to the strict nation-wide lockdown.

- **Expect current account deficit at 1% of GDP in FY22:** Going ahead, imports are expected to gain traction on easing lockdown restrictions, receding infections, increasing pace of vaccinations, rising commodity prices and a favourable base. In fact, even as export growth momentum is expected to continue, thanks to strong global recovery and continue policy support, import growth is expected to outpace export growth in the current fiscal year. Consequently, we expect current account balance to slip into deficit again from a surplus of 0.9% of GDP, with our estimate pegged 1% of GDP assuming average crude oil prices at $65/bbl. While foreign capital flows are expected to taper amid expectations of gradual policy normalisation, BOP is expected to remain in a comfortably surplus position.

- **USDINR to remain volatile in the near term:** The Indian Rupee depreciated by 1.3% against the dollar and averaged at a 11-month high in July, in the wake of hardening oil prices and stronger dollar. Dollar remained firm as risk-off sentiments intensified amidst investors’ concerns of growth peaking out as well as a rampant spread of Delta variant across the world. However, robust IPO flows, along with adequate forex reserves, limited the downside. Going ahead, in the near term, Fed’s strong intent of looking through inflation while citing it as “transitory” and thereby not moving towards the path of normalisation anytime soon is likely to provide significant succour to the EM currencies. However, divergent growth trends in DM and EM regions, narrowing interest-rate differentials, uneven vaccination trends across the globe, impending Covid waves, and crude price movements are expected to dictate the FX outlook and will also keep the INR volatile, thus coercing RBI to remain watchful in either direction. Over the medium term, RBI is expected to continue accumulating FX Reserves during the period of INR appreciation as this is likely to contain the depreciating pressures when Fed starts tapering. This will thus avert 2013 taper tantrum situation which remains highly unlikely given the external vulnerability metrics (reserves, current account deficit, inflation etc.) at current juncture are better than they were in 2013.
Figure 114: India monthly trade balance for July 2021

<table>
<thead>
<tr>
<th></th>
<th>Exports</th>
<th>Imports</th>
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<tr>
<td></td>
<td>US$ bn</td>
<td>% YoY</td>
<td>Total (US$ bn)</td>
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<td>July-21</td>
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<td>FY21</td>
<td>291.0</td>
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<td>393.4</td>
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</table>

Source: Ministry of Commerce, CMIE Economic Outlook.

Figure 115: India monthly trade balance trend

Source: Refinitiv Datastream.

Figure 116: Non-oil, non-gold imports trend

Source: Ministry of Commerce, CMIE Economic Outlook.

Figure 117: Oil imports trend
Figure 118: Oil imports vs. Brent crude oil prices trend

Oil imports vs. prices (US$)

Source: Refinitiv Datastream.

Figure 119: Current account balance expected at 1% of GDP in FY22

Annual current account balance

Source: Refinitiv Datastream, NSE. *FY22 figure is NSE estimate.
Figure 120: FX reserves remain at more-than-ad​equate levels while import cover has dipped on account of significant rebound in imports.

Source: CMIE, NSE

Figure 121: INR vs. other key Asian market currencies

Source: Refinitiv Datastream, NSE
RBI Monetary Policy: Inflation forecast raised; rate and stance maintained

The RBI’s Monetary Policy Committee (MPC) unanimously decided to keep the policy rates unchanged (repo rate: 4%) and on a 5 to 1 majority to continue with the accommodative stance—the first divergent view on stance since April 2019. The MPC acknowledged the nascent economic recovery that’s underway following the deadlier second wave, expecting it to gather pace on the back of rising vaccinations, continued policy support, strong exports, and favourable financial conditions. The GDP growth forecast for FY22, therefore, has been retained at 9.5%—a tad higher than our 9.2% estimate. Inflation, on the other hand, has surprised on the upside, breaching the upper tolerance of the target band for the second month in a row in June. The RBI expects inflation to remain elevated until Q2FY22 but ease in the second half, aided by arrivals of Kharif harvest, with the forecast for FY22 revised up to 5.7% vs. 5.1% projected in June. Importantly, the RBI views the recent inflationary pressures as transitory in nature, largely led by supply-side bottlenecks, even as demand-side impulses remain sluggish. The communique regarding looking at “anchoring inflationary expectations as soon as the prospects for a strong and sustainable growth are assured” elucidates the MPC’s focus on prioritising growth for now, albeit far more cautiously.

Excess liquidity in the system—evident from the recent sharp surge in amount absorbed through reverse repo—led to the RBI raising the 14-day variable rate reverse repo (VRRR) auction amount in a phased manner from Rs2trn to Rs4trn by Sep-end. This would lead to increase in short-term and money market rates that have been hovering closer to reverse repo rate for quite some time now. While this is a step towards liquidity normalisation, the RBI restated as this being just another tool to manage liquidity and should not be construed as reversal of an accommodative stance. The RBI also reiterated its focus on ensuring an orderly evolution of the yield curve via continued G-SAP (G-sec acquisition programme) auctions and special/regular open market operations on securities across the maturity spectrum.

The policy stance and commentary were on expected lines, with emergence of diverging views among the MPC members, that may intensify over the coming months as COVID-led risks ebb and economic recovery gains further traction. The MPC deferred providing any further guidance beyond the current growth-inflation trade-off and on its response in terms of rate normalisation. It also stopped short of providing clarity on what it deems as strong and sustainable growth. On policy action, the MPC is expected to stay put on the repo rate through the current financial year. Reduction in rate corridor via hike in reverse repo rate and calibrated increase in excess liquidity absorption through VRRRs are measures that the MPC may resort to later this year before changing policy stance.

- **RBI keeps policy rates unchanged; maintains an accommodative stance:** In the third bi-monthly monetary policy review of FY22, the RBI’s MPC unanimously voted to keep the policy rates unchanged. As such, the repo, reverse repo and bank/Marginal Standing Facility (MSF) rates remain unchanged at 4.0%, 3.35% and 4.25% respectively. The accommodative stance was also retained but with a 5:1 vote, with Prof. Varma voting against it. This was the first divergent view on the policy stance among MPC members since April 2019. The MPC acknowledged the expectedly good recovery in economic growth following a deadlier second wave and highlighted concerns emanating from hardening inflationary pressures, even as they were perceived as transitory for now. The communique regarding looking at “anchoring inflationary expectations as soon as the prospects for a strong and sustainable growth are assured” elucidates the MPC’s focus on prioritising growth for now, albeit far more cautiously.

- **Growth forecasts retained:** Phased reopening of the economy, receding caseloads and increasing coverage of vaccinations have facilitated gradual normalisation of economic activity on expected lines. This is reflected in several high-frequency indicators such as GST collections, e-way bills, non-oil imports, auto sales, among others. While rural demand is expected to remain robust amidst expectations of a normal monsoon, urban demand should revive with re-
opening of contact-intensive services, release of pent-up demand and upscaling of vaccinations. Improvement in capacity utilisation, continued policy support and favourable financial conditions provide a conducive environment for an impending revival in investment demand. As such, the RBI has retained its FY22 GDP growth forecast at 9.5%—a tad higher than our estimate of 9.2%. GDP growth in Q1FY22 has been revised up to 21.4% vs. 18.5% expected in the last policy, indicating lower-than-expected negative impact of the second wave on economic activity. Growth forecasts for the subsequent quarters, however, have been marginally lowered, with Q2, Q3 and Q4 GDP growth estimates pegged at 7.3%, 6.3% and 6.1% vs. the previous policy’s forecasts of 7.9%, 7.2% and 6.6% respectively.

• **Inflationary concerns rising; FY22 CPI forecast pegged at 5.7%**: Headline CPI inflation has surprised on the upside, breaching the upper tolerance of the target band for the second month in a row in June. This was led by a broad-based pick-up on the back of supply-side bottlenecks and rising commodity prices. The RBI expects inflation to remain elevated until Q2FY22 but ease in the second half, aided by arrivals of Kharif harvest, with the forecast for FY22 revised up to 5.7% vs. 5.1% projected in June. Importantly, the RBI views the recent inflationary pressures as transitory in nature, largely led by supply-side bottlenecks, even as demand-side impulses remain sluggish as evident from a moderation in core inflation in June and benign inflation in core services such as house rentals. On the negative side, elevated commodity prices, higher fuel prices and rising logistic costs are expected to continue to impart cost-push pressures on manufacturing as well as services sectors, even as weak demand conditions may limit the passthrough.

• **Liquidity calibration underway**: The RBI had reintroduced variable rate reverse repo (VRRR) auctions in Jan’21 following a temporary halt during the pandemic to absorb a part of the excess liquidity from the system. Continued build-up of excess liquidity—evident from the recent sharp surge in amount absorbed through reverse repo (Rs8.5trn in August thus far vs. Rs6.8trn/Rs5.7trn in July/June)—led to the RBI raising the 14-day VRRR auction amount in a phased manner from Rs2trn to Rs4trn by Sep-end. This would result in an increase in short-term and money market rates which have been hovering near reverse repo rate for quite some time now. While this is a step towards liquidity normalisation, the RBI restated this being just another tool to manage liquidity and should not be construed as reversal of an accommodative stance. The RBI also reiterated its focus on ensuring an orderly evolution of the yield curve via continued G-SAP (G-sec acquisition programme) auctions and special/regular open market operations on securities across the maturity spectrum.

• **Other measures**: Some additional measures announced in the policy include a) Extension of on-tap TLTRO (Targeted Long-term Repo Operations) scheme by another three months ending December 31st, 2021 to support the nascent and fragile economic recovery that’s underway, b) Extension of relaxation to avail funds under the marginal standing facility (MSF) by dipping into the Statutory Liquidity Ratio (SLR) up to an additional 1% of NDTL (total 3%) by another three months until December 31st, 2021, and 3) Deferral of deadline for meeting sector-specific thresholds in respect of certain financial parameters under the
Resolution Framework 1.0 announced in August 2020 from March 31st, 2022 to October 1st, 2022.

- **Growth-inflation trade-off worsening; policy normalisation in the offing:** The policy stance and commentary were on expected lines, with emergence of diverging views among the MPC members, that may intensify over the coming months as COVID-led risks ebb and economic recovery gains further traction. The MPC deferred providing any further guidance beyond the current growth-inflation trade-off and on its response in terms of rate normalisation. It also stopped short of providing clarity on what it deems as strong and sustainable growth. On policy action, the MPC is expected to stay put on the repo rate through the current financial year. Reduction in rate corridor via hike in reverse repo rate and calibrated increase in excess liquidity absorption through VRRRs are measures that the MPC may resort to later this year before changing policy stance.

**Figure 122: Current policy rates**

<table>
<thead>
<tr>
<th>Key rates</th>
<th>Current value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repo Rate</td>
<td>4.0%</td>
</tr>
<tr>
<td>Reverse Repo Rate</td>
<td>3.35%</td>
</tr>
<tr>
<td>Marginal Standing Facility (MSF) Rate</td>
<td>4.25%</td>
</tr>
<tr>
<td>Bank Rate</td>
<td>4.25%</td>
</tr>
<tr>
<td>Cash Reserve Ratio (CRR)</td>
<td>4.0%</td>
</tr>
<tr>
<td>Statutory Liquidity Ratio (SLR)</td>
<td>18.0%</td>
</tr>
</tbody>
</table>

Source: RBI

**Figure 123: Policy rates kept unchanged**

Source: Refinitiv Datastream.
Figure 124: Real interest rates have remained negative for more than a year now

Source: Refinitiv Datastream.

Figure 125: RBI expects headline CPI inflation to average at 5.7% in FY22

The RBI has increased its inflation forecasts for FY22 by 60bps to 5.7% from 5.1% projected in the previous policy.

Source: CSO, RBI. Core inflation is calculated as CPI inflation excluding food, pan, tobacco & intoxicants and fuel & light.
Figure 126: GDP growth trend and estimate for FY22
The RBI has retained its FY22 GDP growth forecast at 9.5%—a tad higher than our estimate of 9.2%.

Source: RBI. PE = Provisional estimates.

Figure 127: Revision in RBI GDP growth forecasts for FY22
GDP growth in Q1FY22 has been revised up to 21.4% vs. 18.5% expected in the last policy, indicating lower-than-expected negative impact of the second wave on economic activity. Growth forecasts for the subsequent quarters, however, have been marginally lowered, with Q2, Q3 and Q4 GDP growth estimates pegged at 7.3%, 6.3% and 6.1% vs. the previous policy’s forecasts of 7.9%, 7.2% and 6.6% respectively.

Source: RBI.
Average daily surplus liquidity in the system has widened meaningfully from Rs4.8 trn in June to Rs5.6 trn in July. Total absorption through reverse repos surged from a daily average of Rs5.7 trn in June to Rs6.8 trn in July 2021 and further to Rs8.5 trn in August 2021 thus far (As on August 4th).

Source: CMIE Economic Outlook, Refinitiv Datastream, NSE.

The RBI’s G-SAP purchases and continued liquidity injection via regular and special OMOs have kept yield curve broadly stable over the last few months despite worsening negative externalities in the form of enhanced Government borrowings and mounting inflationary pressures.
Centre’s cumulative fiscal deficit in Q1FY22 stood at 11-year lows of 18% of BE

The Centre’s gross fiscal deficit for Q1FY22 came in at mere Rs2.7trn or 18% of the budget estimate (BE) vs. Rs6.6trn in the same period last year. This is the lowest cumulative fiscal deficit ever reported during the first quarter of the fiscal since FY15, and lowest in 11 years in terms of % of BE. This primarily indicates significant traction in receipts coupled with retrenchment in spending from Q1FY21 levels as the severity of lockdowns imposed during the first and second wave varied substantially. While a near-complete halt in economic activity during the same period last year hurt the Centre’s tax kitty, severe economic ramifications prompted the Government to front load expenditure and announce stimulus measure. However, despite the more virulent second wave during Q1FY22, the Centre’s tax revenues did not witness any debilitating impact because of the implementation of localised and targeted restrictions, better preparedness, and the strong intent of state governments to keep manufacturing units operational.

Within receipts, the Government accounts for the month of April-June 2021 point to a strong 97% jump in gross tax revenues, owing to an extremely depressed base and buoyancy in broader economic activity. Thanks to better compliance coupled with relatively less stringent restrictions in place, GST collections for Q1FY22 remained above Rs1trn mark against Rs617bn recorded in Q1FY21. Alongside, a sharp surge of 738% YoY in non-tax revenues was on account of RBI’s surplus transfer of Rs991bn to the Centre, that further bolstered the Government’s kitty. On the expenditure side, while capital expenditure grew by a robust 26% YoY, revenue expenditure contracted by 2% YoY on account of lower fertilizer and petroleum subsidy transfer. As a result, fiscal deficit remained restrained at Rs2.7trn.

Robust capital spending clearly exhibits the Government’s strong intent to support and revive growth on a durable basis. Amidst contained implications of the second wave on GDP growth (FY22E: 9.2% YoY) and elevated inflation trajectory (FY22E: 5.8% YoY), growth in nominal GDP is most likely to exceed budget targets of 13% YoY. This, in turn, should translate into better-than-budgeted buoyancy in tax revenues. Even the Government’s clear intent of not meddling around with higher excise duties on petrol and diesel despite its substantial contribution to inflation is likely to ensure that the fiscal coffers remain cushioned. Alongside, overshooting of food subsidy bill by Rs1trn in FY21—incurred because of earlier than predicted disbursement of loans to NSSF, coupled with higher than anticipated surplus transfer by the RBI, also provides solace. Higher expenditure on account of Government’s recent relief measures, hike in dearness allowance and shortfall in disinvestment collections are key potential upside risks to fiscal balances.

- Centre’s cumulative fiscal deficit in Q1FY22 dropped by 59% YoY in FY22: The Centre’s gross fiscal deficit for April-June 2021 plunged by 59% YoY to a mere Rs2.7trn or 18% of the budget estimate, marking the lowest print ever for this period since FY15. However, as a % of budget estimate, this is the lowest ever cumulative deficit in 11 years, indicating a significant traction in receipts and retrenchment in spending from Apr-Jun 2020 levels. Despite re-imposition of lockdown restrictions, the Centre’s tax revenues remained resilient—a consequence of targeted and localised lockdown measures, better preparedness, and the strong intent of states to keep manufacturing units operational.

- Sharp surge in revenue receipts...: Within receipts, gross tax revenues during Apr-Jun’21 grew by a strong 97% YoY, thanks to an extremely depressed base and buoyancy in broader economic activity. Thanks to better compliance and relatively less stringent restrictions in place, GST collections for Q1FY22 remained above Rs1trn mark against Rs617bn recorded for Q1FY21. Within direct taxes (+112% YoY), corporate and income tax revenues grew by 128% and 98% YoY respectively. Growth in indirect tax collections was relatively lower at 86% YoY, with customs, excise, and GST collections rising by 168%, 92% and 71% YoY respectively. Alongside, a sharp surge of 738% YoY in non-tax revenues was on account of RBI’s surplus transfer of Rs991bn to the Centre, that further bolstered the Government’s kitty. Lower tax devolution to states (-12% YoY) till date this year...
led to a much higher 206% YoY growth in net tax revenues. Revenue generation through the disinvestment route stood at Rs40bn against nil divestment of Apr-Jun FY21. Consequently, total revenue receipts during Apr-June 2021 registered a strong 260% YoY expansion. The two-year CAGR in gross tax revenues stood at a strong 15%, with direct and indirect taxes expanding by 21% & 11% respectively, with the former largely led by strong growth in corporate tax revenues (32%). Strong surplus transfer by the RBI to the Government over the last two years led to a strong 95% CAGR in non-tax revenues during the period.

• **...And lower revenue expenditure contained fiscal deficit for Apr-Jun FY22:** Overall expenditure grew by meagre 0.7% YoY during Apr-Jun 2021 largely led by a fall in revenue expenditure even as capital spending registered a strong expansion. Revenue expenditure—accounting for 86% of total expenditure—fell by 2% YoY in Apr-Jun 2021, primarily led by lower fertilizer and petroleum subsidy outgo coupled with other revenue expenditure items declining by 13% YoY. While interest payments witnessed a 15% YoY expansion, fertilizer and petroleum subsidy bills fell by 35% YoY and 91% YoY respectively. However, a strong surge of 100% YoY in food subsidy bill resulted in overall subsidy bill expansion of 27% YoY. Capital expenditure, on the other hand, exhibited a robust expansion of 26% YoY, signalling the Government’s strong intent to keep pushing capex to revive growth on durable basis. This was largely attributed to strong spending towards railways, housing and urban affairs, road, health, electronics, and IT.

• **GST collections in July surged to a three-month high:** GST collections collected in the month of July for activities occurring in Jun’21 rebounded sharply from a 10-month low of Rs929bn recorded in Jun’21 (for May activity) to a three-month high of Rs1.2trn in July, thanks to easing restrictions across the board. While the sharp rebound in GST collections clearly elucidates the nascent signs of pickup in consumption impulses from the second wave induced slump, its sustainability hinges on the intensity of subsequent waves and severity of attendant restrictive measures. Going forward, GST collections in August (for July activity) are expected to show a further sequential traction as indicated by 17% MoM uptick in E-way bills for July 2021, thanks to continued recovery in economic activity.

• **Concluding Remarks:** Lower-than-expected contraction in FY21 nominal GDP, coupled with higher-than-expected revenue receipts, has lowered the growth required to attain FY22 budget targets. Required tax revenue growth for FY22 is now pegged at 8.5% against 14.9% pencilled earlier. Amidst contained implications of the second wave on GDP growth (FY22E: 9.2% YoY) and elevated inflation trajectory (FY22E: 5.8% YoY), growth in nominal GDP is most likely to exceed budget targets of 13% YoY, thereby translating into better-than-budgeted tax buoyancy. Even the Government’s clear intent of not meddling around with higher excise duties on petrol and diesel despite its substantial contribution to inflation is likely to ensure that the fiscal coffers remain cushioned. Alongside, overshooting of food subsidy bill by Rs1trn in FY21—incurred because of earlier-than-predicted disbursement of loans to NSSF, along with higher-than-anticipated surplus transfer by the RBI, also provides solace. Higher expenditure on account of Government’s recent relief measures, hike in dearness allowance and shortfall in disinvestment collections are key potential upside risks to fiscal balances.
Figure 130: Yearly trend of India’s fiscal balances

India fiscal balances (Rs bn)

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<tr>
<th>Month</th>
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<th>FY17</th>
<th>FY18</th>
<th>FY19</th>
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<td>10.5</td>
<td>10.5</td>
<td>10.5</td>
</tr>
<tr>
<td>Nov</td>
<td>10.5</td>
<td>10.5</td>
<td>10.5</td>
<td>10.5</td>
<td>10.5</td>
<td>10.5</td>
<td>10.5</td>
</tr>
<tr>
<td>Dec</td>
<td>10.5</td>
<td>10.5</td>
<td>10.5</td>
<td>10.5</td>
<td>10.5</td>
<td>10.5</td>
<td>10.5</td>
</tr>
<tr>
<td>Jan</td>
<td>10.5</td>
<td>10.5</td>
<td>10.5</td>
<td>10.5</td>
<td>10.5</td>
<td>10.5</td>
<td>10.5</td>
</tr>
<tr>
<td>Feb</td>
<td>10.5</td>
<td>10.5</td>
<td>10.5</td>
<td>10.5</td>
<td>10.5</td>
<td>10.5</td>
<td>10.5</td>
</tr>
<tr>
<td>Mar</td>
<td>10.5</td>
<td>10.5</td>
<td>10.5</td>
<td>10.5</td>
<td>10.5</td>
<td>10.5</td>
<td>10.5</td>
</tr>
</tbody>
</table>

Source: Refinitiv Datastream.

Figure 131: Gross fiscal deficit as % of budget targets during April-May over the last 20 years

Gross fiscal deficit as a % of budget target during April-June

| | FY01 | FY02 | FY03 | FY04 | FY05 | FY06 | FY07 | FY08 | FY09 | FY10 | FY11 | FY12 | FY13 | FY14 | FY15 | FY16 | FY17 | FY18 | FY19 | FY20 | FY21 | FY22 |
|---|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| &% | 22.5 | 36.3 | 29.2 | 30.3 | 36.1 | 52.3 | 74.5 | 64.6 | 52.3 | 31.0 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 |

Source: CMIE Economic Outlook, CGA, NSE.

Figure 132: Centre’s gross fiscal trend (% GDP)

Source: CMIE Economic Outlook, CGA, NSE. BE = Budget Estimates, RE = Revised Estimates, A = Actual. * FY21 actual figures are provisional number released by CGA.

Figure 133: A quick glance at FY21 fiscal balances

<table>
<thead>
<tr>
<th>Rs bn</th>
<th>FY20A</th>
<th>FY21RE</th>
<th>FY21A*</th>
<th>Growth as per FY21 RE</th>
<th>Growth as per FY21 A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net tax revenues</td>
<td>13,569</td>
<td>13,445</td>
<td>14,240</td>
<td>(0.9)</td>
<td>4.9</td>
</tr>
<tr>
<td>Non-tax revenues</td>
<td>3,272</td>
<td>2,107</td>
<td>2,081</td>
<td>(35.6)</td>
<td>(36.4)</td>
</tr>
<tr>
<td>Non-debt cap rec.</td>
<td>686</td>
<td>465</td>
<td>576</td>
<td>(32.2)</td>
<td>(16.0)</td>
</tr>
<tr>
<td>Total receipts</td>
<td>17,527</td>
<td>16,017</td>
<td>16,897</td>
<td>(8.6)</td>
<td>(3.6)</td>
</tr>
<tr>
<td>Revenue Exp</td>
<td>23,513</td>
<td>30,111</td>
<td>30,864</td>
<td>28.1</td>
<td>31.3</td>
</tr>
<tr>
<td>Capital Exp</td>
<td>3,356</td>
<td>4,392</td>
<td>4,248</td>
<td>30.9</td>
<td>26.6</td>
</tr>
<tr>
<td>Total expenditure</td>
<td>26,869</td>
<td>34,503</td>
<td>35,112</td>
<td>28.4</td>
<td>30.7</td>
</tr>
<tr>
<td>Fiscal deficit</td>
<td>9,342</td>
<td>18,487</td>
<td>18,215</td>
<td>98.0</td>
<td>95.0</td>
</tr>
<tr>
<td>% of GDP</td>
<td>4.6</td>
<td>9.5</td>
<td>9.2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: CMIE Economic Outlook, CGA, NSE. BE = Budget Estimates, RE = Revised Estimates, A = Actual. * FY21 actual figures are provisional number released by CGA.
Figure 134: Direct tax collections trend during Apr-J un

Source: CMIE Economic Outlook, CGA, NSE.

Figure 135: Indirect tax receipts trend during Apr-J un

Source: CMIE Economic Outlook, CGA, NSE.

Figure 136: Gross tax collections trend during Apr-J un

Source: CMIE Economic Outlook, CGA, PIB, NSE.

Figure 137: GST collections trend

Source: CMIE Economic Outlook, CGA, PIB, NSE.

Figure 138: Revenue and capital exp during Apr-J un

Source: CMIE Economic Outlook, CGA, PIB, NSE.

Figure 139: Expenditure mix during Apr-J un

Source: CMIE Economic Outlook, CGA, PIB, NSE.
Figure 140: A snapshot of government finances for April-Jun FY22

<table>
<thead>
<tr>
<th>Items (Rs bn)</th>
<th>FY20A Rs bn</th>
<th>% YoY</th>
<th>FY21A Rs bn</th>
<th>% YoY</th>
<th>April-J un FY22 Rs bn</th>
<th>% YoY</th>
<th>Implied Jul-Mar’22 Rs bn</th>
<th>% YoY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net tax revenues</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>13,569</td>
<td>2.9</td>
<td>14,240</td>
<td>4.9</td>
<td>4,127</td>
<td>206.1</td>
<td>11,327</td>
<td>(12.1)</td>
</tr>
<tr>
<td>Of which:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Direct Tax</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporation tax</td>
<td>10,372</td>
<td>(7.8)</td>
<td>9,264</td>
<td>(10.7)</td>
<td>1,257</td>
<td>111.8</td>
<td>8,616</td>
<td>6.4</td>
</tr>
<tr>
<td>Income tax</td>
<td>5,569</td>
<td>(16.1)</td>
<td>4,572</td>
<td>(17.9)</td>
<td>1,237</td>
<td>128.2</td>
<td>4,233</td>
<td>5.0</td>
</tr>
<tr>
<td><strong>Indirect Tax</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goods and service tax</td>
<td>6,018</td>
<td>2.9</td>
<td>5,122</td>
<td>(8.4)</td>
<td>1,691</td>
<td>71.0</td>
<td>4,609</td>
<td>1.9</td>
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<tr>
<td>Custom Duties</td>
<td>1,093</td>
<td>(7.3)</td>
<td>1,348</td>
<td>23.3</td>
<td>414</td>
<td>168.3</td>
<td>946</td>
<td>(20.7)</td>
</tr>
<tr>
<td>Excise Duties</td>
<td>2,395</td>
<td>3.7</td>
<td>3,897</td>
<td>62.7</td>
<td>679</td>
<td>92.1</td>
<td>2,671</td>
<td>(24.6)</td>
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<td>States Share</td>
<td>(6,507)</td>
<td>(15)</td>
<td>(5,950)</td>
<td>(8.6)</td>
<td>(1,175)</td>
<td>(14.9)</td>
<td>(5,480)</td>
<td>18.9</td>
</tr>
<tr>
<td>Transferred to NCCD</td>
<td>(25)</td>
<td>84.4</td>
<td>(58)</td>
<td>134.7</td>
<td>(14)</td>
<td>(12.3)</td>
<td>(47)</td>
<td>(5.9)</td>
</tr>
<tr>
<td><strong>Non-Tax Revenue</strong></td>
<td>3,271</td>
<td>38.3</td>
<td>2,081</td>
<td>(36.4)</td>
<td>1,273</td>
<td>70.3</td>
<td>1,157</td>
<td>(40.0)</td>
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<tr>
<td>Dividends and profits</td>
<td>1,861</td>
<td>64.1</td>
<td>970</td>
<td>(47.9)</td>
<td>1,017</td>
<td>738.4</td>
<td>18</td>
<td>(98.1)</td>
</tr>
<tr>
<td>Other non-tax revenues</td>
<td>1,401</td>
<td>14.5</td>
<td>1,111</td>
<td>(21.2)</td>
<td>256</td>
<td>4,229.2</td>
<td>1,139</td>
<td>15.9</td>
</tr>
<tr>
<td><strong>Central govt. revenue receipts</strong></td>
<td>16,841</td>
<td>8.3</td>
<td>16,321</td>
<td>(7.7)</td>
<td>5,400</td>
<td>99.5</td>
<td>12,484</td>
<td>(15.8)</td>
</tr>
<tr>
<td>Non-Debt Capital Receipts</td>
<td>686</td>
<td>(39.1)</td>
<td>576</td>
<td>(16.0)</td>
<td>74</td>
<td>260.0</td>
<td>1,806</td>
<td>234.1</td>
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<tr>
<td>Recovery of Loans</td>
<td>183</td>
<td>2.0</td>
<td>197</td>
<td>7.7</td>
<td>34</td>
<td>107.2</td>
<td>96</td>
<td>(40.6)</td>
</tr>
<tr>
<td>Misc. Receipts (inc. divestment)</td>
<td>503</td>
<td>(46.9)</td>
<td>379</td>
<td>(24.7)</td>
<td>40</td>
<td>(4.7)</td>
<td>1,710</td>
<td>351.2</td>
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<tr>
<td><strong>Total Receipts</strong></td>
<td>17,527</td>
<td>5.1</td>
<td>16,897</td>
<td>(3.6)</td>
<td>5,474</td>
<td>256.4</td>
<td>14,290</td>
<td>(7.0)</td>
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<td><strong>Revenue Expenditure</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>23,513</td>
<td>17.0</td>
<td>30,864</td>
<td>31.3</td>
<td>7,101</td>
<td>-2.4</td>
<td>22,189</td>
<td>(5.9)</td>
</tr>
<tr>
<td>Interest Payments</td>
<td>6,121</td>
<td>4.9</td>
<td>6,821</td>
<td>11.4</td>
<td>1,843</td>
<td>14.8</td>
<td>6,254</td>
<td>19.9</td>
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<tr>
<td>Major subsidies</td>
<td>2,232</td>
<td>13.3</td>
<td>6,895</td>
<td>208.9</td>
<td>1,001</td>
<td>26.8</td>
<td>2,363</td>
<td>(61.3)</td>
</tr>
<tr>
<td>Food</td>
<td>1,087</td>
<td>6.7</td>
<td>5,254</td>
<td>383.4</td>
<td>822</td>
<td>100.2</td>
<td>1,606</td>
<td>(66.8)</td>
</tr>
<tr>
<td>Fertilizer</td>
<td>811</td>
<td>14.9</td>
<td>1,279</td>
<td>57.7</td>
<td>167</td>
<td>(34.5)</td>
<td>628</td>
<td>(38.7)</td>
</tr>
<tr>
<td>Petroleum</td>
<td>334</td>
<td>36.0</td>
<td>362</td>
<td>8.3</td>
<td>12</td>
<td>(90.5)</td>
<td>129</td>
<td>(45.8)</td>
</tr>
<tr>
<td>Other revenue expenditure</td>
<td>15,160</td>
<td>23.4</td>
<td>17,147</td>
<td>13.1</td>
<td>4,258</td>
<td>(12.8)</td>
<td>13,236</td>
<td>7.9</td>
</tr>
<tr>
<td><strong>Capital Expenditure</strong></td>
<td>3,356</td>
<td>9.7</td>
<td>4,248</td>
<td>26.6</td>
<td>1,115</td>
<td>26.3</td>
<td>4,427</td>
<td>31.6</td>
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<tr>
<td><strong>Total Expenditure</strong></td>
<td>26,869</td>
<td>16.0</td>
<td>35,112</td>
<td>30.7</td>
<td>8,216</td>
<td>0.7</td>
<td>26,616</td>
<td>(1.2)</td>
</tr>
<tr>
<td><strong>Fiscal Deficit</strong></td>
<td>9,342</td>
<td>44.1</td>
<td>18,215</td>
<td>95.0</td>
<td>2,742</td>
<td>-58.6</td>
<td>12,326</td>
<td>6.3</td>
</tr>
</tbody>
</table>

Source: CMIE Economic Outlook, CGA, Budget Documents, NSE.
## Figure 141: Fiscal math: FY22 fiscal deficit budgeted at 6.8% of GDP

<table>
<thead>
<tr>
<th>Items (Rs bn)</th>
<th>FY20A</th>
<th>FY21</th>
<th>FY22</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rs bn</td>
<td>RE (Rs bn)</td>
<td>Actuals (Rs bn)</td>
</tr>
<tr>
<td><strong>Net tax revenues</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>13,569</td>
<td>13,445 (0.9)</td>
<td>14,240</td>
</tr>
<tr>
<td><strong>Gross tax revenues</strong></td>
<td>20,101</td>
<td>19,003 (5.5)</td>
<td>20,249</td>
</tr>
<tr>
<td><strong>Of which:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Direct Tax</strong></td>
<td>10,372</td>
<td>9,050 (12.7)</td>
<td>9,264 (10.7)</td>
</tr>
<tr>
<td>Corporation tax</td>
<td>5,569</td>
<td>4,460 (19.9)</td>
<td>4,572 (17.9)</td>
</tr>
<tr>
<td>Income tax</td>
<td>4,803</td>
<td>4,590 (4.4)</td>
<td>4,692 (2.3)</td>
</tr>
<tr>
<td><strong>Indirect Tax</strong></td>
<td>9,728</td>
<td>9,953 (2.3)</td>
<td>10,984 (12.9)</td>
</tr>
<tr>
<td>Goods and service tax</td>
<td>6,018</td>
<td>5,151 (14.4)</td>
<td>5,512 (8.4)</td>
</tr>
<tr>
<td>Custom Duties</td>
<td>1,093</td>
<td>1,120 (2.5)</td>
<td>1,348 (23.3)</td>
</tr>
<tr>
<td>Excise Duties</td>
<td>2,395</td>
<td>3,610 (50.8)</td>
<td>3,897 (62.7)</td>
</tr>
<tr>
<td>States Share</td>
<td>(6,507)</td>
<td>(5,500) (15.5)</td>
<td>(5,950) (8.6)</td>
</tr>
<tr>
<td>Transferred to NCCD</td>
<td>(25)</td>
<td>(58) (134.7)</td>
<td>(58) (134.7)</td>
</tr>
<tr>
<td><strong>Non-Tax Revenue</strong></td>
<td>3,271</td>
<td>2,107 (35.6)</td>
<td>2,081 (36.4)</td>
</tr>
<tr>
<td>Dividends and profits</td>
<td>1,861</td>
<td>965 (48.1)</td>
<td>970 (47.9)</td>
</tr>
<tr>
<td><strong>Central govt. revenue receipts</strong></td>
<td>16,841</td>
<td>15,552 (7.7)</td>
<td>16,321 (3.1)</td>
</tr>
<tr>
<td>Non-Debt Capital Receipts</td>
<td>686</td>
<td>465 (32.2)</td>
<td>576 (16.0)</td>
</tr>
<tr>
<td>Misc. Receipts (inc. divestment)</td>
<td>503</td>
<td>320 (36.4)</td>
<td>379 (24.7)</td>
</tr>
<tr>
<td><strong>Total Receipts</strong></td>
<td>17,527</td>
<td>16,017 (8.6)</td>
<td>16,897 (3.6)</td>
</tr>
<tr>
<td><strong>Revenue Expenditure</strong></td>
<td>23,513</td>
<td>30,111 (28.1)</td>
<td>30,864 (31.3)</td>
</tr>
<tr>
<td>Interest Payments</td>
<td>6,121</td>
<td>6,929 (13.2)</td>
<td>6,821 (11.4)</td>
</tr>
<tr>
<td>Major subsidies</td>
<td>2,232</td>
<td>5,954 (166.7)</td>
<td>6,895 (208.9)</td>
</tr>
<tr>
<td>Capital Expenditure</td>
<td>3,356</td>
<td>4,392 (30.9)</td>
<td>4,248 (26.6)</td>
</tr>
<tr>
<td><strong>Total Expenditure</strong></td>
<td>26,869</td>
<td>34,503 (28.4)</td>
<td>35,112 (30.7)</td>
</tr>
<tr>
<td><strong>Fiscal Deficit</strong></td>
<td>9,342</td>
<td>18,487 (97.9)</td>
<td>18,215 (95.0)</td>
</tr>
<tr>
<td>Fiscal Deficit/GDP</td>
<td>4.6</td>
<td>9.5</td>
<td>9.2</td>
</tr>
</tbody>
</table>

Source: Budget Documents, CGA. BE: Budget Estimates; RE: Revised Estimates; A = Actual
Monsoon Update: Kharif sowing gains traction as rainfall distribution improves

Following a timely onset and a good start, the Southwest monsoon lost steam in early July but subsequently regained the lost momentum, resulting in cumulative rainfall recording a deficit of a mere 0.7% as on July 31st vs. a deficit of 8% as of June-end. While the pace has moderated again in August, with the cumulative rainfall recording a deficit of 5% as on Aug 10th, the spatial distribution has improved with 78% of the country (area-wise) receiving normal to excess rainfall. This is significantly better than the 68% coverage as on July 28th. Alongside, there has also been an improvement in the number of sub-divisions reporting deluge (large excess) and deficient rainfall. Geographically, except for South Peninsula, which reported an 8% surplus rainfall, all other three sub-divisions including Central India, Northwest India and East and Northeast India have reported a deficit cumulative rainfall until August 10th.

Current live storage as on August 5th, 2021, was 98.4bn cubic meters or 56% of the storage capacity at full reservoir level. This is not only significantly higher than 75.9bn cubic meters last year (44% of the storage capacity at full reservoir level) but also much higher than the last 10-year average of 81.8bn cubic meters (47% of the storage capacity at full reservoir level). The restoration of rainfall activity momentum, especially within the last 10 days of July, coupled with substantially adequate reservoir water levels, aided the Kharif sowing activity, with actual area sown being ~87.03% of the normal area sown. This is a tad lower than 89.69% as of same date last year but much higher than 82.5% and 86.85% in the previous two years. The last year’s Kharif season saw exceptionally strong sowing activity, thanks to COVID-induced reverse migration and rising economic uncertainty. While most of the Kharif crops saw lower sown area this year, some of the exceptions were sugarcane, jute & Mesta, arhar, ragi, maize and jowar.

Going ahead, we will remain watchful of the precipitation and spatial distribution of rainfall in month of August. The significant progress in rainfall activity in July end after the dry spell experienced in early July coupled with the improved spatial distribution, adequate water reservoir levels, buoyant kharif sowing along with the anticipation of equally good precipitation for the upcoming monsoon months auger well for farm incomes and thus, rural demand recovery. However, weak consumer sentiments, dented by the ferocious second wave that penetrated at a much larger scale in the hinterland than the previous wave, are likely to hold back the swift rebound in rural consumption impulses, particularly in the wake of heightened uncertainty around the subsequent waves.

- **Rainfall activity again lost some momentum in early August post a strong end in July:** Following a timely onset and recording a 10% surplus rainfall vis-à-vis the long-period average (LPA) in June, monsoon lost steam in early July, with cumulative rainfall recording a deficit of 8% as on July 11th. However, the lost momentum was regained with significant progress in the last 10 days of the month, that resulted in cumulative rainfall recording a deficit of mere 0.7% as on July 31st. This was lower than the 1% surplus rainfall observed in the same period last year. Even as the pace has moderated again in August, with the cumulative rainfall recording a deficit of 5% as on Aug 10th, the spatial distribution has improved with 78% of the country (area-wise) receiving excess to normal rainfall. This is significantly better than the 68% coverage as on July 28th. Alongside, there has also been an improvement in the number of sub-divisions reporting deluge (large excess) and deficient rainfall. As on Aug 10th, 8/36, divisions have reported deficient rainfall (vs. 9 as on July 28th) and 1/36 division reported deluge (vs. 3 divisions as on July 28th). Geographically, except for South Peninsula, which reported an 8% surplus rainfall, all other three sub-divisions including Central India, Northwest India and East & Northeast India have reported a deficit cumulative rainfall until Aug 10th as compared to the LPA. Though, the % deviation in cumulative rainfall has improved for East and Northeast India (-12.5% as on Aug 10th vs. -17.9% as on July 28th) and Northwest India (-1.7% as on Aug 10th vs. -7% as on July 28th), it has worsened for Central India (-7.2% as on Aug 10th vs. +2.4%
as on July 28th) and South Peninsula (+7.7% as on Aug 10th vs. +22.4% as on July 28th).

- **Sowing activity recovers sharply after significant progress in rainfall in July; now only a tad lower than previous year’s levels**: The restoration of rainfall activity momentum, especially within the last 10 days of July coupled with substantially adequate reservoir water levels, aided the Kharif sowing activity. However, the actual sown area in 2021 at 933.88 lakh hectare remained well below 956.46 lakh hectare area sown during the corresponding period of last year, thereby witnessing mere 2.4% moderation. This is owing to exceptionally strong sowing in 2020 (9%YoY), thanks to COVID-induced reverse migration and rising economic uncertainty. Broad categories of Kharif crops like Pulses (1.9%YoY), Sugarcane (1.5%) and Jute & Mesta (1%) showed an uptick from previous year’s levels while crops like Rice (-2.7%), Coarse Cereals (-2.1%YoY), Oilseeds (-3.5%YoY) and Cotton (-6%YoY) witnessed moderation from previous years’ levels.

- **Reservoir levels remain significantly adequate**: Current live storage as on Aug 5th, 2021, was 98.4bn cubic meters (56% of the storage capacity at full reservoir level), not only significantly higher than 75.9bn cubic meters last year (44% of the storage capacity at full reservoir level) but also much higher than the last 10-year average of 81.8bn cubic meters (47% of the storage capacity at full reservoir level). The current year’s storage is nearly 130% of the last year’s storage and 120% of the average of last 10 years. According to CWC bulletin, there are 104 reservoirs having storage more than 80%, 18 reservoirs having storage 51% to 80%, six reservoirs having storage 31% to 50% and only two reservoirs reporting storage up to 30% of normal storage. A normal Rabi season rainfall last year, coupled with a good start to the Kharif season, kept reservoir live storage at adequate levels.

- **Normal rainfall crucial for rural demand recovery**: Going ahead, we will remain watchful of the precipitation and spatial distribution of rainfall in month of August. The significant progress in rainfall activity in July end after a prolonged lull in many parts of the country coupled with the improved spatial distribution, adequate water reservoir levels, buoyant kharif sowing along with the anticipation of equally good precipitation for the upcoming monsoon months and stable MSP hikes auger well for farm incomes and thus, rural demand recovery. However, weak consumer sentiments, dented by the ferocious second wave that penetrated at a much larger scale in the hinterland than the previous wave, are likely to hold back the swift rebound in rural consumption impulses, given the households have already incurred substantial medical expenses during the second wave and there is uncertainty around the subsequent waves.
Figure 142: Daily mean rainfall

Daily mean rainfall

Source: CMIE Economic Outlook, IMD, NSE.

Figure 143: Cumulative rainfall (period: June 1st, 2021, to August 10th, 2021)

Cumulative rainfall

Source: CMIE Economic Outlook, IMD, NSE.

Figure 144: Subdivision-wise distribution of cumulative rainfall

<table>
<thead>
<tr>
<th>Subdivisions</th>
<th>Cumulative rainfall (Period: June 1st to July 28th)</th>
<th>Cumulative rainfall (Period: June 1st to August 10th)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Actual (mm)</td>
<td>Normal (mm)</td>
</tr>
<tr>
<td>East and Northeast India</td>
<td>608.3</td>
<td>740.9</td>
</tr>
<tr>
<td>Northwest India</td>
<td>246.5</td>
<td>265.1</td>
</tr>
<tr>
<td>Central India</td>
<td>470</td>
<td>459</td>
</tr>
<tr>
<td>South Peninsula</td>
<td>435.8</td>
<td>356</td>
</tr>
<tr>
<td>Total</td>
<td>416.6</td>
<td>424.1</td>
</tr>
</tbody>
</table>

Source: CMIE Economic Outlook, IMD, NSE.
Figure 145: Category-wise number of subdivisions and % area (sub-divisional) of the country

<table>
<thead>
<tr>
<th>Category</th>
<th>No. of subdivisions</th>
<th>% Area of the country</th>
<th>No. of subdivisions</th>
<th>% Area of the country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large excess</td>
<td>3</td>
<td>8%</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Excess</td>
<td>6</td>
<td>15%</td>
<td>8</td>
<td>24%</td>
</tr>
<tr>
<td>Normal</td>
<td>18</td>
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<td>54%</td>
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<tr>
<td>Deficient</td>
<td>9</td>
<td>24%</td>
<td>8</td>
<td>20%</td>
</tr>
<tr>
<td>Large Deficient</td>
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<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>No rain</td>
<td>0</td>
<td>0%</td>
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<td>0%</td>
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</table>

Source: IMD, NSE.

Figure 146: Actual sown area as % of normal area sown.

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
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<tbody>
<tr>
<td>Cereals</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Pulses</td>
<td></td>
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<td>Sugar cane</td>
<td></td>
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<td>Oilseeds</td>
<td></td>
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<td>Fibres</td>
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</table>

Source: CMIE Economic Outlook, NSE.

Figure 147: YoY change in actual sown area

<table>
<thead>
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<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
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<td>Pulses</td>
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<tr>
<td>Sugar cane</td>
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<tr>
<td>Oilseeds</td>
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<td>Fibres</td>
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</table>

Source: CMIE Economic Outlook, NSE.

Figure 148: Live reservoir storage levels

<table>
<thead>
<tr>
<th></th>
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<td></td>
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<tr>
<td>Oilseeds</td>
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</tr>
</tbody>
</table>

Source: CMIE Economic Outlook, NSE.
Figure 149: Trend of reservoir storage levels

Source: CMIE Economic Outlook, NSE.
IMF WEO: Divergent recovery across economies

The IMF World Economic Outlook (WEO) update 3 maintained the global GDP growth forecast at 6% for 2021 and revised it up by 50bps to 4.9% for 2022, reflecting increased normalization of economic activity in advanced economies. Growth projections for EMDEs, however, have been downgraded following slower vaccine rollouts and a severe second wave in India. GDP growth estimate for FY22 has been sharply revised downwards from 12.5% to 9.5% but is expected at a 160bps higher of 8.5% in FY23. Estimates of economic growth diverge across countries primarily due to vaccine access and fiscal support. The report emphasizes the need for worldwide access to vaccines as a mere ~10% of population in EMDEs and ~1% in low-income countries have been vaccinated. The fiscal response of governments has been varied with advanced economies reacting with sizeable fiscal packages, but many EMDE countries continue to report limited fiscal space. Additionally, the IMF WEO estimates global trade to expand by 9.7% in 2021, with growth expected to moderate to 7% in 2022.

The report maintains that price pressures are unusual developments caused due to the pandemic and that current inflationary levels are expected to be transitory and should ease in 2022 to pre-pandemic levels. Core inflation levels have been noted to be stable. Risks to global economic growth include a slow vaccine rollout and a revision in monetary policy by central banks due to elevated inflation expectations. On the other hand, global cooperation on vaccines could lead to the end of the pandemic with households releasing savings sooner. The divergence in economic recoveries must be addressed by supporting financially weak economies and providing access to international liquidity. Countries must also continue to prioritize health expenditure. Premature withdrawal of support for small firms could result in a high number of bankruptcies. Lastly, the IMF advises central banks to resist tightening monetary policy until they have more clarity on price dynamics.

- **Divergence in economic prospects due to vaccine access and fiscal support:** Estimates of economic growth diverge across countries primarily due to vaccine access and fiscal support. Vaccine access continues to be the key to normalization of economic activity. While 40% of the population in advanced economies has been vaccinated, the corresponding numbers for emerging markets and low-income countries are about 10% and less than 1% respectively. Additionally, emergence of new variants of the virus are likely to result in an uneven recovery across countries. The fiscal response of governments has also been varied, with advanced economies reacting with sizeable fiscal packages but many EMDE countries struggling with limited fiscal space.

- **Economic prospects vary by region:** Global forecasts in the IMF WEO July 2021 update have been retained at 6% for 2021 but have been upgraded by 50bps for 2022 to 4.9%. Growth estimates for advanced economies have been revised upwards due to faster normalization of economic activity and rapid vaccinations. EMDEs, however, have seen a downgrade in their projections owing to slower pace of vaccinations and a deadlier second wave, with India leading the pack. After the severe second COVID-19 wave in India, growth projections have been lowered due to an expected slow recovery from the economic setback. Estimates for low income developing countries have also been downgraded due to the slow rollout of vaccines. Lastly, the IMF estimates global trade to expand by 9.7% in 2021 and a tad lower 7% in 2022.

- **Elevated inflation due to pandemic related disruptions:** The IMF WEO update maintains that price pressures are unusual developments related to the pandemic.

Current inflationary pressures are expected to be transitory in nature and should ease in 2022 to pre-pandemic levels. Although there has been an observed rise in global food prices, core inflation has remained broadly stable. While the recent jump in core inflation in the US is believed to be due to pandemic-related disruptions, the inflation trajectory in EMDEs will remain elevated in 2022 because of pressure on food prices and delayed passthrough of high oil prices for importers.

- **Risks to growth outlook:** A slow vaccine rollout due to delayed procurement and delivery is a potential downside risk to growth forecasts. Additionally, if central banks tighten their monetary policy stance due to elevated inflation expectations, financial conditions could tighten and slow down the recovery process. On the upside, global cooperation on vaccines could lead to the end of the pandemic with households releasing savings sooner.

- **Policy recommendations going forward:** It is imperative that the divergence in economic recoveries is addressed by supporting financially weak economies. This can be done by providing access to international liquidity for countries that had higher debt levels before the pandemic. Countries must also prioritize health expenditure and those with limited fiscal space must redirect spending from other channels. Premature withdrawal of support for small firms could result in a high number of bankruptcies. Lastly, the IMF advises central banks to resist tightening monetary policy until they have more clarity on price dynamics.

**Figure 150: IMF World Economic Outlook projections**

<table>
<thead>
<tr>
<th>Countries</th>
<th>2020</th>
<th>Projections</th>
<th>Difference from April 2021 WEO Update</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2021E</td>
<td>2022E</td>
</tr>
<tr>
<td><strong>Real GDP Growth</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>World</td>
<td>-3.2</td>
<td>6.0</td>
<td>4.9</td>
</tr>
<tr>
<td>Advanced Economies</td>
<td>-4.6</td>
<td>5.6</td>
<td>4.4</td>
</tr>
<tr>
<td>United States</td>
<td>-3.5</td>
<td>7.0</td>
<td>4.9</td>
</tr>
<tr>
<td>Euro Area</td>
<td>-6.5</td>
<td>4.6</td>
<td>4.3</td>
</tr>
<tr>
<td>Germany</td>
<td>-4.8</td>
<td>3.6</td>
<td>4.1</td>
</tr>
<tr>
<td>France</td>
<td>-8.0</td>
<td>5.8</td>
<td>4.2</td>
</tr>
<tr>
<td>Italy</td>
<td>-8.9</td>
<td>4.9</td>
<td>4.2</td>
</tr>
<tr>
<td>Spain</td>
<td>-10.8</td>
<td>6.2</td>
<td>5.8</td>
</tr>
<tr>
<td>J Japan</td>
<td>-4.7</td>
<td>2.8</td>
<td>3.0</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>-9.8</td>
<td>7.0</td>
<td>4.8</td>
</tr>
<tr>
<td>Canada</td>
<td>-5.3</td>
<td>6.3</td>
<td>4.5</td>
</tr>
<tr>
<td><strong>EMDEs</strong></td>
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<td>6.3</td>
<td>5.2</td>
</tr>
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<td>8.1</td>
<td>5.7</td>
</tr>
<tr>
<td>India</td>
<td>-7.3</td>
<td>9.5</td>
<td>8.5</td>
</tr>
<tr>
<td>Russia</td>
<td>-3.0</td>
<td>4.4</td>
<td>3.1</td>
</tr>
<tr>
<td>Brazil</td>
<td>-4.1</td>
<td>5.3</td>
<td>1.9</td>
</tr>
<tr>
<td>Mexico</td>
<td>-8.3</td>
<td>6.3</td>
<td>4.2</td>
</tr>
<tr>
<td><strong>World Trade Volume</strong></td>
<td>-8.3</td>
<td>9.7</td>
<td>7.0</td>
</tr>
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</table>

Source: IMF World Economic Outlook.
### Figure 151: General government fiscal balance and gross debt projections (% of GDP)

<table>
<thead>
<tr>
<th>Countries</th>
<th>Overall Fiscal Balance</th>
<th>Gross Debt</th>
<th>Difference from April 2021 WEO Update</th>
<th>2021E</th>
<th>2021E</th>
<th>Difference from April 2021 WEO Update</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>2021E</td>
<td>Difference from April 2021 WEO Update</td>
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<td>2021E</td>
<td></td>
</tr>
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<tr>
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<td>100.1</td>
<td>1.9</td>
</tr>
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<td>120.1</td>
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<td>61.0</td>
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<td>-0.6</td>
</tr>
</tbody>
</table>

Source: IMF World Economic Outlook.

### Figure 152: Global activity indicators

Source: IMF World Economic Outlook; Note: *three month moving average, **annualized percent change; ***deviations from 50, ****seasonally adjusted, 2018=100).
Figure 153: Household savings and government support during the pandemic (share of 2020 GDP)

Source: IMF World Economic Outlook.

Figure 154: Trends in core inflation trends across regions

Source: IMF World Economic Outlook.
Note: AEs: advanced economies, EMs: emerging markets.
STOP PRESS: Macro data update (Data released between August 1st and 15th)¹

IIP for June 2021: Industrial activity shows sequential traction but remains subdued on a 2-year CAGR

Industrial production (IIP) rose by a strong 13.6% YoY in June but off a low base (-16.6% in Jun’20), positively surprising market expectations by a whisker (Consensus: 13.5%). Even on a sequential basis, IIP exhibited traction and surged by a six-month high 5.7% MoM, aided by persistent buoyancy in external demand coupled with significant easing of restrictive norms across most of the states. However, on a two-year CAGR, industrial production activity continued to remain subdued, but the pace of moderation eased substantially from an eleven-month low of -7% to -2%, depicting nascent signs of regained momentum. While the quantum of moderation eased on a 2-year CAGR for mostly all the categories, production in consumer non-durables rebounded considerably and displayed an eight-month high 2-year CAGR of +1%. Though, Q1FY22 factory activity moderated sequentially (-11% QoQ) from Q4FY21 levels owing to virulent second wave and attendant lockdowns, the severity of contraction (-7%YoY*) while comparing with Q1FY21 levels (-35%YoY), was curtailed as fewer restrictions were imposed relative to last year and robust external demand also provided significant downside support. Going ahead, industrial production is likely to inch sequentially north owing to improvement in domestic demand prompted by further unlocking (evident from sequentially better vehicle sales, E-way bills, PMIs etc.) coupled with the sturdy external demand.

*From Q1FY20 level

CPI for July 2021: Retail inflation moderates to a three-month low

Headline CPI inflation eased by ~70bps from 6.3% in June to a three-month low of 5.6% in July, positively surprising market expectations (Consensus: 5.8%; Source: Reuters). While sharp moderation in food & beverages (-113 bps), services (-50 bps) coupled with fuel inflation (-24bps) alleviated broader price pressures and brought the headline inflation within RBI’s tolerance limit, upsurge in pan, tobacco, and intoxicant (+73bps), clothing and footwear (+32bps) and housing (+11bps) component weighed on the entire basket. Within food, the moderation was primarily led by vegetables, fruits, oils & fats, pulses, spices, sugar and prepared meals, even as other categories like cereals, meat and fish, eggs and milk & products inched higher. Core inflation eased by 24bps to a three-month low of 6%, thanks to lower inflation in household goods & services, transport & communication, education and personal care and effects. However, higher YoY increase in prices for recreation & amusement and health kept the core inflation elevated. Sequential hardening of inflation for the sixth month in a row coupled with firming inflation expectations as evident from the latest RBI survey, thus calls for some caution over the inflation trajectory. We expect MPC to stay put on the repo rate through the current financial year and continue to support the nascent economic recovery by providing adequate and targeted liquidity support. Reduction in rate corridor via hike in reverse repo rate and calibrated increase in excess liquidity absorption through VRRRs are measures that the MPC may resort to later this year before changing policy stance.

¹ A detailed note on these would be included in the next month’s edition of Market Pulse.
Invited Article: Qualities of an authentic asset manager with ESG ambitions

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There are different ways an organization can attract and engage its various stakeholders. Having an inspiring purpose articulated in form of a mission statement may be one of the most effective ways. An even simpler concept is presented by Simon Sinek, the British-American author, who offers “WHY” as an influential notion in his impactful book “Start with why”.

Sustainable sales and long-term growth are often enabled when an organization is truly capable of inspiring trust in its customers and other stakeholders. Just like in any other business, asset managers also need to be able to articulate their “Why” clearly as their clients want their investments to create a genuine positive impact while generating a return. We believe this is possible.

Define the Why

Within asset management, the story of recent years has been the emergence of sustainability or ESG tainted products. Redecorating existing funds to create a ESG look-and-feel has been a new trend on the back of substantial flows into ESG products. Yet many investors and clients are very smart, and they are developing the skills to be able to tell very easily if an investment strategy is genuinely authentic. Besides, regulators also have started paying attention, especially in Europe, to the issue of funds which use pretended or misinforming names.

This is the reason why asset managers with ESG ambitions really need to be very careful and define their Why immediately. An important point here is to define ESG. Here we mean using the ESG lens to create a positive impact as opposed to risk management. The difference is crucial as we would argue that every asset manager should screen for ESG risks. The positive non-financial impact objective is much harder and requires commitment that percolates through the organization starting from the top and the broader definition of the why. Clients are very smart, and they are developing the skills to easily distinguish if an asset manager is not authentic. A key test is to go right to the top. Is the board walking the walk and talking the talk? Do board members have expertise in sustainability, and do they have ESG-related KPIs? If asset managers are unable to back their marketing messages with their own actions, then clients will straight away see a marketing effort rather than a genuine intention.

What are some of the other things that asset managers need to do these days which they did not have to do before? Manage relationships and manage stakeholders. In the past – for example 10 years ago, when ESG was not as center stage in investments as it is now, dialogue was still key. However, now the number of stakeholders has increased substantially, including getting the buy-in from various market participants like clients, regulators, NGO’s etc.

Delivering on a purpose we have formulated in our own minds is always easier than receiving acceptance from others, which requires leadership skills to convert ideals into actionable goals.
Collaborate

If asset managers want to have a meaningful influence on corporates and policy-makers, they need to collaborate with other industry players, asset owners and NGOs – even if you are like the size of BlackRock then it is not enough. Examples of those are Climate Action 100+, the Net Zero Asset Owner Alliance or the Climate Bonds Initiative. Simply signing up to one of those groups is not enough though and asset managers would need to go beyond the marketing declarations. One difficulty is that one has to be very specific when trying to influence a corporate. There are so many aspects that one can engage on – biodiversity, gender diversity, net zero, circular economy, etc. – So, one has to be both very specific in terms of objectives and very knowledgeable in that particular area. For example, Climate Action 100+ is an investor-led initiative to ensure the world’s largest corporate greenhouse gas emitters take necessary action on climate change. This is specific. However, it is still not enough. You have to understand the sectors (cement, steel, chemicals, etc.) both technically and financially extremely well in order to support corporates to pursue achievable and realistic pathways towards their net-zero commitments. Going back to the asset manager itself, that engagement, be it with the NGOs and associations, requires a lot of work, resources, and dedication. To be credible, it would have to go beyond the subscription fee to be part of the alliance. An example is ESG Portfolio Management leading an engagement with Kellogg Co. asking to reduce plastic waste and to search for more sustainable alternatives. They used the PRI collaboration platform to invite further asset managers to support the initiative. Also, they asked experts from the Ellen MacArthur foundation and non-profit foundation As You Sow for support.

Use data and regulation appropriately

Data is very important. We identify three key steps: data sourcing, data integration and data disclosures. Here is a warning though. Data is a measurement tool to achieve the ESG ambitions of the asset manager. It is not so much on how much but how data is being used to achieve and monitor its progress towards a ESG objective. Hence the crucial importance of how the ESG objective ties in with the definition of the Why in the first place.

Data is not the panacea. First, ESG is broad as a concept and is lacking measurement indicators, lots of it is very qualitative and at times cultural. The EU is trying to codify parts of the ESG world as much as it can. Starting with the taxonomy for climate change adaptation and mitigation. However, in our opinion, given the qualitative nature of some of the objectives, it won’t be able to fully quantify ESG. Regulation for funds is helpful but again not the panacea both for the investor and the asset manager. Complying as an article 8 or 9 fund under the European SFDR regulation is not the definitive answer for labelling a strategy as authentic. There are many loopholes that asset managers can exploit to make their strategy comply. But again, investors are smart.

Conclusion

ESG is not an end objective in itself but a journey to deliver a better planet. We need to ask why at every stage and not get swayed by what is considered to be trendy or by some imitation products coming to the market. Being ESG credible and authentic requires fund managers to rethink their purpose both as individuals and as organizations. Adapting and asking why helps asset managers explore ways to have a genuine impact on society through their investments.
Explaining stock market jumps using daily news articles

The paper “What Triggers Stock Market Jumps” by Scott R. Baker, Steven J. Davis, Nicholas Bloom and Marco C. Sammon uses newspaper accounts of prominent daily jumps in 16 national stock markets to analyse their cause and the geographic source of the news. Together, 6,200 daily stock market jumps at national markets and 450 jumps in bond markets in the United States from 1970 to 2020 are identified with a set threshold and then examined by trained readers who identify the journalist’s interpretation. The articles are classified by confidence level of the journalist as well as ease of coding for the reader. They find that policy related news tend to result in upward jumps more often. Articles responsible for these jumps are found to be related to monetary policy and government expenditure. Using their constructed clarity index, the study has found that clarity of news articles has increased over time. The authors add that economic and policy developments from the USA play a much larger role than developments from other countries analysed, contributing to an existing body of literature about the importance of the dollar in the international financial system. Lastly, they find that articles about economic and policy developments have a much larger influence on equity markets across the globe with China playing an increasingly more important role since the 1990s.

1. Introduction

In “What Triggers Stock Market Jumps?”, authors Scott R. Baker, Steven J. Davis, Nicholas Bloom and Marco C. Sammon use next-day newspaper articles in the Wall Street Journal, New York Times, Washington Post, Chicago Tribune, Los Angeles Times and other papers accounts of prominent daily jumps in 16 national stock markets to analyse their cause and the geographic source of the news. As per the common view, stock price changes are known to be a result of news about discount changes and corporate earnings. Thus, the authors attempt to associate noticeable daily changes in the stock market along with developments that would affect discount rates and corporate earnings. They would also expect to identify potential drivers of the observed changes.

2. Methodology

Next-day newspaper accounts from 1990 in the United States, 1930 in the United Kingdom and from the 1980s in 14 markets across the world are analysed. Together, 6,200 daily stock market jumps at national markets and 450 jumps in bond markets in the United States from 1970 to 2020 are examined. A threshold is set to identify large stock market jumps – a 2.5% daily change in the stock market for most countries. The threshold is increased for countries with more volatile stock markets, in order to cover a large proportion of trading days. The news accounts covered are generally from prominent newspapers of their respective countries and an effort is made to identify the journalist’s explanation and interpretation of the market movement. The study takes the help of trained readers to classify the reason for the jump into 17 categories along with assigning a confidence level to the journalist’s explanation in the article and ease of coding for the reader. More than one reader is assigned to each article in order to identify multiple reasons for the jump and finally, data for each article is compiled.

3. Contribution and Findings

While there is an existing range of literature related to how news coverage influences financial markets, this study builds closely on previous literature by Niederhoffer (1971)

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and Cutler, Poterba and Summers (1989). It does so by widening the choice of markets, identifying the reason behind the jump and geographical source as well as the effect on market volatility in the future. The approach developed in this paper to measure clarity in articles about forces affected stock market jumps is also new. The exercise described above brings to light some important findings. Firstly, they find that upward jumps as a result of policy related news are more frequent than downward changes. While this holds true for every country assessed, the trend has only grown stronger in the U.S.A and the UK. After digging deeper, it was found that the specific news articles responsible are related to monetary policy and government expenditure. Secondly, it was observed that there is significantly less volatility after market movements triggered by monetary policy developments as compared to other announcements.

The authors also find, using their constructed clarity index, that clarity of news articles has increased over time. They attribute this increased clarity to professional news reporting, transparent corporate performance results, improved economic data and a drop in communication costs. Articles about economic and policy developments in the USA have also had a much larger influence on equity markets across the globe. While similar news from Europe doesn’t have a noticeable effect in non-European countries, China has begun to play a prominent role in this respect post the mid-1990s.

The study makes a valuable contribution to the body of literature about the importance of the dollar in the international financial system. The authors add that economic and policy developments from the USA play a much larger role than developments from other countries analysed, adding to work by Ehrmann et al. (2011) about the strong effect of U.S financial markets on European markets.

4. Conclusion

Analysis conducted for markets in Australia, Canada, China, Japan, New Zealand, Saudi Arabia, Singapore, South Africa and South Korea revealed a much larger share of jumps attributed to US related developments as compared to Europe. While the analysis in the paper doesn’t cover India, one would expect to find a similar importance of US policy developments given the extent to which Indian financial markets are internationally integrated.
Do Fund Managers Misestimate Climatic Disaster Risk: Research Insights from the NSE-ISB Trading Lab

Do Fund Managers Misestimate Climatic Disaster Risk
Shashwat Alok⁷  Nitin Kumar⁸  Russ Wermers⁹

1. Introduction
Climate change will play an important role in investment decisions of investors and fund managers. Although most policy debates around climate change focus on transition towards low carbon economy and its impact on allocation of capital, there is little attention paid to the firms affected by climate disasters. This paper addresses to fill the gap. It looks at how fund managers misestimate the impact of climate disaster. The paper provides evidence for the fact that funds located near climatic disaster zones underweight the stocks of firm located in the disaster zone to a much greater degree than distant funds. This overreaction is due to manager’s misestimation due to his ability to recall such events more frequently than other fund managers. The overreaction also decreases over time and distance from the disaster.

2. Motivation
There are multiple reasons why a fund manager might misestimate the impact of climate disaster.

1. Salience Bias - Salience bias is the tendency to overweight probabilities based on the ease with which events can be recalled. In the presence of such a bias, subjects overestimate the risk of salient events based on proximity, recall or emotional impact. Fund managers exposed to the consequences of a climatic disaster event may overestimate the probability of such disasters in the future, and, consequently, underweight stocks recently exposed to such climatic events in their portfolios.

2. Information Hypothesis – Existing literature shows that fund managers possess significant informational advantages with respect to firms located near to their location. These fund managers overweight nearby firms and earn abnormal returns from their local holdings. Authors therefore imply that fund managers may possess superior information regarding proximate firms, and, consequently, may underweight local disaster firms if they expect such firms to underperform in the near future as a result of a disaster strike.

Both salience bias and information hypothesis can overlap and are not mutually exclusive. Information hypothesis would mean that if fund managers underweight disaster area stocks, then such stocks should underperform in the near future. Salience hypothesis would mean that if fund managers underweight disaster area stocks, then such stocks should not underperform in the near future.

3. Data
Data on climatic disasters is from SHELDUS. SHELDUS provides information on names, dates, property damages, and county locations of major climatic disasters in the United States. Authors obtain data on the sixteen disasters listed in SHELDUS. The top-four disasters, based on the average damage imposed per occurrence, are hurricanes/tropical storms, floods, tornadoes, and wildfires. These are likely to be more salient disasters, and together account for over 90% of the total damages caused by all climatic disasters during our sample period. Data on actively managed, open-ended diversified U.S. equity mutual funds are obtained from CRSP Survivor-Bias-free U.S. Mutual Fund database.

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Authors also obtain ZIP codes of fund headquarter locations from CRSP, which are converted to the county level. Data on firm financials and headquarters’ county locations are from the Compustat Quarterly files.

4. **Empirical Strategy**

The main econometric challenge in evaluating whether portfolio decisions of fund managers encounter salience bias is obtaining the counterfactual portfolio in the absence of such a bias. Authors design an empirical method that aims to circumvent these issues by focusing on changes in the portfolios of fund managers around salient climatic disasters. Specifically, authors employ a difference-in-differences strategy that compares the portfolio decisions regarding stocks of firms headquartered in disaster zones of funds located close to the disaster zone (treatment group funds) to those located farther away (control group funds). The assumption is that disasters are more salient for funds located closer to the disaster zone, and consequently, such funds will underweight stocks of firms headquartered in the disaster zone around the time of disaster events.

In a difference-in-differences test, the county location of fund companies and portfolio-holding firm headquarters are used to calculate the distance between fund-firm pairs and then classify the funds into two groups. If the distance between fund and firm headquarters is less than 100 miles, fund-firm pairs is classified as CLOSE (treatment) and FAR (control) if it is more than 100 miles. Authors ensure that the results are not driven by the choice of cut-off. They repeat baseline specification with alternative distance cut-offs of 50, 150, 200, and 250 miles to classify close fund-firm pairs. Disaster quarter along with two quarters that follow are considered to be the post disaster period.

5. **Results**

   a) **Fund Manager overreaction** - Funds close to the disaster zone reduce their portfolio weights on disaster zone stocks by approximately 0.09%, as compared to the reduction in weight by funds that are far from the disaster zone. For a typical fund in our sample, this translates into a 1.5% drop in dollar value of each disaster stock.

   b) **Temporal Dynamics** – Authors find that the underweighting by close funds relative to distant funds, in disaster zone stocks, decreases progressively through time. This result is consistent with the predictions of the salience hypothesis: as salient events pass into the past, their impact decreases with time.

   c) **Managers learning from experience** – Authors show that managers learn from experience and as more disaster strikes, they become more experienced and less salient. Manager who are disaster experienced exhibit less overreaction compared to managers with less disaster experience.

The authors show that the above findings consistently apply to the high frequency and low frequency analysis of price impact and limit order book, respectively. The results are robust across subperiods, maturity of bonds examined and other methodological variations.

6. **Salience Bias or Information Hypothesis?**

Authors test the motivation behind the managers and check whether it is related to salience bias or manager possessing superior information.

- **Disaster firms vs. Near-disaster firms** - The differential response of the fund managers in CLOSE and FAR pairs for stocks in disaster zone is compared with differential response of fund managers in stocks of firms of neighbouring disaster zones. The differential is much higher in disaster zones than in neighbouring disaster zones, giving credence to the salience bias.

- **Impact on stock returns** - Authors examine the abnormal return performance of stocks in the disaster zone. Authors evaluate the subsequent performance of stocks that are underweighted by funds just after climatic disaster events. If the underweighting of disaster zone firms by close funds is consistent with the salience hypothesis, we
would expect the most underweighted stocks to exhibit nonnegative risk-adjusted returns during post-disaster quarters, on average, while future average underperformance by such stocks would be more consistent with the information hypothesis. The results from these tests indicate that disaster zone stocks that are most underweighted by disaster zone funds subsequently outperform stocks that are overweighted by disaster zone funds, giving credence to the salience bias.

- **Impact of extent of disaster damage** – Authors split the sample into two based on the degree of damage measures based on per capita damages and total damages. Authors find that underweighting of disaster zone stocks is larger for damage-intensive disasters.

Authors also show that following alternative explanations do not hold:

- Investors of mutual funds putting pressure on manager, forcing redemptions
- Reduction of weight mechanically due to drop in share price of disaster zone stocks

### 7. Conclusion

This paper is an important contribution to the field of climate finance and behavioural finance, as it shows how salience bias play a role in fund manager’s misestimation of the impact of climatic disasters on stocks of firms located in disaster zones. This bias is transitory and diminishes with time and distance. Climatic disaster risk misestimation is costly to the fund investors as it adversely affects portfolio returns.
Does the Stock Market Overreact?\textsuperscript{10} (Highly cited research paper 1)

Werner FM de Bondt\textsuperscript{11} \quad Richard Thaler\textsuperscript{12}

1. Introduction

It has long been posited that the stock market overreacts to new information. John Maynard Keynes was one of the first economists to comment on this phenomenon, stating that “day-to-day fluctuations in the profits of existing investments... tend to have an altogether excessive, and even an absurd, influence on the market” (Keynes, 1936\textsuperscript{13}). John Burr Williams also noted that “prices have been based too much on current earning power and too little on long-term dividend paying power” (Williams, 1938\textsuperscript{14}).

In relation to the volatility of stock prices, previous studies have shown that dividends indeed do not vary enough to rationally justify the observed movement in prices (Shiller, 1981\textsuperscript{15}). Further, strong positive correlation observed between price movements and changes in next year’s earnings lends credence to the claim of overreaction (Kleidon, 1981\textsuperscript{16}).

This paper (published in 1985) is one of the earliest in the field of behavioural finance and draws motivation from (at the time, recent) research in experimental psychology indicating that individuals do not act entirely rationally as per Bayes’ rule. Intrinsic biases inhibit accurate recalculation of probabilities in the light of new information – in addition to being unable to perform complex mathematical calculations, individuals tend to give higher weightage to newer or more recent information, thereby overreacting to unexpected news. The authors investigate whether such behaviour matters at the market level in determining stock prices.

2. Data and Setting

The authors presume that if stock prices systematically overshoot, then any reversals should be predictable from past return data alone. Therefore, the study’s sample comprises monthly return data for New York Stock Exchange (NYSE) common stocks compiled by the Center for Research in Security Prices (CRSP). The sample period ranges from January 1926 to December 1982. At periodic intervals (base case of 3 years, implying 16 such intervals), the authors form ‘winner’ (W) and ‘loser’ (L) portfolios based upon the highest and lowest group of 35 stocks, respectively, ranked on past market-adjusted excess returns. The market index is proxied by the equal-weighted average return on all CRSP-listed securities. It is observed that, cross-sectionally, the winner and loser portfolios do not differ materially with respect to financial metrics such as market capitalization, dividend yield or financial leverage.

After forming the W/L portfolios, the authors calculate the cumulative market-adjusted excess returns for each portfolio over the next 36 months, by taking an equal-weighted average across all constituent stocks. Monthly means are also calculated by taking an equal-weighted average across all intervals.

In their study, the authors test for the following two hypotheses, which imply market inefficiency:

1. Extreme movements in stock prices will be followed by movements in the opposite direction
2. More extreme the initial price movement, greater will be the subsequent adjustment

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\textsuperscript{14} J. B. Williams. The Theory of Investment Value. Amsterdam: North-Holland, 1938
\textsuperscript{15} R. J. Shiller. "Do Stock Prices Move Too Much to be Justified by Subsequent Changes in Dividends?" American Economic Review 71 (J une 1981)
Thus, while the efficient market hypothesis implies that excess returns for both portfolios (in the post-formation period) should be zero, the overreaction hypothesis implies that winner and loser portfolios should have negative and positive excess returns, respectively.

3. Results

The authors’ primary results are consistent with the overreaction hypothesis. They observe that loser portfolios outperform the market by 19.6% on average over the next 36 months, while winner portfolios underperform by 5.0% on average. Thus, the observed difference in cumulative excess returns of a long-short portfolio (long L, short W) equals 24.6% over a three-year period. Furthermore, the greater the prior excess returns, the greater is the subsequent price reversal.

Apart from the asymmetry in overreaction reflected above — the effect being much larger for the L portfolios than for W — the authors also observe consistency with the turn-of-the-year effect and seasonality in returns. In addition, majority of the overreaction phenomenon (~78% of difference in cumulative returns) is observed over the second and third years (months 13-36).

In an interesting result, the authors note that the average betas of the W portfolios are significantly larger than those of the L portfolios. Thus, the W portfolios underperform the L portfolios while being significantly riskier.

Most of the excess returns are observed to be realized in the month of January. Depicting remarkable persistence, the L portfolios experience above average returns in January up to five years post portfolio formation. These portfolios also undergo a decline in cumulative return in the months of October to December. The authors’ study, however, does not attempt to explain the underlying economic mechanism.

The above-mentioned findings are robust to the length of time intervals between portfolio formation, the month of portfolio formation, and alternative measures of excess return.

4. Conclusion

This paper is one of the earliest to use a behavioural principle (overreaction) as predictor of a market anomaly. In keeping with the overreaction hypothesis, the authors find that portfolios of prior losers outperform prior winners, earning nearly 25% more in cumulative returns, on average, over a period of three years. Notably, these portfolios do not differ materially (in terms of market capitalization and other metrics) at the time of formation. Thus, irrational behaviour, as evidenced by overreaction to unexpected news events, does indeed matter at the market level.
Measuring Economic Policy Uncertainty17 (Highly cited research paper 2)

Scott R. Baker18  Nicholas Bloom19  Steven J. Davis20

1. Introduction

The authors, Scott R. Baker, Nicholas Bloom, and Steven J. Davis, investigate the role of policy uncertainty in the United States by developing a new index of economic policy uncertainty (EPU) based on newspaper coverage frequency. It reflects the frequency of articles in 10 leading U.S. newspapers that contain terms in all three categories pertaining to uncertainty, the economy, and policy. The authors find out that the index spikes in periods of uncertainty in the U.S., suggesting that this index serves as a proxy for movements in economic policy uncertainty.

The authors extend their newspaper-based approach to measure policy uncertainty along three dimensions — back in time (as far back as 1900), across countries (11 major economies, including all G10 economies), and to specific policy categories (11 categories).

The paper also attempts to address all potential concerns about newspaper reliability by checking for accuracy, bias, and consistency through a variety of measures such as human auditing of 12,000 newspaper articles, cross-checking the relationship between the EPU index so developed and other measures of economic and policy uncertainty, checking for political bias, and finally, its market use validation.

The authors undertake a micro and a macro estimation approach to investigate the role of policy uncertainty. The micro estimation approach uses firm-level dissimilarity in exposure to certain aspects of policy, mainly government purchases of goods and services. The macro estimation approach, meanwhile, fits vector autoregressive (VAR) models to U.S. data and to an international panel VAR that exploits the EPU indexes for 12 countries.

2. Methodology

For the monthly EPU index for the U.S., the authors search the digital archives of 10 leading U.S. newspapers from January 1985 to obtain a monthly count of articles that contain the following trio of terms: “uncertainty” or “uncertain”; “economic” or “economy”; and one of the following policy terms: “Congress,” “deficit,” “Federal Reserve,” “legislation,” “regulation,” or “White House.”

Since the overall volume of articles varied across newspapers and time, the authors scale the raw counts by the total number of articles in the same newspaper and month. They then standardize each monthly newspaper-level series to unit standard deviation from 1985 to 2009 and average it across the 10 papers by month. Finally, they normalize the 10-paper series to a mean of 100 from 1985 to 2009.

The authors also produce a daily EPU index for the U.S. using a news aggregator covering around 1,500 U.S. newspapers. When averaged across the month, this daily index shows a high correlation (0.85) with the monthly index, indicating a high degree of similarity. However, the authors focus on the 10-paper monthly index as the count of newspapers in the news aggregator’s archive varies significantly over time, which distorts the longer-term behaviour of the daily EPU index.

The authors create 11 category-specific EPU indexes by applying additional criteria to those articles that contain terms in all three categories pertaining to uncertainty, the economy, and policy.

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19 William D. Eberle Professor of Economics, Stanford University
20 William H. Abbott Distinguished Service Professor of International Business and Economics, University of Chicago Booth School of Business
A similar approach was used by the authors to construct EPU indexes for 11 other major economies. To help develop suitable E, P, and U term sets, the authors consulted persons with native-level fluency and economics expertise in the relevant language and country.

The authors also construct long-span monthly EPU indexes back to 1900 for the U.S. and the U.K. based on newspapers that were published throughout the past century.

There is an acknowledgement of the issues that arise about the accuracy and potential bias in using newspaper-based measures of EPU. To tackle these issues, the authors take the following steps. Firstly, they conduct an extensive audit study, which relies on human readings of over 12,000 newspaper articles. This helps the authors select the P term set, compare the time-series behaviour of human and computer-generated EPU indexes, and collect other information about the nature of policy uncertainty. Secondly, they show a strong relationship between their EPU index and other measures of economic uncertainty, for example, VIX, an index of 30-day option implied volatility in the S&P500 index. Finally, they find very similar movements in EPU indexes based on right-leaning and left-leaning newspapers, suggesting that political slant does not seriously distort the EPU index.

3. Results

The results of the paper can be divided into two broad sections:

Part A: Construction of EPU Index

1. The EPU index so constructed is able to capture the situations of economic policy uncertainty caused by both global and domestic issues strikingly. For instance, the EPU index for the U.S. exhibited spikes during Gulf Wars, close to presidential elections, the 9/11 attack, the stimulus debate in early 2008, the Lehman Brothers bankruptcy, and TARP legislation in late 2008, among others.

2. Fiscal matters, especially tax policy, are the largest source of policy uncertainty followed by health care policy in the U.S.

3. Policy uncertainty related to financial regulations, sovereign debt, and currency crisis have increased in magnitude after 2008, but there was little effect on the EPU index from a low base.

4. EPU concerns related to monetary policy were influential throughout the 1985–2014 period. However, they are not relevant in recent years.

Part B: Role of Policy Uncertainty

5. The regulatory policy uncertainty drives firm-level stock price volatility.

6. An increase in policy uncertainty is associated with concurrent drops in investment rates and employment growth rates for firms in policy-exposed sectors.

7. The 12-country panel VAR results show that a 90-point rise in EPU foreshadows a peak drop in industrial production of about 1% and an increase in the unemployment rate of about 25 basis points. There are three ways to interpret this VAR based result:

   a) The increased EPU corresponds to an unforeseen uncertainty shock that causes poor macroeconomic performance through real options effects, cost-of-capital effects, or other mechanisms.

   b) An increase in EPU captures bad news about the economic outlook, which has harmful effects on the economy. Thus, EPU amplifies a causal impulse that originated elsewhere.

   c) EPU acts as a useful summary statistic for information missing from other variables such as output, employment (or unemployment), policy rates, and others.
4. Conclusion

The notion that uncertainty affects economic activity is not new. Friedman (1968), Rodrik (1991), Higgs (1997), and Hassett and Metcalf (1999), among others, consider the detrimental economic effects of monetary, fiscal, and regulatory policy uncertainty. In an attempt to analyze the impact of uncertainty shocks, Bloom (2009) came up with a parameterized model and then compared its effect with VAR estimations on actual data. Born and Pfeifer (2014) and Fernandez-Villaverde et al. (2015) study policy uncertainty in DSGE models, finding moderately negative effects, while Pastor and Veronesi (2012, 2013) model the theoretical links among fluctuations, policy uncertainty, and stock market volatility.

However, devising an index through text search methods – particularly newspaper archives – to measure EPU objectively is groundbreaking. The EPU index is used by commercial data providers such as Bloomberg, FRED, Haver, and Reuters. Some authors have built upon the concept and measures introduced by Baker, Bloom, and Davis. For instance, Davis (2016) constructed a monthly Global Economic Policy Uncertainty (GEPU) index based on this paper. The GEPU Index is a GDP-weighted average of national EPU indices for 16 countries that account for two-thirds of global output. Ghirelli, Pérez and Urtasun (2019) refine the EPU index for Spain. The paper demonstrates that newspaper text search can yield useful proxies for economic and policy conditions stretching back several decades, which could be especially valuable in earlier eras and in countries with fewer data sources.

The authors develop a new measure to investigate the relationship of policy uncertainty to firm-level stock price volatility, investment rates, and employment growth and to aggregate investment, output, and employment. Their findings are largely consistent with economic theories that highlight the adverse economic effects of uncertainty shocks. Finally, the paper contributes to the literature in the methodological sense by showing how to tap newspaper archives to develop and evaluate new measures of interest to researchers. It opens up the possibilities for drawing on newspaper archives to broaden our understanding of economic, political, and historical developments through systematic empirical inquiries.
Market Performance

Market Round-up

Markets caught off in cautious optimism

Following a strong performance in Q2CY2021 (Apr-Jul), global equities extended further gains in the month of July, buoyed by strong corporate earnings, continued global economic recovery and further substantial progress in vaccine rollout especially in developed economies. However, sentiments got disrupted when volatility made a comeback mid-month on account of the spread of more contagious Delta variant of Covid-19 across the world. Alongside, escalating concerns regarding the incessant build-up of inflationary pressures, along with signs of peaking global economic growth also re-ignited caution amongst investors. China’s crackdown on technology and private tutoring business added to the market volatility last month. While the MSCI World Index ended the month 1.7% higher (YTD: +15.2% as of August 10th), aided by strong performance in US and Europe, the MSCI EM Index massively underperformed and ended 6.7% lower (YTD: -0.7%), weighed down by the subdued performance in most of the Asian Economies.

Notwithstanding bouts of volatility sparked by Chinese authorities, Indian equities not only outperformed the MSCI EM index by 5.8% but was also the only market in the MSCI AC Asia ex Japan index to end the month with gains (MSCI India: +0.9%). Though, Nifty 50 Index ended the month by crawling mere 0.3% higher (YTD: 16.4%), the rally was much sharper in mid-cap (Nifty Midcap 50 up 2.5%) and small-cap companies (Nifty Small cap 50: +8%). This was primarily aided by better than anticipated corporate performance, encouraging signs of renewed strength in economic recovery following the deadlier second wave, steady progress in vaccination drive and continuous decline in daily COVID cases across various states. Following the highest net equity inflows in four months in June 2021, FIIs turned net sellers of Indian equities in Jul’21, with net outflows at US$1.7bn—the highest outflows since March 2020.

Global fixed income markets exhibited a synchronised performance across most of the economies in July. Barring a few EM markets like Brazil and India, benchmark sovereign bond yields for all other countries plummeted to multi-year lows as mounting concerns over the COVID-19 Delta variant and signs of global growth moderating instigated investors to shift towards safer investments. The US, UK, German and Chinese 10-year benchmark sovereign yields fell by 21bps, 15bps, 26bps and 24bps respectively. Indian bond yields, however, surged as rise in global crude oil prices and intensifying concerns about an early normalisation of policy in the wake of elevating inflationary pressures exerted pressure on the bond market. India’s 10-year G-sec yield ended the month 15bps higher at 6.2%. As crude oil prices continued to march higher on strengthening global demand, INR depreciated by 0.1% in July to end at 74.4.

- Domestic equity markets outperformed the broader EM pack in July as well: Notwithstanding bouts of volatility sparked by Chinese authorities, Indian equities, unlike other EM equities, not only outperformed the MSCI EM index by 5.8% but was also the only market in the MSCI AC Asia ex Japan index to end the month in positive territory (MSCI India: +0.9%). This was primarily on the back of a) better than anticipated corporate performance, b) encouraging signs of renewed strength in economic recovery from the slump of second wave of COVID-19, c) steady progress in vaccination drive, and d) continuous decline in daily COVID cases across most states. As of August 9th, 2021, India has inoculated at least one dose to 29% of the population, of which 8% have been fully vaccinated. However, external headwinds in the form of rising COVID cases across the world and slew of restrictive measures announced by China for various sectors restricted gains.

While the Nifty 50 Index ended the month 0.3% higher (YTD: 16.4%), the Nifty 500 Index posted marginally higher gains of 1.4% (YTD: 20.6%). Mid- and small-caps outperformed for yet another month, with the Nifty Mid-cap 50 and Nifty Small-cap 50 Index rising by 2.5% (YTD: 27%) and 8.2% (YTD: 42%) respectively. Sector-wise, the gains were led by Real Estate (+15.9%), Metals (+10.6%), Information...
Technology (+4.5%) and Pharma (+0.8%). Sectors that ended in red included Automobiles (-5.2%), Banks (-0.5%), FMCG (-0.1%) and Media (-0.1%). On a YTD basis, Metal companies have significantly outperformed the market, with the NIFTY Metal Index rising by 71%.

Average daily turnover in NSE’s cash market fell by 11.3% MoM to Rs627bn on top of a 9.9% MoM fall in the previous month. On a YoY basis, Average daily turnover in NSE’s cash market surged by 6.9% in July’21 over Rs586bn registered in the same month of FY21. Average daily turnover during the first quarter of FY22 of Rs730bn is nearly 18% higher than the average daily turnover in FY21. Average daily derivative turnover in J uly fell by 6.1% MoM to Rs1,169bn, marking the fifth consecutive month to report a MoM contraction, with average daily turnover in J uly FY22 being 4% higher than Rs1,122bn recorded in the same month of FY21 and Q1FY22 being 2.1% higher than the average daily turnover of Rs1,219bn in FY21.

Fixed income markets showed uniformity in movement across economies: Global fixed income markets exhibited a synchronised performance across most of the economies over the last month. Apart from a few EM markets like Brazil and India, benchmark sovereign bond yields for all other countries plummeted to multi-month lows as the mounting concerns over the Covid-19 Delta variant and signs of global growth moderating, instigated investors to shift towards safer investments. Concerns over the peaking of global growth, coupled with uncertainty regarding the eruption of new variants disrupting global growth momentum, outweighed inflation-tightening worries on the global front. Alongside, persistent communique of major central banks to maintain bond purchase program by overlooking “transient inflation” also added to the demand for these securities that in turn weighed on yields. While the US 10-year yield fell by 21bps, UK yields softened by 26bps, and Chinese yields dropped by 24bps.

However, contrary to global fixed income markets, Indian bond yields surged as increase in global crude oil prices and intensifying concerns about an early normalisation of policy in the wake of elevated inflation levels exerted pressure on the bond market. India 10-year G-sec yield ended the month 15bps higher at 6.2%.

FII turned strong sellers of Indian equities in J uly; DIIIs were buyers: Sharp selloff in Chinese equities, rising oil prices, stronger dollar, and investors’ perpetual concerns about the sustainability of the growth momentum, all have resulted in turning investors cautious and thus, triggered risk capitulation. Following the highest net equity inflows in four months in J une 2021, FIIs turned net sellers of Indian equities in Jul’21. FII net outflows stood at US$1.7bn, highest outflows since Mar’20. Though, foreign institutional investors turned cautious towards EMs including India, but continued growth in profitability of listed companies helped the stock market sustain domestic institutional investors’ interest. Thus, DII net inflows stood at US$2.5bn in Jul’21, marking the fifth consecutive month of inflows, highest inflow since March 2020.

Global equity markets ended the month marginally in green in J uly, supported by developed markets: Following a significant advancement in Q2CY2021 (Apr-J un), global equities extended further gains in J uly (MSCI ACWI :0.7%), buoyed by strong corporate earnings, persistent global economic recovery momentum, and
further substantial progress in vaccine rollout especially in developed markets. However, sentiments got disrupted when volatility made a comeback mid-month on account of the spread of more contagious Delta variant of COVID-19 across the world. Alongside, escalating concerns regarding the incessant build-up of inflationary pressures, along with signs of peaking global economic growth, also re-ignited caution amongst investors. China’s crackdown on technology and private tutoring business added to the market volatility last month. Technology stocks in China had their worst month since 2008. As a resulted, Chinese equities witnessed a 14% MoM contraction, which contributed to an 8.4% difference in returns between the developed and emerging markets in July. While the MSCI World Index ended the month 1.7% higher (YTD: +15.2% as of August 10th), aided by strong performance in US and Europe, the MSCI EM Index ended 6.7% lower (YTD: +0.7%), weighed down by subdued performance in most of the Asian Economies.

According to Institute of International Finance (IIF), FIIs were net buyers of EM equities for the tenth consecutive month in July. Net foreign portfolio flows to EMs stood at US$7.5bn in July vs. US$28.1bn in the previous month. While equity segment recorded net outflows US$10.7bn, debt segment recorded net inflows of US$18.3bn respectively. Chinese equities posted mere US$0.9bn in equity flows against US$5.2bn recorded in June and US$11.3bn recorded in May.

**US:** The US equity markets moved up further and hit fresh record high levels in July, supported by ongoing robust growth momentum and strong earnings. This was despite increase in economic uncertainty amidst surge in COVID infections in various parts of the globe including the US and tighter regulations imposed on several sectors, particularly in the technology and private education space by the Chinese authorities. Even as inflation has continued to climb higher, the Fed’s reiteration of remarks about the current period of high inflation being transitory in nature, emanating from COVID-led supply bottlenecks, unfavourable base, and high pent-up demand, provided some respite to unnerved investors. The S&P 500 and Dow Jones Index ended the month 2.3% and 1.3% higher respectively.

On the macro front, high-frequency indicators continued to exhibit signs of continued growth recovery. The Manufacturing Purchasing Managers’ Index (PMI) remained elevated at all-time high levels of 63.4 in July. Services PMI fell further from 64.6 in June to a six-month low of 59.9 in July but remained much quicker than the series average. Despite the recent shift towards spending to services, US retail trade rose 0.6% MoM in July 2021, following a revised 1.7% decline in May, as demand for goods remained strong. Additionally, vaccination drives are progressing at a fast pace, with nearly 50% of the population getting fully vaccinated and 58% getting at least one dose as on August 8th, 2021 (Source: Centres for Disease Control and Prevention). On the negative side, headline CPI inflation rose further to 5.4% YoY in July—the fastest pace since August 2008, primarily attributed to a sharp jump in used car and truck prices. Recent jobs report reflected signs of labor market gaining steam as US economy added 943K jobs in July 2021, the most in eleven months and above market expectations of 870K. Alongside, unemployment rate fell to 5.4% in July—the lowest since March 2020. Consumer confidence as measured by the Conference Board stayed unchanged at high levels in July, even as the University of Michigan consumer confidence figure dropped to a five-month low thanks to rising inflation.
On the monetary policy front, the Fed in the recent review meeting acknowledged that the economy was making “progress” in-line with its mandate but said that tapering asset purchases would require additional improvements—particularly in the labour market. It also acknowledged that there was upside risk to the inflation outlook but retained the view that this would be transitory.

**Europe**: European equities also extended gains in July, as investor optimism about economic and business outlook strengthened owing to a substantial pick-up in pace of vaccination roll-out. Improvement in incoming macro data as well as ECB’s decision to continue with enhanced asset purchases to keep borrowing costs contained further supported investor sentiments. Vaccination progress has picked up pace meaningfully, with nearly 61% of the adult population (18+) in EU member states getting fully vaccinated as of August 9th (Source: European Centre for Disease Prevention and Control) and ~72% getting administered one done. Among key market indices, while Germany’s DAX 30 gave modest returns of 0.1% in July, France’s CAC 40 and EuroStoxx600 outperformed and generated a return of 1.6% and 2% respectively. However, UK’s FTSE100 remained flat.

On the macro front, economic recovery gathered further steam. PMI data instilled encouragement that the eurozone recovery was gathering pace last month. Business activity grew at its fastest rate in 21 years, as reflected in the composite PMI that reached 60.6 in July as compared to 59.5 in June. A robust improvement in service sector activity more than offset a modest decline in the manufacturing PMI that was linked to supply chain disruption. The Euro area unemployment rate dropped for the fifth month in a row to 7.7% in June. On the negative side, the Consumer Confidence Index fell from -3.3 in June to -4.4 in July. Consumption demand continued to exhibit signs of revival, as signalled from a further 1.5% MoM surge in retail sales in June after 4.4% MoM surge in May. On the monetary policy front, ECB revised its forward guidance on interest rates during its July meeting, stating that it expects interest rates to remain at their present or lower levels until it sees inflation reaching 2% well ahead of the end of its projection horizon. ECB also retained the pace of asset purchases programme.

UK equities remained flat for the month. It was a volatile period as markets initially sold off in the first part of the month amid ongoing fears around the global growth outlook and the spread of the Delta COVID-19 variant. However, appetite for risk returned, and markets bounced back in the second part of the month as restrictions eased and data held ground. Though, Manufacturing PMI moderated from 63.9 in June to 60.4 in July & Services PMI also moderated from 62.4 in June to 59.6 in July, slowest since Mar’21, the PMIs still suggested strong expansion. Consumer Confidence index rose to -7 in July 2021 from -9 in the previous month. It was the highest reading since a survey conducted in February last year. On the policy front, Bank of England left monetary policy unchanged during its Aug 2021 meeting, with policymakers reiterating that they do not intend to tighten monetary policy at least until there is clear evidence that significant progress is being made in eliminating spare capacity and achieving the 2% inflation target sustainably.

**Asia**: Barring Indian markets, all other Asian markets underperformed sharply in July, weighed down by China after a crackdown by Chinese authorities on technology and education companies that prompted a sharp sell-off. Laggard pace of vaccinations, coupled with intermittent volatility prompted by significant surge
in COVID cases in Indonesia, Malaysia, Japan, South Korea, and Philippines, also disrupted sentiments across the region. India outperformed the broader EM pack, aided by continued drop in infections, accelerating pace of vaccinations and strong corporate performance. Japanese equities continued to underperform its developed market peers, thanks to increase in Covid cases. Alongside, with a state of emergency getting re-imposed in Tokyo in early July, and spectators getting banned from most Olympic events and restrictions also getting extended throughout August, near-term recovery expectations have been downgraded. While Hang Seng Index (Hong Kong), SSE Composite Index (China), Nikkei Index, South Korea’s Kospi Index reported substantial losses of 10%, 6%, 5% and 3% respectively, India’s Nifty 50 Index ended the month in green with a gain of 0.3%.

On the macro front, several high-frequency indicators in India continued to point towards improving economic environment. India’s Manufacturing PMI surged to 55.3 in July 2021 from 48.1 a month earlier. However, Services PMI remained in the contractionary zone at 45.4 in Jul’21 vs. 41.2 in Jun’21. With easing restrictions, vaccination pace gathering momentum and mobility inching higher from May slump, consumption demand has witnessed signs of revival. With decentralised nature of restrictions limiting downside risks to the economic activity, Indian economy seems to have recovered much faster from the second Covid-19 shock that struck India around April-May 2021 than it did from the first one a year ago. This is reflected in various high frequency indicators as well.

Macro indicators in China continued to paint a mixed picture of the economy, with the Manufacturing PMI falling to 50.3 in July from 51.3 in the previous month, lowest reading since April 2020 and Services PMI climbing to 54.9 in July from 14-month low of 50.3 in June. Recent spike in COVID infections and supply chain bottlenecks have weighed on manufacturing activity.

- **Commodities showed renewed strength in July after taking a breather in June:** Following a significant rally over the last few months, commodity markets took a breather in June, weighed down by renewed dollar strengthening. In the month of June, commodities made a comeback despite steady dollar and signs of peaking global growth, largely on account of tighter supply conditions coupled with the persistent robust global demand. Except iron ore, silver, platinum and palladium, all other commodities witnessed an upsurge on MoM basis with Tin, Nickel and Lead gaining the most amongst all others. Brent Crude Oil gained by 1.6% in July as prices inched higher from US$75.3/bbl to US$76.5/bbl.

- **EM currencies continued to weaken against a steady dollar:** Though, Dollar index—that measures the greenback against a basket of currencies—remained on strong footing for most of the month but reversed gains post Fed policy to end the month on a flat note. Fed’s strong intent of looking through inflation while citing it as “transitory” and thereby, not moving towards the path of normalisation anytime soon weighed on the Dollar index. EM currencies weakened from a firm dollar, with the INR depreciating marginally by 0.1% against the dollar last month.
## Market performance across equity asset classes

**Figure 155: Performance across equity indices, fixed income, currency, and commodities**

<table>
<thead>
<tr>
<th>Indicator Name</th>
<th>July-21</th>
<th>1M ago</th>
<th>3M ago</th>
<th>12M ago</th>
<th>1M (%)</th>
<th>3M (%)</th>
<th>6M (%)</th>
<th>12M (%)</th>
<th>YTD (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Equity Indices</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>NIFTY 50</td>
<td>15,763</td>
<td>15,722</td>
<td>14,631</td>
<td>11,073</td>
<td>0.3</td>
<td>7.7</td>
<td>15.6</td>
<td>42.4</td>
<td>12.7</td>
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<tr>
<td>NIFTY 500</td>
<td>13,664</td>
<td>13,474</td>
<td>12,364</td>
<td>9,036</td>
<td>1.4</td>
<td>10.5</td>
<td>20.9</td>
<td>51.2</td>
<td>18.6</td>
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<tr>
<td>MSCI INDIA</td>
<td>1,837</td>
<td>1,821</td>
<td>1,686</td>
<td>1,305</td>
<td>0.9</td>
<td>9.0</td>
<td>17.7</td>
<td>40.8</td>
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<td>India Volatility Index (%)</td>
<td>13</td>
<td>13</td>
<td>23</td>
<td>24</td>
<td>-1.9</td>
<td>-44.4</td>
<td>-49.5</td>
<td>-47.1</td>
<td>-39.3</td>
</tr>
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<td>MSCI WORLD</td>
<td>3,069</td>
<td>3,017</td>
<td>2,939</td>
<td>2,305</td>
<td>1.7</td>
<td>4.4</td>
<td>15.3</td>
<td>33.2</td>
<td>14.1</td>
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<tr>
<td>S&amp;P 500 COMPOSITE</td>
<td>4,395</td>
<td>4,298</td>
<td>4,181</td>
<td>3,271</td>
<td>2.3</td>
<td>5.1</td>
<td>18.3</td>
<td>34.4</td>
<td>17.0</td>
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<tr>
<td>DOW J ONES INDUSTRIALS</td>
<td>34,935</td>
<td>34,503</td>
<td>33,875</td>
<td>26,428</td>
<td>1.3</td>
<td>3.1</td>
<td>16.5</td>
<td>32.2</td>
<td>14.1</td>
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<td>HANG SENG</td>
<td>25,961</td>
<td>28,828</td>
<td>28,725</td>
<td>24,595</td>
<td>-9.9</td>
<td>-9.6</td>
<td>-8.2</td>
<td>5.6</td>
<td>-4.7</td>
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<td>FTSE 100</td>
<td>7,032</td>
<td>7,037</td>
<td>6,970</td>
<td>5,898</td>
<td>-0.1</td>
<td>0.9</td>
<td>9.8</td>
<td>19.2</td>
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<td>NIKKEI 225</td>
<td>27,284</td>
<td>28,792</td>
<td>28,813</td>
<td>21,710</td>
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<td></td>
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<tr>
<td>India 10YR Govt Yield (%)</td>
<td>6.20</td>
<td>6.05</td>
<td>6.03</td>
<td>5.84</td>
<td>-5bps</td>
<td>17bps</td>
<td>26bps</td>
<td>37bps</td>
<td>31bps</td>
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<tr>
<td>India 5YR Govt Yield (%)</td>
<td>5.73</td>
<td>5.72</td>
<td>5.42</td>
<td>4.99</td>
<td>1bps</td>
<td>31bps</td>
<td>43bps</td>
<td>74bps</td>
<td>63bps</td>
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<tr>
<td>India 1YR Govt Yield (%)</td>
<td>4.04</td>
<td>4.09</td>
<td>3.82</td>
<td>3.66</td>
<td>-5bps</td>
<td>22bps</td>
<td>14bps</td>
<td>38bps</td>
<td>28bps</td>
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<td>India 3Month T-Bill Yield (%)</td>
<td>3.45</td>
<td>3.45</td>
<td>3.37</td>
<td>3.35</td>
<td>1bps</td>
<td>8bps</td>
<td>4bps</td>
<td>10bps</td>
<td>35bps</td>
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<tr>
<td>US 10YR Govt Yield (%)</td>
<td>1.24</td>
<td>1.44</td>
<td>1.63</td>
<td>0.54</td>
<td>-21bps</td>
<td>-39bps</td>
<td>15bps</td>
<td>70bps</td>
<td>33bps</td>
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<tr>
<td>Germany 10YR Govt Yield (%)</td>
<td>-0.46</td>
<td>-0.20</td>
<td>-0.20</td>
<td>-0.53</td>
<td>-26bps</td>
<td>-26bps</td>
<td>6bps</td>
<td>8bps</td>
<td>12bps</td>
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<tr>
<td>China 10YR Govt Yield (%)</td>
<td>2.85</td>
<td>3.08</td>
<td>3.18</td>
<td>2.97</td>
<td>-24bps</td>
<td>-33bps</td>
<td>-38bps</td>
<td>-13bps</td>
<td>-36bps</td>
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<tr>
<td>J apan 10YR Govt Yield (%)</td>
<td>0.02</td>
<td>0.05</td>
<td>0.09</td>
<td>0.02</td>
<td>-4bps</td>
<td>-7bps</td>
<td>-3bps</td>
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<tr>
<td>USD/INR</td>
<td>74.4</td>
<td>74.3</td>
<td>74.1</td>
<td>74.8</td>
<td>0.1</td>
<td>0.5</td>
<td>2.0</td>
<td>-0.5</td>
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<td>EUR/USD</td>
<td>1.19</td>
<td>1.19</td>
<td>1.2</td>
<td>1.2</td>
<td>0.0</td>
<td>-1.5</td>
<td>-2.4</td>
<td>-3.0</td>
<td>-3.1</td>
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<td>GBP/USD</td>
<td>1.39</td>
<td>1.38</td>
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<td>1.3</td>
<td>0.6</td>
<td>0.4</td>
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<td>5.9</td>
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<td>USD/YEN</td>
<td>109.8</td>
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<td>USD/CHF</td>
<td>1.1</td>
<td>1.1</td>
<td>1.1</td>
<td>1.1</td>
<td>2.0</td>
<td>0.6</td>
<td>-1.9</td>
<td>0.4</td>
<td>-2.5</td>
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<td>USD/CNY</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>7.0</td>
<td>-0.1</td>
<td>-0.2</td>
<td>-0.1</td>
<td>-7.5</td>
<td>-1.3</td>
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<td><strong>Commodities</strong></td>
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<tr>
<td>Brent Crude Oil (US$/bbl)</td>
<td>76.5</td>
<td>75.3</td>
<td>67.4</td>
<td>43.1</td>
<td>1.6</td>
<td>13.5</td>
<td>36.7</td>
<td>77.3</td>
<td>47.4</td>
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<td>LME Aluminium (US$/MT)</td>
<td>2,598</td>
<td>2,510</td>
<td>2,408</td>
<td>1,675</td>
<td>3.5</td>
<td>7.9</td>
<td>31.1</td>
<td>55.1</td>
<td>31.6</td>
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<td>LME Copper (US$/MT)</td>
<td>9,701</td>
<td>9,352</td>
<td>9,829</td>
<td>6,422</td>
<td>3.7</td>
<td>-1.3</td>
<td>23.4</td>
<td>51.1</td>
<td>25.2</td>
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<td>LME Lead (US$/MT)</td>
<td>2,415</td>
<td>2,265</td>
<td>2,137</td>
<td>1,862</td>
<td>6.6</td>
<td>13.0</td>
<td>20.2</td>
<td>29.7</td>
<td>22.2</td>
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<td>LME Nickel (US$/MT)</td>
<td>19,547</td>
<td>18,212</td>
<td>17,653</td>
<td>13,738</td>
<td>7.3</td>
<td>10.7</td>
<td>10.8</td>
<td>42.3</td>
<td>18.1</td>
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<td>LME Tin (US$/MT)</td>
<td>35,738</td>
<td>32,920</td>
<td>31,680</td>
<td>17,909</td>
<td>8.6</td>
<td>12.8</td>
<td>54.1</td>
<td>99.6</td>
<td>74.0</td>
</tr>
<tr>
<td>LME Zinc (US$/MT)</td>
<td>3,029</td>
<td>2,967</td>
<td>2,913</td>
<td>2,308</td>
<td>2.1</td>
<td>4.0</td>
<td>18.5</td>
<td>31.2</td>
<td>11.0</td>
</tr>
<tr>
<td>SHC Iron Ore Spot (US$/MT)</td>
<td>191</td>
<td>216</td>
<td>187</td>
<td>110</td>
<td>-11.4</td>
<td>2.1</td>
<td>20.9</td>
<td>74.4</td>
<td>20.5</td>
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<tr>
<td>Gold Spot Price (US$/troy ounce)</td>
<td>1,823</td>
<td>1,765</td>
<td>1,770</td>
<td>1,975</td>
<td>3.3</td>
<td>3.0</td>
<td>-1.9</td>
<td>-7.7</td>
<td>-3.9</td>
</tr>
<tr>
<td>Silver Spot Price (US$/troy ounce)</td>
<td>25</td>
<td>26</td>
<td>26</td>
<td>24</td>
<td>-2.4</td>
<td>-1.7</td>
<td>-5.7</td>
<td>4.4</td>
<td>-3.4</td>
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<tr>
<td>Platinum Spot Price (US$/ounce)</td>
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<td>1,059</td>
<td>1,218</td>
<td>905</td>
<td>-1.4</td>
<td>-14.3</td>
<td>-6.0</td>
<td>15.4</td>
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<tr>
<td>Palladium Spot Price (US$/ounce)</td>
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<td>2,707</td>
<td>2,981</td>
<td>2,065</td>
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<td>-10.8</td>
<td>14.2</td>
<td>28.7</td>
<td>13.5</td>
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Source: Refinitiv Datastream, NSE.
Figure 156: Performance across NSE sector indices

<table>
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<tr>
<th>Indicator Name</th>
<th>July-21</th>
<th>1M ago</th>
<th>3M ago</th>
<th>12M ago</th>
<th>1M (%)</th>
<th>3M (%)</th>
<th>6M (%)</th>
<th>12M (%)</th>
<th>YTD (%)</th>
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<tbody>
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<td>Auto</td>
<td>10,049</td>
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<td>2.4</td>
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<tr>
<td>Bank</td>
<td>34,584</td>
<td>34,772</td>
<td>32,782</td>
<td>21,640</td>
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<td>FMCG</td>
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<td>36,093</td>
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<td>8.9</td>
<td>16.8</td>
<td>5.5</td>
</tr>
<tr>
<td>IT</td>
<td>30,480</td>
<td>29,168</td>
<td>25,664</td>
<td>18,072</td>
<td>4.5</td>
<td>18.8</td>
<td>23.7</td>
<td>68.7</td>
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<td>1,798</td>
<td>1,548</td>
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<td>87.5</td>
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<td>Pharma</td>
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<td>13,469</td>
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<td>7.1</td>
<td>18.5</td>
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<td>11.7</td>
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<td>310</td>
<td>201</td>
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<td>28.8</td>
<td>30.4</td>
<td>98.3</td>
<td>27.0</td>
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Source: Refinitiv Datastream, NSE.

Figure 157: NIFTY sector performance during June 2021 (rebased to 0)

Source: Refinitiv Datastream, NSE.
### Figure 158: Performance of key Nifty debt indices (As of July 31st, 2021)

<table>
<thead>
<tr>
<th>Category</th>
<th>Index name</th>
<th>Absolute returns (%)</th>
<th>CAGR returns (%)</th>
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<td></td>
<td></td>
<td>1M</td>
<td>3M</td>
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<tr>
<td>G-sec</td>
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<tr>
<td></td>
<td>Nifty 10 Year Benchmark G-Sec</td>
<td>(1.1)</td>
<td>(0.2)</td>
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<tr>
<td></td>
<td>Nifty Composite G-sec Index</td>
<td>0.2</td>
<td>0.7</td>
</tr>
<tr>
<td>SDL</td>
<td>NIFTY 10 Year SDL Index</td>
<td>0.0</td>
<td>0.2</td>
</tr>
<tr>
<td>AAA credit</td>
<td>NIFTY AAA Ultra Short Duration Bond Index</td>
<td>0.4</td>
<td>1.0</td>
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<tr>
<td></td>
<td>NIFTY AAA Short Duration Bond Index</td>
<td>0.8</td>
<td>1.4</td>
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<tr>
<td></td>
<td>NIFTY AAA Low Duration Bond Index</td>
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<tr>
<td></td>
<td>NIFTY AAA Medium Duration Bond Index</td>
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<td>1.6</td>
</tr>
<tr>
<td></td>
<td>NIFTY AAA Medium to Long Duration Bond Index</td>
<td>0.7</td>
<td>1.7</td>
</tr>
<tr>
<td></td>
<td>NIFTY AAA Long duration Bond Index</td>
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<td>0.9</td>
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<tr>
<td>Composite</td>
<td>NIFTY Liquid Index</td>
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<tr>
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<td>NIFTY Money Market Index</td>
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<td>0.9</td>
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<tr>
<td></td>
<td>NIFTY Ultra Short Duration Debt Index</td>
<td>0.4</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>NIFTY Short Duration Debt Index</td>
<td>0.8</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>NIFTY Low Duration Debt Index</td>
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<td>1.1</td>
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<td></td>
<td>NIFTY Medium Duration Debt Index</td>
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<td>1.6</td>
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<tr>
<td></td>
<td>NIFTY Medium to Long Duration Debt Index</td>
<td>0.4</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td>NIFTY Long Duration Debt Index</td>
<td>0.2</td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td>NIFTY Corporate Bond Index</td>
<td>0.5</td>
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</tr>
<tr>
<td></td>
<td>NIFTY Composite Debt Index</td>
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<td>1.7</td>
</tr>
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</table>

Source: NSE Indices.

### Figure 159: India 10Y G-sec yield—long-term trend

<table>
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<tr>
<th>%</th>
<th>India 10-year benchmark g-sec yield-long-term trend</th>
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<tbody>
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<tr>
<td>1</td>
<td>9</td>
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<tr>
<td>2</td>
<td>8</td>
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<tr>
<td>3</td>
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<tr>
<td>9</td>
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</tr>
<tr>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: Refinitiv Datastream.

### Figure 160: India 10Y G-sec yield—last one-year trend

<table>
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<tr>
<th>%</th>
<th>India 10-year benchmark g-sec yield movement over last 12 months</th>
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<tr>
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<td>9</td>
<td>4.7</td>
</tr>
<tr>
<td>10</td>
<td>4.6</td>
</tr>
</tbody>
</table>

Source: Refinitiv Datastream.
Figure 161: India sovereign yield curve
The RBI’s G-SAP purchases and continued liquidity injection via regular and special OMOs have kept yield curve broadly stable over the last few months despite worsening negative externalities in the form of enhanced Government borrowings and mounting inflationary pressures.

![India sovereign yield curve graph]

Source: Refinitiv Datastream.

Figure 162: Sovereign yield curve across G20 countries as of July 31st, 2021

<table>
<thead>
<tr>
<th>June 2021</th>
<th>3m</th>
<th>6m</th>
<th>1y</th>
<th>2y</th>
<th>3y</th>
<th>4y</th>
<th>5y</th>
<th>6y</th>
<th>7y</th>
<th>8y</th>
<th>9y</th>
<th>10y</th>
<th>30y</th>
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</thead>
<tbody>
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<td>0.05</td>
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<td>0.34</td>
<td>0.69</td>
<td>1.00</td>
<td>1.23</td>
<td>1.89</td>
<td></td>
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<tr>
<td>Japan</td>
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<td>-0.13</td>
<td>-0.13</td>
<td>-0.12</td>
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<td>-0.14</td>
<td>-0.12</td>
<td>-0.13</td>
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<td>0.02</td>
<td>0.64</td>
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<tr>
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<td>-0.61</td>
<td>-0.65</td>
<td>-0.76</td>
<td>-0.81</td>
<td>-0.80</td>
<td>-0.74</td>
<td>-0.72</td>
<td>-0.63</td>
<td>-0.61</td>
<td>-0.54</td>
<td>-0.46</td>
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<td>-0.20</td>
<td>-0.10</td>
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<td>0.05</td>
<td>0.05</td>
<td>0.06</td>
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<td>0.19</td>
<td>0.27</td>
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<td>0.52</td>
<td>0.59</td>
<td>0.57</td>
<td>0.99</td>
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<td>0.75</td>
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<td>-</td>
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<td>-0.66</td>
<td>-0.65</td>
<td>-0.76</td>
<td>-0.81</td>
<td>-0.81</td>
<td>-0.74</td>
<td>-0.72</td>
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</table>

Source: Refinitiv Datastream.
Figure 163: Sovereign yield curve across G20 countries as of July 31st, 2019

<table>
<thead>
<tr>
<th>Country</th>
<th>3m</th>
<th>6m</th>
<th>1y</th>
<th>2y</th>
<th>3y</th>
<th>4y</th>
<th>5y</th>
<th>6y</th>
<th>7y</th>
<th>8y</th>
<th>9y</th>
<th>10y</th>
<th>30y</th>
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</thead>
<tbody>
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</tr>
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</table>

Source: Refinitiv Datastream.
Corporate bond market performance

Corporate bond yields have remained broadly steady in the five and 10-year maturity segments as oppose to an increase in the sovereign yields for these tenors, specially the 10-year G-sec yield. This has been primarily on the back of weak demand from debt funds, thanks to lacklustre inflows in longer-dated funds, and low supply of corporate bonds in these segments. This, in turn, has translated into narrowing of spreads for five and 10-year corporate bonds across issuer categories. While the spreads in the 1-year corporate segment have remained broadly steady, that in the three-year segment rose from an average of 44bps in June to 62bps in July thanks as supply has been largely concentrated in this segment.

Figure 164: Spreads for 1-year AAA-rated corporate bonds across segments

![Graph showing spreads for 1-year AAA-rated corporate bonds across segments](image)

Source: NSE Data and Analytics (NDAL), Refinitiv Datastream.

Figure 165: Spreads for 3-year AAA-rated corporate bonds across segments

![Graph showing spreads for 3-year AAA-rated corporate bonds across segments](image)

Source: NSE Data and Analytics (NDAL), Refinitiv Datastream.
Figure 166: Spreads for 5-year AAA-rated corporate bonds across segments

Spreads for 5-year corporate bonds across segments

- 5Y Corp (-) 1Y G-sec
- 5Y NBFC (-) 1Y G-sec
- 5Y PSU (-) 1Y G-sec
- 5Y HFC (-) 1Y G-sec

Source: NSE Data and Analytics (NDAL), Refinitiv Datastream.

Figure 167: Spreads for 10-year AAA-rated corporate bonds across segments

Spreads for 10-year corporate bonds across segments

- 10Y Corp (-) 1Y G-sec
- 10Y NBFC (-) 1Y G-sec
- 10Y PSU (-) 1Y G-sec
- 10Y HFC (-) 1Y G-sec

Source: NSE Data and Analytics (NDAL), Refinitiv Datastream.

Figure 168: AAA-rated corporate bond yield curve

AAA PSU yield curve

- 31-Dec-20
- 30-Jun-21
- 31-Jul-21

Source: NSE Data and Analytics (NDAL).

Figure 169: AA+ rated corporate bond yield curve

AA+ PSU yield curve

- 31-Dec-20
- 30-Jun-21
- 31-Jul-21

Source: NSE Data and Analytics (NDAL).
Figure 170: Change in AAA bond yields in July 2021

Change in AAA yields in July 2021

Source: NSE Data and Analytics (NDAL).

Figure 171: Change in AA+ bond yields in July 2021

Change in AA+ yields in July 2021

Figure 172: Net lending under RBI’s liquidity adjustment facility

Surplus liquidity in the system widened from a daily average of Rs4.8trn in June to Rs5.8trn in July and further to Rs7.4trn in August thus far.

Rs bn

Source: CMIE Economic Outlook.
Institutional flows across market segments in India

**Post a temporary recovery, FIIs’ net inflows turned negative in July 2021 in the equity segment:** After recording a significant growth in FY21, FIIs’ net inflows have started steering mostly into negative zone in FY22, thanks to slow pace of the vaccination drive, multiple waves of Coronavirus cases and slow recovery of high-frequency indicators. After having marginal and transitory increased in June 2021, FIIs’ net inflows became negative in the following year due to rise in uncertainty in the financial market given slow recovery of the Indian economy even as several developed countries could improve their economic activities through prompt fiscal and monetary stimulus packages. The trend continued in the first week of August as well. As of August 12th, 2021, FIIs’ net outflows stood at around US$591 in FY22, as compared to net inflows US$7.9bn and US$1b.0n over the same period in FY20 and FY21, respectively.

**...while it remained muted in the debt segment:** Except FY18, FIIs net inflows remained somewhat muted and ended in the negative territory over the last six years. FIIs’ net inflows reached to a record level with a significant growth in FY18, before turning to negative zone in the following year to decline to record lows in FY19. The trend was somewhat reversed over a significantly long period of time in FY20, before declining again since March 2020. Henceforth, FIIs’ remained to be net sellers in the debt segment, and there is no sign of recovery in FY22 thus far. This was largely led by deteriorating India’s fiscal health condition, continuous rise in government debt globally, rise in US benchmark yields, significant rise in inflation in US as well as in India, and several spikes in the number of coronavirus cases. At the same time, there is an increasing concern over rise in defaults of outstanding loans in the private sector. As of August 12th, FY21, FIIs’ net outflows in the debt segment was US$991m in FY22, which is significantly lower than US$5.1bn over the same period in FY21.

**Figure 173: Overall net inflows of FIIs in India**

Cumulative FII net flows over last six years (FY)

Source: Refinitiv Datastream.
In contrast, domestic institutional investors’ (DIIs) net investment rose gradually since June 2021: Unlike FIIIs, DIIs’ net purchase remained positive between FY17 and FY20 thanks to continuous rise in passive investment by retailers in India, and significant rally in the equity prices over the period while return from risk free investment remained stagnant. The situation somewhat deteriorated in FY21 with rise in uncertainly and sudden outbreak of the Coronavirus pandemic. Overall, investors return from passive investment declined significantly while they became much more active in the equity space with a significant rise in new investor registration over the fiscal year. As a result, net investment fell sharply in FY21 and somewhat muted in FY22 till mid-June. Afterwards, it has been observed that DIIs are marginally rising. Overall, the net investment of DIIs’ was Rs392bn in FY22 as of August 12th, as compared to net outflows of Rs9.9bn over the same period in FY21.

Figure 174: Overall net inflows by DIIs in Indian equity markets

Cumulative DII net flows over last five years (FY)

Source: Refinitiv Datastream.
Fund mobilisation through NSE

Market Statistics: Primary market

Fund-raising through equity issuances moderated in July: The amount of funds raised through equity issuances declined 12.5% MoM in July after touching a 10-month high in the previous month when it increased by 43.1% MoM. Companies raised Rs2114bn through equity issuances vs Rs245bn in the previous month. While overall equity fund-raising moderated in July, funds raised through IPOs registered 44.5% MoM growth with six listings (including one SME-IPO) amounting to ~62% of the overall funds raised through equity issues or Rs132bn. Preferential allotment comprised 30% of the total equity issuances, which 38.1% lower from previous month. Companies raised Rs64bn through 20 issues of preferential allotment, while Rs17bn (8% of total equity raised) was raised through three (3) QIP issues.

Debt fund-raising by corporates in July was the highest this fiscal: Fund raised by corporates through debt issuances registered a growth of 16.5% MoM to raise Rs1,130bn in July – the highest in four months of the current fiscal. Total funds raised (total equity + total debt excl. public issue of G sec, T-Bills & SDLs) by corporates in July improved 10.7% MoM (vs +73.8% MoM in June), with nearly 84% of the total funds raised from the debt markets (CPs and NCDs) as compared to 80% or Rs970bn in June. Private placement of NCDs and CPs continued to be the most preferred option for raising debt among corporates. While corporates raised Rs1,122bn through private placement of CPs and NCDs, Rs8bn was raised through public issue of debt. Companies raised ~Rs4tn in the current fiscal through the NSE platform.

Figure 175: Funds mobilised through NSE platform

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<tr>
<th>Particulars</th>
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<th>June-21</th>
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<tr>
<td></td>
<td>No. of Issues</td>
<td>Amount Raised (Rsm)</td>
<td>Amount Raised (USDm)</td>
<td>No. of Issues</td>
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<td>IPOs</td>
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<td>1,771</td>
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<td>Preferential Allotment</td>
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<td>QIPs</td>
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<td>16,837</td>
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<td>Total equity raised</td>
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<td>Private placement of NCDs</td>
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<td>Private placement of CPs</td>
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<td>Total debt raised</td>
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<td>Total funds raised</td>
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<td>4,063,504</td>
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Source: NSE. Note: In case of debt issuances, the above table reports no. of ISINs instead of issues.
New listings in the month

NSE witnessed twelve new listings in July: Twelve (12) new companies debuted on NSE’s Main Board in July. While six (6) companies got listed through IPOs, two migrated from SME segment and the remaining four (4) companies got listed through direct listing of equity shares. All companies that debuted on the NSE in July, gained on their respective listing dates.

Figure 176: Companies listed on NSE in July 2021

<table>
<thead>
<tr>
<th>Listing Date</th>
<th>Security Name</th>
<th>Listing Gain %</th>
<th>Market Cap (Rsm)</th>
<th>Gross Turnover (Rsm)</th>
<th>Listing</th>
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<td>05-Jul-21</td>
<td>Hindcon Chemicals Limited</td>
<td>4.9</td>
<td>427</td>
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<td>Migrated from SME to NSE Main Board</td>
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<td>05-Jul-21</td>
<td>India Pesticides Limited</td>
<td>18.2</td>
<td>39,518</td>
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<td>06-Jul-21</td>
<td>Ganga Forging Limited</td>
<td>5.0</td>
<td>1,046</td>
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<td>Migrated from SME to NSE Main Board</td>
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<td>13-Jul-21</td>
<td>Walpar Nutritions Limited</td>
<td>9.0</td>
<td>259</td>
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<td>14-Jul-21</td>
<td>SVP Global Ventures Limited</td>
<td>1.8</td>
<td>13,687</td>
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<td>New listing</td>
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<td>19-Jul-21</td>
<td>Clean Science and Technology Limited</td>
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<td>168,384</td>
<td>22,224</td>
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<td>19-Jul-21</td>
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<td>23-Jul-21</td>
<td>Valiant Organics Limited</td>
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<td>Zomato Limited</td>
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<td>Synergy Green Industries Limited</td>
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<td>Tatva Chintan Pharma Chem Limited</td>
<td>9.5</td>
<td>51,250</td>
<td>18,115</td>
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</table>

Source: NSE. Note: Figures in brackets indicate negative
The monthly turnover of Rs12.8trn, largely led by surplus liquidity, thanks to policy easing measures by global central banks to counter the economic impact of the COVID-19 pandemic that stalled business activities globally. In the current fiscal (FY2021-22), the monthly turnover in the four (4) months grew at a monthly average growth rate of 29.1% on an YoY basis, lower than the average monthly growth rate of 71.1% YoY during the same period last year and the average monthly growth of 73.2% YoY over the period of Apr’20-Mar’21.

NSE’s turnover recorded a strong growth in FY2020-21, thanks to a sharp rise in volatility, a strong rally in global equity prices and significant rise in total liquidity due to monetary policy easing by global central banks. NSE’s equity derivatives segment registered a monthly average growth rate of 26.3% YoY in the four (4) months of FY2021-22, a tad higher than an average monthly growth rate of 22.8% YoY during the same period last year and an average monthly growth rate of 33.4% in FY21.

However, the overall long-term trend in the currency segment has been divergent. Growth in monthly turnover languished during 2014-17, before rising gradually after 2017. The monthly turnover grew by an average rate of -1.5% on an YoY basis during 2014-17 as compared to 36.9% post 2017 till date. In FY22TD, the currency derivatives segment has registered an average monthly growth of 28.7% YoY, higher than average monthly growth rate of 23.5% YoY during the same period last year and 23.2% YoY during FY21.
A recovery in economic growth momentum witnessed last year following normalisation of economic activities after the first wave of infections and a liquidity push by global central banks had given a boost to NSE's turnover across all segments in FY2020-21. A surge in trading by retail investors and FIIs, partly offset by substantial DII selling, had led a rally in equity prices, post the sharp correction of March2020. The emergence of a second wave of COVID-19 infections since February this year, which intensified further during April - May, imposition of lockdowns in major states to contain the second wave of infections, slow pace of immunisation and growth uncertainty had raised concerns among investors, as witnessed in subdued participation by institutional investors in April and May. However, a decline in caseloads towards the end of May, subsequent easing of lockdowns in major states, accelerating pace of immunisation and improvement in certain high frequency indicators have increased the prospect of a recovery in economic activities.

Figure 178: Impact of global and domestic macroeconomic indicators on overall turnover growth across segments

Source: Refinitiv Datastream, NSE.
Figure 179: Growth rates of NSE’s turnover vs IIP and GVA growth

Source: Refinitiv Datastream, NSE
A risk-on sentiment among FIIs amid enhanced policy support, favourable economic outlook and optimism over vaccine roll-out globally and domestically had led to a surge in NSE’s turnover growth last year, even as DIIs net investment remained negative during the year due to redemption pressures and profit-booking. While FII net investment had been the highest in FY21, DII net investment was the lowest compared to the last five years. A sharp surge in COVID-19 infections since February, however, caused by the highly virulent variant of the virus, followed by imposition of lockdowns in large states, slow pace of immunisation in India and growth uncertainty have raised concerns among investors.

Overall, FIIs net inflows were muted in the current fiscal, with net sale of US$834mn in Indian equities during April – July. DIIs, on the other hand, invested US$4,600mn on a net basis during the same period. However, a decline in caseloads towards the end of May, subsequent easing of lockdowns in major states, acceleration in vaccinations and improvement in certain high frequency indicators have increased the prospect of a recovery in economic activities.

**Figure 180: Growth of NSE’s turnover vs. Institutional flows**

Source: Refinitiv Datastream, NSE.
Institutional investments through NSE platform

FIIs were net sellers in the secondary markets in July: FIIs were net sellers in the CM segment of NSE for four months in a row, after a buying-spree that lasted six months till March 2020. They sold equities worth Rs236bn in July in the secondary market on a net basis, higher than net sale of Rs108bn in June. Overall, FIIs net outflows in secondary markets have been to the tune of Rs487bn in the current fiscal. During FY21, FIIs bought equities worth Rs1,290bn net in NSE’s cash segment.

While FIIs sold equities in CM segment, DIIs bought equities worth Rs179bn in the month of July. The buying moment of DIIs has picked up in July compared to net inflow of Rs44bn in the previous month. Subsequently, DIIs remain net buyers this fiscal with a net inflow of Rs306bn. During FY21, DIIs sold equities worth Rs1,486bn net in NSE’s cash segment.

DIIs were net sellers in equity derivatives segment: While DIIs bought equities in the CM segment, they sold equity derivatives contracts worth Rs75bn in July. FIIs bought derivatives contracts worth Rs43bn in the month of July on a net basis. Institutional investors remained net sellers in equity derivatives contracts the whole of FY21.

FIIs were net sellers in currency futures in July: FIIs turned net sellers in currency futures contracts, after turning buyers for the first time in June in this fiscal. While FIIs sold currency futures contracts worth Rs21bn in July, DII trading activity in currency futures contracts were balanced on buy and sell side.

The institutional investors have been net sellers in currency futures segment during FY21, selling contracts worth Rs111bn on a net basis. Institutional trading activity in the currency options contracts and interest rate derivatives continues to remain negligible.

**Figure 181: FII and DII flows (Rs bn) in secondary markets during April – July of FY21 and FY22**

<table>
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<tr>
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<th>FY21TD</th>
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<td>4,629</td>
<td>4,587</td>
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<tr>
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<td>3</td>
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<td>3</td>
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<tr>
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<td>410</td>
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<tr>
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<td>62</td>
</tr>
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</tr>
<tr>
<td>DI</td>
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<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>FII</td>
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<td>1</td>
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</tr>
<tr>
<td>DI</td>
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<td>0</td>
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<td>1</td>
</tr>
<tr>
<td>FII</td>
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<tr>
<td>Interest Rate Options</td>
<td></td>
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</tr>
<tr>
<td>DI</td>
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</tr>
<tr>
<td>FII</td>
<td>-</td>
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<td>-</td>
</tr>
</tbody>
</table>

Source: NSE. * DII – Domestic Institutional Investors includes Banks, Insurance companies, Mutual Funds, NBFCs and Domestic Venture Capital Funds, AIFs, PMS clients; FII – Foreign Institutional Investors includes Foreign Portfolio Investors, Foreign Direct Investors and Foreign Venture Capital Investors; Above table reports premium turnover for Options contracts. Figures in brackets indicate negative numbers.
Figure 182: Foreign and domestic institutional flows (Rs bn) in secondary markets during FY2020-21 and CY2021

<table>
<thead>
<tr>
<th>Category</th>
<th>FY21</th>
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<th></th>
<th>CY21TD</th>
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</tr>
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<tr>
<td></td>
<td>Buy</td>
<td>Sell</td>
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<td>Buy</td>
<td>Sell</td>
<td>Net</td>
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</tr>
<tr>
<td>DII</td>
<td>10,810</td>
<td>12,296</td>
<td>(1,486)</td>
<td>7,763</td>
<td>7,748</td>
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<tr>
<td>FII</td>
<td>18,308</td>
<td>17,019</td>
<td>1,290</td>
<td>10,936</td>
<td>11,162</td>
<td>(226)</td>
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<tr>
<td><strong>Equity Futures</strong></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DII</td>
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<td>9,837</td>
<td>(251)</td>
<td>7,547</td>
<td>7,882</td>
<td>(335)</td>
</tr>
<tr>
<td>FII</td>
<td>58,900</td>
<td>59,205</td>
<td>(305)</td>
<td>33,432</td>
<td>33,571</td>
<td>(139)</td>
</tr>
<tr>
<td><strong>Equity Options</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DII</td>
<td>14</td>
<td>12</td>
<td>2</td>
<td>17</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>FII</td>
<td>4,413</td>
<td>4,417</td>
<td>(4)</td>
<td>3,259</td>
<td>3,260</td>
<td>(1)</td>
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<tr>
<td>DII</td>
<td>694</td>
<td>740</td>
<td>(46)</td>
<td>537</td>
<td>575</td>
<td>(37)</td>
</tr>
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<td>FII</td>
<td>8,280</td>
<td>8,345</td>
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<td>3,892</td>
<td>3,906</td>
<td>(14)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>DII</td>
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<td>6</td>
<td>3</td>
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<tr>
<td><strong>Interest Rate Futures</strong></td>
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<tr>
<td>DII</td>
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<td>16</td>
<td>18</td>
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</tr>
<tr>
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<td>(2)</td>
<td>2</td>
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<td>0</td>
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<tr>
<td><strong>Interest Rate Options</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DII</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: NSE. * DII – Domestic Institutional Investors includes Banks, Insurance companies, Mutual Funds, NBFCs and Domestic Venture Capital Funds, AIFs, PMS clients; FII – Foreign Institutional Investors includes Foreign Portfolio Investors, Foreign Direct Investors and Foreign Venture Capital Investors; Above table reports premium turnover for Options contracts. Figures in brackets indicate negative numbers.
Total turnover in capital markets and derivatives segments of NSE

Turnover in CM and equity derivatives segment moderated for two months in a row:
The turnover in NSE’s capital market segment declined 15.4% MoM in July compared to a decline of 0.8% MoM in June, as average daily turnover fell 11.3% MoM in July. NSE’s turnover in the cash segment touched Rs13.1tn in the month of July as compared to Rs15.5tn in the previous month. The decline in trading activity in CM segment, resulted in a subsequent decline in average daily turnover from Rs707bn in June to Rs626bn in July, which can be largely attributed to the decline in participation by retail investors and proprietary traders. In terms of number of trades during the month, NSE registered 458 million trades vs 507 million trades in June, which was the highest in a single month.

The decline in equity derivatives turnover was slightly lower in July at 10.3% MoM as compared to CM segment. While decline in index derivatives turnover was 6.9% MoM in July, the decline in single stock derived was higher at 12% MoM. As a result, the equity derivatives turnover declined by Rs2,833bn from Rs27.4tn in June to Rs24.5tn in July.

Turnover in the currency derivatives segment declined by 2.8% MoM to Rs5.1tn, as compared to a growth of 19.2% MoM in June – the first MoM growth in this fiscal. The currency derivatives turnover rose 21.7% MoM in March to touch Rs6.1tn – the highest monthly turnover in FY2020-21, thereafter, declining sequentially by 0.6% MoM to Rs6tn in April and 26.7% to Rs4.4tn in May. The decline in turnover in July was witnessed in both instruments with currency futures turnover declining 2.7% MoM and premium turnover in currency options registering a decline of 11.3% MoM in July.

Figure 183: Total turnover in different segments (Rsbn) during 2021 (January – July)

<table>
<thead>
<tr>
<th>Cash Market</th>
<th>Jan-21</th>
<th>Feb-21</th>
<th>Mar-21</th>
<th>Apr-21</th>
<th>May-21</th>
<th>Jun-21</th>
<th>Jul-21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash Market</td>
<td>14,494</td>
<td>16,275</td>
<td>13,989</td>
<td>13,307</td>
<td>15,679</td>
<td>15,547</td>
<td>13,157</td>
</tr>
<tr>
<td>Equity futures</td>
<td>24,987</td>
<td>29,034</td>
<td>25,585</td>
<td>23,049</td>
<td>23,464</td>
<td>23,388</td>
<td>20,857</td>
</tr>
<tr>
<td>Index futures</td>
<td>7,327</td>
<td>9,107</td>
<td>9,132</td>
<td>7,250</td>
<td>6,125</td>
<td>5,713</td>
<td>5,175</td>
</tr>
<tr>
<td>Stock futures</td>
<td>17,660</td>
<td>19,927</td>
<td>16,453</td>
<td>15,799</td>
<td>17,339</td>
<td>17,675</td>
<td>15,681</td>
</tr>
<tr>
<td>Equity options</td>
<td>3,270</td>
<td>4,309</td>
<td>4,469</td>
<td>4,114</td>
<td>3,882</td>
<td>3,992</td>
<td>3,691</td>
</tr>
<tr>
<td>Index options</td>
<td>2,545</td>
<td>3,497</td>
<td>3,884</td>
<td>3,488</td>
<td>3,141</td>
<td>3,116</td>
<td>3,042</td>
</tr>
<tr>
<td>Stock options</td>
<td>725</td>
<td>812</td>
<td>585</td>
<td>626</td>
<td>741</td>
<td>876</td>
<td>649</td>
</tr>
<tr>
<td>Currency derivatives</td>
<td>4,604</td>
<td>4,978</td>
<td>6,056</td>
<td>6,021</td>
<td>4,414</td>
<td>5,260</td>
<td>5,114</td>
</tr>
<tr>
<td>Currency futures</td>
<td>4,594</td>
<td>4,966</td>
<td>6,037</td>
<td>5,998</td>
<td>4,401</td>
<td>5,244</td>
<td>5,100</td>
</tr>
<tr>
<td>Currency options</td>
<td>10</td>
<td>12</td>
<td>20</td>
<td>23</td>
<td>13</td>
<td>16</td>
<td>15</td>
</tr>
<tr>
<td>Interest rate futures</td>
<td>41</td>
<td>67</td>
<td>44</td>
<td>24</td>
<td>28</td>
<td>20</td>
<td>17</td>
</tr>
<tr>
<td>Interest rate options</td>
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<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>0.00</td>
</tr>
<tr>
<td>Commodity derivatives</td>
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<td>9.5</td>
<td>17.0</td>
<td>6.1</td>
<td>3.2</td>
<td>4.3</td>
<td>6.8</td>
</tr>
<tr>
<td>Commodity futures</td>
<td>8.4</td>
<td>9.3</td>
<td>16.8</td>
<td>6.0</td>
<td>3.1</td>
<td>4.2</td>
<td>6.8</td>
</tr>
<tr>
<td>Commodity options</td>
<td>0.2</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
</tr>
</tbody>
</table>

Source: NSE. *NA refers to not applicable as Interest rate options were launched in Dec’19; Above table reports premium turnover for Options contracts and excludes auction market turnover.
Average daily turnover (ADT) in capital markets and derivatives segment of NSE

NSE’s ADT in cash market segment declined further in July: NSE’s ADT in capital markets segment declined 11.3% MoM or Rs80bn to touch Rs 626bn – the lowest in seven (7) months. The ADT in the first four of current fiscal, however, remained higher by 25.3% YoY as compared to the same period last year.

While trading in Main Board equities, ETFs, InvITs, REITs and MFs witnessed a decline in June, average daily trading SME stocks registered a double-digit growth, for two months in a row, of 20.9% MoM in July and 23.5% MoM in June. However, all categories of products (except Others) in the CM segments have witnessed YoY growth in ADT as compared to the same period last year.

The ADT in CM turnover in FY21 recorded a significant jump of 69.7% YoY over FY20. The increase in average daily turnover in the previous fiscal was broad-based, largely led by trading in SGBs (+246% YoY), InvITs (+109% YoY) and Main Board Equities (+69.5% YoY).

Figure 184: Average daily turnover in NSE Capital Market (Rsm)

<table>
<thead>
<tr>
<th>Product</th>
<th>Jul-21</th>
<th>Jun-21</th>
<th>% Change</th>
<th>FY22TD</th>
<th>FY21TD</th>
<th>% Change</th>
<th>FY21</th>
<th>CY21TD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Market</td>
<td>626,531</td>
<td>706,679</td>
<td>(11.3)</td>
<td>703,538</td>
<td>561,642</td>
<td>25.3</td>
<td>618,390</td>
<td>716,424</td>
</tr>
<tr>
<td>Equities (Main Board)</td>
<td>622,215</td>
<td>701,550</td>
<td>(11.3)</td>
<td>698,692</td>
<td>556,989</td>
<td>25.4</td>
<td>612,808</td>
<td>710,707</td>
</tr>
<tr>
<td>Exchange Traded Funds</td>
<td>2,411</td>
<td>2,602</td>
<td>(7.3)</td>
<td>2,645</td>
<td>2,627</td>
<td>0.7</td>
<td>2,638</td>
<td>2,855</td>
</tr>
<tr>
<td>SME Emerge</td>
<td>82</td>
<td>68</td>
<td>20.9</td>
<td>61</td>
<td>23</td>
<td>167.6</td>
<td>37</td>
<td>53</td>
</tr>
<tr>
<td>Sovereign Gold Bonds</td>
<td>36</td>
<td>37</td>
<td>(3.5)</td>
<td>35</td>
<td>21</td>
<td>62.7</td>
<td>36</td>
<td>38</td>
</tr>
<tr>
<td>InvITs</td>
<td>160</td>
<td>216</td>
<td>(25.9)</td>
<td>261</td>
<td>40</td>
<td>553.4</td>
<td>107</td>
<td>185</td>
</tr>
<tr>
<td>REITs</td>
<td>270</td>
<td>388</td>
<td>(30.5)</td>
<td>347</td>
<td>177</td>
<td>96.1</td>
<td>362</td>
<td>411</td>
</tr>
<tr>
<td>Mutual Funds (Close Ended)</td>
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<td>1</td>
<td>(20.4)</td>
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<td>1</td>
<td>36.0</td>
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<td>2</td>
</tr>
<tr>
<td>Others</td>
<td>1,357</td>
<td>1,818</td>
<td>(25.3)</td>
<td>1,496</td>
<td>1,764</td>
<td>(15.2)</td>
<td>2,401</td>
<td>2,173</td>
</tr>
</tbody>
</table>

Source: NSE. Note: Average daily turnover (ADT) excludes auction market turnover. Equities (Main Board) include stocks in EQ, BE, BL and BZ series. Others include corporate and government debt instruments (excl. SGBs), preferential shares, partly paid-up shares, warrants etc., among others. Figures in brackets indicate negative numbers.

ADT in equity derivatives witnessed a decline in July: Average daily trading in equity derivatives segment declined for five (5) months in a row. Average daily turnover (ADT) of NSE’s equity derivatives declined 6.1% MoM in July to touch Rs1,169bn, following declines of 9% MoM in June, 4.4% MoM in May, 0.1% MoM in April and 14.2% in March.

The decline in average daily traded value, was largely led by single stock derivatives and index futures, registering a decline of 7.8% MoM and 5.1% MoM respectively. On the contrary, ADT of index options increased at a modest rate of 2.3% MoM registering a turnover of Rs145bn.

The ADT in equity derivatives in FY21, however, recorded a jump of 32% YoY to touch Rs1,219bn compared to Rs925bn in FY20. While, average daily turnover of single stock derivatives surged 22.7% YoY to touch Rs750bn in the current fiscal, the average daily turnover of index derivatives increased by a much higher 49.4% YoY to touch Rs463bn during the same period.
Figure 185: Average daily turnover in Equity derivatives (Rsm)

<table>
<thead>
<tr>
<th>Product</th>
<th>Jul-21</th>
<th>Jun-21</th>
<th>% Change</th>
<th>FY22TD</th>
<th>FY21TD</th>
<th>% Change</th>
<th>FY21</th>
<th>CY21TD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Single stock derivatives</strong></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stock futures</td>
<td>746,730</td>
<td>803,427</td>
<td>(7.1)</td>
<td>810,915</td>
<td>622,353</td>
<td>30.3</td>
<td>726,842</td>
<td>842,898</td>
</tr>
<tr>
<td>Stock options</td>
<td>30,908</td>
<td>39,815</td>
<td>(22.4)</td>
<td>35,273</td>
<td>16,610</td>
<td>112.4</td>
<td>23,267</td>
<td>35,065</td>
</tr>
<tr>
<td><strong>Index futures</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BankNifty</td>
<td>125,976</td>
<td>129,912</td>
<td>(3.0)</td>
<td>147,972</td>
<td>162,939</td>
<td>(9.2)</td>
<td>183,694</td>
<td>174,426</td>
</tr>
<tr>
<td>Nifty</td>
<td>120,326</td>
<td>129,559</td>
<td>(7.1)</td>
<td>147,559</td>
<td>187,319</td>
<td>(21.2)</td>
<td>179,320</td>
<td>173,233</td>
</tr>
<tr>
<td>FinNifty</td>
<td>139</td>
<td>198</td>
<td>(29.9)</td>
<td>360</td>
<td>0</td>
<td>NA</td>
<td>339</td>
<td>797</td>
</tr>
<tr>
<td>Nifty T</td>
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<td>0</td>
<td>NA</td>
<td>0</td>
<td>19</td>
<td>NA</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td><strong>Index options</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BankNifty</td>
<td>98,321</td>
<td>93,961</td>
<td>4.6</td>
<td>102,444</td>
<td>40,226</td>
<td>154.7</td>
<td>62,966</td>
<td>101,920</td>
</tr>
<tr>
<td>Nifty</td>
<td>46,524</td>
<td>47,664</td>
<td>(2.4)</td>
<td>53,440</td>
<td>37,307</td>
<td>43.2</td>
<td>42,589</td>
<td>56,800</td>
</tr>
<tr>
<td>FinNifty</td>
<td>2</td>
<td>9</td>
<td>(74.1)</td>
<td>42</td>
<td>0</td>
<td>NA</td>
<td>45</td>
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<td>NA</td>
<td>0</td>
<td>19</td>
<td>NA</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,168,926</td>
<td>1,244,545</td>
<td>(6.1)</td>
<td>1,298,004</td>
<td>1,066,773</td>
<td>21.7</td>
<td>1,219,023</td>
<td>1,385,139</td>
</tr>
</tbody>
</table>

Source: NSE. Note: Above table reports premium turnover for Options contracts; FINNIFTY was launched on January 11th, 2021; Trading in weekly and monthly derivative contracts of Nifty IT index was discontinued from June 4th, 2020 and June 25th, 2020 respectively. Figures in brackets indicate negative numbers.

Trading in currency futures expanded in July: Trading in currency futures expanded in July for two consecutive months to touch Rs243bn or 1.9% higher than the previous month. While average daily currency futures turnover increased 1.9% MoM to touch Rs242bn, currency options premium turnover declined 7% MoM to touch Rs693m during the month. The USDINR contracts which account for nearly 72% of the overall ADT in currency derivatives continued to be the highly traded contracts in July, even as the average daily trading declined 4.7% MoM. Barring USDINR and EURUSD contracts, trading across rest of the instruments witnessed an increase in trading in July.

Figure 186: Average daily turnover in Currency derivatives (Rsm)

<table>
<thead>
<tr>
<th>Product</th>
<th>Jul-21</th>
<th>Jun-21</th>
<th>% Change</th>
<th>FY22TD</th>
<th>FY21TD</th>
<th>% Change</th>
<th>FY21</th>
<th>CY21TD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Currency futures</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EURINR</td>
<td>17,645</td>
<td>16,282</td>
<td>8.4</td>
<td>17,014</td>
<td>12,734</td>
<td>33.6</td>
<td>17,195</td>
<td>16,805</td>
</tr>
<tr>
<td>EURUSD</td>
<td>99</td>
<td>135</td>
<td>(26.6)</td>
<td>115</td>
<td>220</td>
<td>(47.5)</td>
<td>229</td>
<td>141</td>
</tr>
<tr>
<td>GBPINR</td>
<td>46,784</td>
<td>36,469</td>
<td>28.3</td>
<td>38,559</td>
<td>20,556</td>
<td>87.6</td>
<td>32,364</td>
<td>39,474</td>
</tr>
<tr>
<td>GBPUSD</td>
<td>358</td>
<td>303</td>
<td>18.0</td>
<td>266</td>
<td>269</td>
<td>(1.2)</td>
<td>345</td>
<td>312</td>
</tr>
<tr>
<td>JPYINR</td>
<td>4,172</td>
<td>2,795</td>
<td>49.3</td>
<td>3,260</td>
<td>3,853</td>
<td>(15.4)</td>
<td>4,189</td>
<td>3,477</td>
</tr>
<tr>
<td>USDINR</td>
<td>173,775</td>
<td>182,347</td>
<td>(4.7)</td>
<td>203,338</td>
<td>165,565</td>
<td>22.8</td>
<td>179,289</td>
<td>201,211</td>
</tr>
<tr>
<td>USDJPY</td>
<td>18</td>
<td>12</td>
<td>47.7</td>
<td>11</td>
<td>2</td>
<td>366.9</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td><strong>Currency options</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EURINR</td>
<td>0.61</td>
<td>0.65</td>
<td>(6.0)</td>
<td>0.63</td>
<td>0.02414</td>
<td>2502.0</td>
<td>0.46</td>
<td>0.91</td>
</tr>
<tr>
<td>EURUSD</td>
<td>0.00</td>
<td>0.00</td>
<td>NA</td>
<td>0.00</td>
<td>0.00</td>
<td>(100.0)</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>GBPINR</td>
<td>4.26</td>
<td>2.63</td>
<td>62.0</td>
<td>4.19</td>
<td>0.04</td>
<td>9774.5</td>
<td>1.93</td>
<td>3.89</td>
</tr>
<tr>
<td>GBPUSD</td>
<td>0.00</td>
<td>0.00</td>
<td>NA</td>
<td>0.00</td>
<td>0.02</td>
<td>(100.0)</td>
<td>0.02</td>
<td>0.00</td>
</tr>
<tr>
<td>JPYINR</td>
<td>0.01</td>
<td>0.02</td>
<td>(53.9)</td>
<td>0.03</td>
<td>0.00</td>
<td>4821.1</td>
<td>0.01</td>
<td>0.02</td>
</tr>
<tr>
<td>USDINR</td>
<td>688.28</td>
<td>742.27</td>
<td>(7.3)</td>
<td>842.92</td>
<td>526.60</td>
<td>60.1</td>
<td>600.22</td>
<td>780.84</td>
</tr>
<tr>
<td>USDJPY</td>
<td>0.00</td>
<td>0.00</td>
<td>NA</td>
<td>0.00</td>
<td>0.00</td>
<td>NA</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>243,544</td>
<td>239,090</td>
<td>1.9</td>
<td>263,410</td>
<td>203,726</td>
<td>29.3</td>
<td>234,218</td>
<td>262,216</td>
</tr>
</tbody>
</table>

Source: NSE. Note: Above table reports premium turnover for Options contracts. Figures in brackets indicate negative numbers.
**Trading in interest rate derivatives declined in July:** Average daily turnover of interest rate futures declined at 8.5% MoM in July to touch Rs818m, albeit at a lower rate compared to decline of 39.1% MoM in the month of June, due to drop in trading activities by DIIs (excl. banks) and retail investors. Two (2) interest rate futures contracts witnessed trading activity in this month; 585GS2030 was the highly traded contract in this segment with ADT touching Rs794m lower, although it was lower by 5% MoM from June levels.

**Figure 187: Average daily turnover in Interest rate derivatives (Rsm)**

<table>
<thead>
<tr>
<th>Product</th>
<th>Jul-21</th>
<th>Jun-21</th>
<th>% Change</th>
<th>FY22TD</th>
<th>FY21TD</th>
<th>% Change</th>
<th>FY21</th>
<th>CY21TD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest rate futures</td>
<td>818</td>
<td>894</td>
<td>(8.5)</td>
<td>1,121</td>
<td>6,168</td>
<td>(81.8)</td>
<td>3,940</td>
<td>1,732</td>
</tr>
<tr>
<td>Interest rate options</td>
<td>-</td>
<td>-</td>
<td>NA</td>
<td>-</td>
<td>NA</td>
<td>NA</td>
<td>0.8</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>818</td>
<td>894</td>
<td>(8.5)</td>
<td>1,121</td>
<td>6,168</td>
<td>(81.8)</td>
<td>3,941</td>
<td>1,732</td>
</tr>
</tbody>
</table>

Source: NSE. Note: Above table reports premium turnover for Options contracts. Figures in brackets indicate negative numbers.

**ADT in commodities derivatives improved significantly:** The ADT in commodity derivatives improved 59.2% MoM in the month of July to touch Rs310m – the highest in the current fiscal, owing to increase in trading in degummed soy oil futures contracts and Gold Mini contracts. While average trading in commodities futures contracts increased 59.7% MoM, trading commodity options increased 21.8% MoM.

**Figure 188: Average daily turnover in commodities derivatives (Rsm)**

<table>
<thead>
<tr>
<th>Product</th>
<th>Jul-21</th>
<th>Jun-21</th>
<th>% Change</th>
<th>FY22TD</th>
<th>FY21TD</th>
<th>% Change</th>
<th>FY21</th>
<th>CY21TD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commodity futures</td>
<td>307</td>
<td>192</td>
<td>59.7</td>
<td>234</td>
<td>46</td>
<td>405.7</td>
<td>215</td>
<td>367</td>
</tr>
<tr>
<td>Commodity options</td>
<td>3.2</td>
<td>2.7</td>
<td>21.8</td>
<td>4</td>
<td>13</td>
<td>(72.6)</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>310</td>
<td>195</td>
<td>59.2</td>
<td>238</td>
<td>60</td>
<td>298.5</td>
<td>226</td>
<td>372</td>
</tr>
</tbody>
</table>

Source: NSE. Note: Above table reports premium turnover for Options contracts. Figures in brackets indicate negative numbers. NSE commenced trading in Commodity Derivatives with the launch of bullion futures on October 12, 2018. NSE launched commodities options contracts on June 8th, 2020 by introducing options contracts in Gold Mini.
Turnover of top traded symbols over the month

While the turnover in NSE’s capital market segment declined 15.4% MoM in July, the turnover of top 9 traded stocks in CM segment (except Zomato which got newly listed in the month of July), however, declined double-digit by 31.2% MoM, resulting in a contraction in the share of these stocks in the overall CM turnover by 324 bps MoM to 14.1% vs 17.3% in June. Five (5) out of the top 9 stocks witnessed an uptick in the total traded turnover in July.

Figure 189: Top 10 symbols based on total turnover of Cash market (Rsm)

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Jul-21</th>
<th>Jun-21</th>
<th>%Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>TATASTEEL</td>
<td>303,812</td>
<td>331,407</td>
<td>(8.3)</td>
</tr>
<tr>
<td>TATAMOTORS</td>
<td>285,525</td>
<td>242,311</td>
<td>17.8</td>
</tr>
<tr>
<td>HDFCBANK</td>
<td>221,472</td>
<td>163,069</td>
<td>35.8</td>
</tr>
<tr>
<td>RELIANCE</td>
<td>208,157</td>
<td>506,235</td>
<td>(58.9)</td>
</tr>
<tr>
<td>ZOMATO</td>
<td>202,520</td>
<td>-</td>
<td>NA</td>
</tr>
<tr>
<td>BAJ FINANCE</td>
<td>181,219</td>
<td>265,198</td>
<td>(31.7)</td>
</tr>
<tr>
<td>ICICIBANK</td>
<td>173,405</td>
<td>173,350</td>
<td>0.0</td>
</tr>
<tr>
<td>INFY</td>
<td>172,491</td>
<td>217,642</td>
<td>(20.7)</td>
</tr>
<tr>
<td>SBIN</td>
<td>156,478</td>
<td>277,283</td>
<td>(43.6)</td>
</tr>
<tr>
<td>ADANIPORTS</td>
<td>151,606</td>
<td>518,909</td>
<td>(70.8)</td>
</tr>
</tbody>
</table>

Source: NSE

While the turnover of the top 10 traded stocks in the single stock futures segment increased 11.3% MoM in July, the turnover of top 10 single stock options contracted a robust 25.9% MoM during the same period. This led to contraction in the share of top 10 traded stocks in stock futures and options turnover by 17bps MoM and 363bps MoM to 25.9% and 30.8% in July of the overall turnover in respective segments. Turnover of five (5) of the top 10 stocks in futures and options segment increased in this month on a MoM basis. Seven (7) stocks were among the top traded stocks across all segments, with Tata Steel at the topmost position.

Figure 190: Top 10 symbols based on total turnover of Stock futures (Rsm)

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Jul-21</th>
<th>Jun-21</th>
<th>%Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>TATASTEEL</td>
<td>669,505</td>
<td>619,501</td>
<td>8.1</td>
</tr>
<tr>
<td>RELIANCE</td>
<td>492,304</td>
<td>836,911</td>
<td>(41.2)</td>
</tr>
<tr>
<td>TATAMOTORS</td>
<td>445,326</td>
<td>391,202</td>
<td>13.8</td>
</tr>
<tr>
<td>BHARTIARTL</td>
<td>411,693</td>
<td>321,422</td>
<td>28.1</td>
</tr>
<tr>
<td>ICICIBANK</td>
<td>399,997</td>
<td>373,484</td>
<td>7.1</td>
</tr>
<tr>
<td>HDFCBANK</td>
<td>368,673</td>
<td>333,394</td>
<td>10.6</td>
</tr>
<tr>
<td>INFY</td>
<td>341,898</td>
<td>398,726</td>
<td>(14.3)</td>
</tr>
<tr>
<td>SBIN</td>
<td>338,053</td>
<td>421,520</td>
<td>(19.8)</td>
</tr>
<tr>
<td>BAJ FINANCE</td>
<td>301,746</td>
<td>347,935</td>
<td>(13.3)</td>
</tr>
<tr>
<td>ADANIPORTS</td>
<td>294,371</td>
<td>566,138</td>
<td>(48.0)</td>
</tr>
</tbody>
</table>

Source: NSE
Figure 191: Top 10 symbols based on total turnover of Stock options (Rsm)

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Jul-21</th>
<th>Jun-21</th>
<th>%Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>TATA STEEL</td>
<td>44,678</td>
<td>34,389</td>
<td>29.9</td>
</tr>
<tr>
<td>TATA MOTOR S</td>
<td>30,280</td>
<td>28,545</td>
<td>6.1</td>
</tr>
<tr>
<td>RELIANCE</td>
<td>21,934</td>
<td>60,361</td>
<td>(63.7)</td>
</tr>
<tr>
<td>BAJ FINANCE</td>
<td>17,821</td>
<td>29,230</td>
<td>(39.0)</td>
</tr>
<tr>
<td>ADANIENT</td>
<td>15,548</td>
<td>77,426</td>
<td>(79.9)</td>
</tr>
<tr>
<td>SBIN</td>
<td>15,044</td>
<td>24,383</td>
<td>(38.3)</td>
</tr>
<tr>
<td>TCS</td>
<td>14,886</td>
<td>12,715</td>
<td>17.1</td>
</tr>
<tr>
<td>BHARTI ARTL</td>
<td>13,701</td>
<td>9,308</td>
<td>47.2</td>
</tr>
<tr>
<td>ICICI BANK</td>
<td>13,080</td>
<td>10,341</td>
<td>26.5</td>
</tr>
<tr>
<td>INFY</td>
<td>12,844</td>
<td>14,722</td>
<td>(12.8)</td>
</tr>
</tbody>
</table>

Source: NSE
Client category-wise participation in total turnover

This section gives a detailed analysis on client-wise participation in total trading activities across all product segments at NSE. The clients are broadly classified into six categories, viz. Foreign institutional investors (FIIs), Domestic institutional investors (DIIs), Corporates, Proprietary traders, Individual investors and Others. The Individual investors category includes individual domestic investors, NRIs, sole proprietorship firms and HUFs. The category Others includes Partnership Firms/LLP, Trust / Society, Depository Receipts, Statutory Bodies, FDI, OCB, FNs, VC Funds, NBFC, etc. which are not included in any other categories mentioned above.

Share of DIIs in CM segment expanded in July: DII participation improved in July by 120bps MoM to 8.5% - the highest in 15 months. Other client categories that witnessed an increase in market share in July as compared to previous month include corporates and individual investors. FIIs and proprietary traders, on the other hand witnessed a contraction in their respective market shares by 20bps and 40bps MoM during the same month.

The last six (fiscal) years have witnessed a considerable change in the distribution of NSE’s total turnover in capital market segment (cash segment) across different client categories. The market share of individual investors rose markedly by 12 percentage points from 33% in FY16 to 45% in FY21, rising sharply in FY21, offsetting the decline in the share of FIIs and public and private corporates during the same period. The significant rise in the share of individual investors in FY21 can be attributed to the increase in new investor registrations witnessed since the beginning of the fiscal, which has led to addition of nearly 90 lakh new investors in FY21 and more than 50 lakh new investors in the first the current fiscal.

While the percentage share of DIIs in the overall turnover was steady during FY16-FY20, it has witnessed a decline in FY21 to 8% of the overall market, as they lost market share to individual investors participating directly in the secondary markets. The percentage share of corporates has halved during this period from 10% to 5%. Notwithstanding a decline in market share for a brief period during FY17 (17%) and FY18 (18%) from 21% in FY16, proprietary traders have maintained their market share between 22%-25% in the last three fiscal years.

Figure 192: Share of client participation in Capital Market segment of NSE (%)
Figure 193: Trends in share of client participation in Capital Market at NSE (%)

Source: NSE.
Note: DII: Domestic Institutional Investors include Banks, Mutual Funds, Insurance Companies, NBFCs, Domestic VC Funds, AIFs, PMS clients etc., FII: Foreign Institutional Investors include FPIs, FDI s and Foreign VC Funds etc., Prop traders: Proprietary Traders, Individual investors: Individual domestic investors, NRIs, sole proprietorship firms and HUFs, Others: Partnership Firms/LLP, Trust / Society, AIF, Depository Receipts, PMS clients, Statutory Bodies, OCB, FNs, etc. FY22 considers data till July 2021.

The share of retail investors and proprietary traders contracted MoM in equity derivatives in July: The share of retail investors and proprietary traders in equity derivatives turnover contracted 90bps MoM and 140bps MoM in July (in line with the decline in their respective share in CM turnover) to 23.4% and 33.6% respectively. This loss in share was offset by modest gains by corporates (70bps), DIIs (70 bps), FIIs (50 bps) and others (30 bps).

The last six years has witnessed the share of individual investors increase in equity derivatives segment, in-line with the increase in their share in cash segment during this period. While their share in equity derivatives premium turnover has increased nearly two (2) percentage points, their share in notional turnover has increased six (6) percentage points during this period.

Contrary to the trend in cash segment, the share of FIIs in overall derivatives premium turnover has increased in the last six years. The FIIs share of total premium turnover in the segment jumped up from 16% in FY16 to 25% in FY20 and settling at nearly 21% in FY21. While the share of proprietary traders has declined marginally from 31% to 30%, the percentage share of corporates has nearly halved from 15% to 8% over the same period, which was primarily offset by the rise in participation by individual investors and FIIs. DIIs’ contribution, however, remains low over the period due to the extant regulatory restrictions.
Figure 194: Share of client participation in Equity Derivatives segment of NSE (%)

<table>
<thead>
<tr>
<th>Client category</th>
<th>Jul-21</th>
<th>Jun-21</th>
<th>Change*</th>
<th>FY22TD</th>
<th>FY21TD</th>
<th>Change*</th>
<th>FY21</th>
<th>CY21TD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Equity Derivatives (Premium Turnover)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporates</td>
<td>8.7</td>
<td>8.0</td>
<td>0.7</td>
<td>8.1</td>
<td>8.4</td>
<td>(0.3)</td>
<td>8.3</td>
<td>8.3</td>
</tr>
<tr>
<td>DII</td>
<td>5.4</td>
<td>4.7</td>
<td>0.7</td>
<td>4.8</td>
<td>3.6</td>
<td>1.2</td>
<td>3.5</td>
<td>4.3</td>
</tr>
<tr>
<td>FII</td>
<td>20.2</td>
<td>19.6</td>
<td>0.5</td>
<td>19.2</td>
<td>24.7</td>
<td>(5.5)</td>
<td>20.9</td>
<td>18.6</td>
</tr>
<tr>
<td>Individuals investors</td>
<td>23.4</td>
<td>24.3</td>
<td>(0.9)</td>
<td>24.7</td>
<td>31.2</td>
<td>(6.6)</td>
<td>29.7</td>
<td>25.6</td>
</tr>
<tr>
<td>PRO</td>
<td>33.6</td>
<td>35.1</td>
<td>(1.4)</td>
<td>34.6</td>
<td>25.5</td>
<td>9.1</td>
<td>30.3</td>
<td>34.8</td>
</tr>
<tr>
<td>Others</td>
<td>8.7</td>
<td>8.3</td>
<td>0.4</td>
<td>8.6</td>
<td>6.6</td>
<td>2.0</td>
<td>7.3</td>
<td>8.4</td>
</tr>
</tbody>
</table>

**Equity Derivatives (Notional Turnover)**

<table>
<thead>
<tr>
<th>Client category</th>
<th>Jul-21</th>
<th>Jun-21</th>
<th>Change*</th>
<th>FY22TD</th>
<th>FY21TD</th>
<th>Change*</th>
<th>FY21</th>
<th>CY21TD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporates</td>
<td>7.5</td>
<td>6.0</td>
<td>1.5</td>
<td>6.2</td>
<td>7.2</td>
<td>(1.0)</td>
<td>6.6</td>
<td>6.2</td>
</tr>
<tr>
<td>DII</td>
<td>0.2</td>
<td>0.2</td>
<td>(0.0)</td>
<td>0.2</td>
<td>0.3</td>
<td>(0.1)</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>FII</td>
<td>9.2</td>
<td>10.4</td>
<td>(1.2)</td>
<td>10.4</td>
<td>17.2</td>
<td>(6.8)</td>
<td>13.2</td>
<td>11.2</td>
</tr>
<tr>
<td>Individuals investors</td>
<td>28.9</td>
<td>27.9</td>
<td>1.0</td>
<td>28.2</td>
<td>30.8</td>
<td>(2.6)</td>
<td>29.2</td>
<td>27.8</td>
</tr>
<tr>
<td>PRO</td>
<td>47.6</td>
<td>48.4</td>
<td>(0.8)</td>
<td>48.2</td>
<td>35.1</td>
<td>13.2</td>
<td>42.6</td>
<td>47.7</td>
</tr>
<tr>
<td>Others</td>
<td>6.7</td>
<td>7.2</td>
<td>(0.5)</td>
<td>6.8</td>
<td>9.5</td>
<td>(2.7)</td>
<td>8.2</td>
<td>6.9</td>
</tr>
</tbody>
</table>

Source: NSE.

Note: DII: Domestic Institutional Investors include Banks, Mutual Funds, Insurance Companies, NBFCs, Domestic VC Funds, AIFs, PMS clients etc., FII: Foreign Institutional Investors include FPIs, FDIs and Foreign VC Funds etc., Prop traders: Proprietary Traders, Individual investors: individual domestic investors, NRI, sole proprietorship firms and HUFs, Others: Partnership Firms/LLP, Trust / Society, Depository Receipts, Statutory Bodies, OCB, FNs, etc. Figures in brackets indicate negative numbers. *percentage points

Figure 195: Trends in share of client participation in Equity Derivatives (Notional Turnover) at NSE (%)

Source: NSE.

Note: DII: Domestic Institutional Investors include Banks, Mutual Funds, Insurance Companies, NBFCs, Domestic VC Funds, AIFs, PMS clients etc., FII: Foreign Institutional Investors include FPIs, FDIs and Foreign VC Funds etc., Prop traders: Proprietary Traders, Individual investors: individual domestic investors, NRI, sole proprietorship firms and HUFs, Others: Partnership Firms/LLP, Trust / Society, Depository Receipts, Statutory Bodies, OCB, FNs, etc. FY22 considers data till July 2021.

Figure 196: Trends in share of client participation in Equity derivatives (Premium Turnover) at NSE (%)

Source: NSE.

Note: DII: Domestic Institutional Investors include Banks, Mutual Funds, Insurance Companies, NBFCs, Domestic VC Funds, AIFs, PMS clients etc., FII: Foreign Institutional Investors include FPIs, FDIs and Foreign VC Funds etc., Prop traders: Proprietary Traders, Individual investors: individual domestic investors, NRI, sole proprietorship firms and HUFs, Others: Partnership Firms/LLP, Trust / Society, Depository Receipts, Statutory Bodies, OCB, FNs, etc. FY22 considers data till July 2021.
Share of FIIs in index futures expanded in July: The share of FIIs in index futures expanded 170bps MoM in July to touch 16.8% - the highest share in 13 months. Corporates gained modest share by 20bps MoM to touch 10.4% during the same period. While the share of FI1 and corporates improved, retail investor and proprietary traders’ share contracted sharply by 140bps MoM and 120bps MoM respectively to touch 28.4% (the lowest since April 2019) and 31.2% respectively.

The market share of proprietary traders has gradually declined in terms of overall index futures notional turnover by two (2) percentage points from 31% in FY16 to 29% in FY21, followed by Corporates whose share has declined by six (6) percentage points from 14% to 8% over the same period. This overall fall in their shares has been largely compensated by an increased participation by individual investors from 32% to 39% during the same period. The share of FIIs rose marginally from 14% in FY16 to 15% in the current fiscal the highest in last six years. The share of DIIs, however, remained low during this period, which can be attributed to the regulatory restrictions on their trading activities in the derivatives segment.

### Figure 197: Share of client participation in Index Futures of NSE (%)

<table>
<thead>
<tr>
<th>Client category</th>
<th>Jul-21</th>
<th>Jun-21</th>
<th>Change*</th>
<th>FY22TD</th>
<th>FY21TD</th>
<th>Change*</th>
<th>FY21</th>
<th>CY21TD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporates</td>
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<td>10.2</td>
<td>0.2</td>
<td>9.4</td>
<td>8.1</td>
<td>1.4</td>
<td>8.5</td>
<td>9.2</td>
</tr>
<tr>
<td>DII</td>
<td>2.3</td>
<td>2.5</td>
<td>(0.2)</td>
<td>2.2</td>
<td>1.2</td>
<td>1.0</td>
<td>1.3</td>
<td>1.9</td>
</tr>
<tr>
<td>FI1</td>
<td>16.8</td>
<td>15.1</td>
<td>1.7</td>
<td>15.8</td>
<td>17.2</td>
<td>(1.4)</td>
<td>14.6</td>
<td>14.6</td>
</tr>
<tr>
<td>Individuals investors</td>
<td>28.4</td>
<td>29.8</td>
<td>(1.4)</td>
<td>31.1</td>
<td>41.3</td>
<td>(10.3)</td>
<td>39.3</td>
<td>32.7</td>
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<td>31.2</td>
<td>32.4</td>
<td>(1.2)</td>
<td>31.5</td>
<td>26.1</td>
<td>5.3</td>
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<td>31.9</td>
</tr>
<tr>
<td>Others</td>
<td>10.8</td>
<td>10.0</td>
<td>0.9</td>
<td>10.1</td>
<td>6.1</td>
<td>3.9</td>
<td>7.6</td>
<td>9.8</td>
</tr>
</tbody>
</table>

Source: NSE.

Note: DII: Domestic Institutional Investors include Banks, Mutual Funds, Insurance Companies, NBFCs, Domestic VC Funds, AIFs, PMS clients etc., FII: Foreign Institutional Investors include FPIs, FDIs and Foreign VC Funds etc., Prop traders: Proprietary Traders, Individual investors: individual domestic investors, NRIs, sole proprietorship firms and HUFs, Others: Partnership Firms/LLP, Trust / Society, Depository Receipts, Statutory Bodies, OCB, FNs, etc. Figures in brackets indicate negative numbers. *percentage points

### Figure 198: Trends in share of client participation in Index Futures at NSE (%)
Retail investors’ share in stock futures dropped to 27-month lows: The share of retail investors contracted 120bps MoM in July to touch 19.2% - the lowest level since April 2019. The share of proprietary traders also witnessed a decline of 170bps MoM to touch 32.2% during the month. The current fiscal till June declined significantly by 980bps YoY to 22% from 31.8% a year ago. While share of retail investors and proprietary traders declined, share of corporates, DIIs and FIIs expanded during the month.

While DIIs’ contribution in stock futures turnover has increased marginally from 4% in FY16 to 5% in FY21 (before touching 7% FY20), the share of FIIs trading in stock futures during the same period has increased significantly from 17% to 25% Among other categories, the share of individual investors was maintained at 25% of the total trades in FY21 - nearly at same level as FY16 - after rising to 31% in FY18. Proprietary traders and corporates have lost their share in the market, which was mainly offset by FIIs and DIIs.

In FY21, Proprietary traders and Corporates accounted for 29% and 9% of total turnover and remaining 8% were traded by Others in the segment.

**Figure 199: Share of client participation in Stock Futures of NSE (%)**

<table>
<thead>
<tr>
<th>Client category</th>
<th>Jul-21</th>
<th>Jun-21</th>
<th>Change*</th>
<th>FY22TD</th>
<th>FY21TD</th>
<th>Change*</th>
<th>FY21</th>
<th>CY21TD</th>
</tr>
</thead>
<tbody>
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<td></td>
<td></td>
</tr>
<tr>
<td>Corporates</td>
<td>8.5</td>
<td>7.9</td>
<td>0.6</td>
<td>8.3</td>
<td>8.9</td>
<td>(0.6)</td>
<td>8.7</td>
<td>8.6</td>
</tr>
<tr>
<td>DIIs</td>
<td>7.7</td>
<td>6.5</td>
<td>1.2</td>
<td>6.9</td>
<td>5.6</td>
<td>1.3</td>
<td>5.3</td>
<td>6.2</td>
</tr>
<tr>
<td>FIIs</td>
<td>23.8</td>
<td>23.2</td>
<td>0.7</td>
<td>22.4</td>
<td>30.1</td>
<td>(7.7)</td>
<td>25.3</td>
<td>21.7</td>
</tr>
<tr>
<td>Individuals</td>
<td>19.2</td>
<td>20.3</td>
<td>(1.2)</td>
<td>20.3</td>
<td>25.5</td>
<td>(5.2)</td>
<td>24.5</td>
<td>21.2</td>
</tr>
<tr>
<td>PRO</td>
<td>32.2</td>
<td>33.9</td>
<td>(1.7)</td>
<td>33.5</td>
<td>23.5</td>
<td>10.0</td>
<td>29.2</td>
<td>34.0</td>
</tr>
<tr>
<td>Others</td>
<td>8.6</td>
<td>8.1</td>
<td>0.4</td>
<td>8.6</td>
<td>6.5</td>
<td>2.1</td>
<td>7.0</td>
<td>8.2</td>
</tr>
</tbody>
</table>

Source: NSE.

Note: DII: Domestic Institutional Investors include Banks, Mutual Funds, Insurance Companies, NBFCs, Domestic VC Funds, AIFs, PMS clients etc., FII: Foreign Institutional Investors include FPIs, FDIs and Foreign VC Funds etc., Prop traders: Proprietary Traders, Individual investors: individual domestic investors, NRIs, sole proprietorship firms and HUFs, Others: Partnership Firms/LLP, Trust / Society, Depository Receipts, Statutory Bodies, OCB, FNs, etc. Figures in brackets indicate negative numbers. *percentage points

**Figure 200: Trends in share of client participation in Stock Futures at NSE (%)**

Source: NSE.

Note: DII: Domestic Institutional Investors include Banks, Mutual Funds, Insurance Companies, NBFCs, Domestic VC Funds, AIFs, PMS clients etc., FII: Foreign Institutional Investors include FPIs, FDIs and Foreign VC Funds etc., Prop traders: Proprietary Traders, Individual investors: individual domestic investors, NRIs, sole proprietorship firms and HUFs, Others: Partnership Firms/LLP, Trust / Society, Depository Receipts, Statutory Bodies, OCB, FNs, etc. FY22 considers data till July 2021.
**Share of corporates and retail investors highest in July in index options premium:** The share of corporates expanded 240bps MoM in the month of July to touch a 15-month high of 7.7%. The share of individual investors in index options premium turnover expanded marginally in June and recorded 34.8% in July - the highest level in last 28 since April 2019. While share of corporates and retail investors gained in June, share of proprietary traders and FIIs declined.

While the share of proprietary traders in Index options declined nearly 14 percentage points from 53% of the total premium turnover in FY16 to 39% in FY21 (before rising to 41% in FY22), they hold the largest share in index options premium turnover as on date. The fall in market share of prop traders was largely offset by a significant rise (10 percentage points) in the share of individual investors from 22% to 32% over the same period. Among other clients, share of Corporate declined nearly five (5) percentage points from 11% to 6% over the period, whereas FIIs’ investment remains negligible in the segment throughout the period due to regulatory restrictions in derivatives segment.

**Figure 201: Share of client participation in Index Options of NSE (%)**

<table>
<thead>
<tr>
<th>Client category</th>
<th>Jul-21</th>
<th>Jun-21</th>
<th>Change*</th>
<th>FY22TD</th>
<th>FY21TD</th>
<th>Change*</th>
<th>FY21</th>
<th>CY21TD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Index Options (Premium Turnover)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporates</td>
<td>7.7</td>
<td>5.3</td>
<td>2.4</td>
<td>5.6</td>
<td>6.8</td>
<td>(1.2)</td>
<td>5.8</td>
<td>5.5</td>
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<tr>
<td>DII</td>
<td>0.1</td>
<td>0.1</td>
<td>(0.0)</td>
<td>0.1</td>
<td>0.1</td>
<td>(0.0)</td>
<td>0.0</td>
<td>0.1</td>
</tr>
<tr>
<td>FII</td>
<td>9.6</td>
<td>11.2</td>
<td>(1.6)</td>
<td>11.6</td>
<td>19.4</td>
<td>(7.8)</td>
<td>15.6</td>
<td>12.8</td>
</tr>
<tr>
<td>Individuals investors</td>
<td>34.8</td>
<td>34.1</td>
<td>0.7</td>
<td>33.5</td>
<td>31.3</td>
<td>2.2</td>
<td>31.5</td>
<td>32.3</td>
</tr>
<tr>
<td>PRO</td>
<td>41.7</td>
<td>42.4</td>
<td>(0.7)</td>
<td>42.8</td>
<td>34.1</td>
<td>8.7</td>
<td>39.3</td>
<td>42.4</td>
</tr>
<tr>
<td>Others</td>
<td>6.1</td>
<td>6.9</td>
<td>(0.9)</td>
<td>6.5</td>
<td>8.4</td>
<td>(1.9)</td>
<td>7.6</td>
<td>6.9</td>
</tr>
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<td><strong>Index Options (Notional Turnover)</strong></td>
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<td>Corporates</td>
<td>7.6</td>
<td>6.0</td>
<td>1.6</td>
<td>6.2</td>
<td>7.1</td>
<td>(0.9)</td>
<td>6.5</td>
<td>6.2</td>
</tr>
<tr>
<td>DII</td>
<td>0.0</td>
<td>0.0</td>
<td>(0.0)</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>FII</td>
<td>9.0</td>
<td>10.2</td>
<td>(1.3)</td>
<td>10.3</td>
<td>17.1</td>
<td>(6.9)</td>
<td>13.1</td>
<td>11.1</td>
</tr>
<tr>
<td>Individuals investors</td>
<td>29.0</td>
<td>27.8</td>
<td>1.1</td>
<td>28.2</td>
<td>30.7</td>
<td>(2.5)</td>
<td>29.1</td>
<td>27.7</td>
</tr>
<tr>
<td>PRO</td>
<td>47.8</td>
<td>48.6</td>
<td>(0.8)</td>
<td>48.5</td>
<td>35.3</td>
<td>13.2</td>
<td>43.0</td>
<td>48.0</td>
</tr>
<tr>
<td>Others</td>
<td>6.7</td>
<td>7.3</td>
<td>(0.6)</td>
<td>6.8</td>
<td>9.7</td>
<td>(2.9)</td>
<td>8.2</td>
<td>6.9</td>
</tr>
</tbody>
</table>

Source: NSE.

Note: DII: Domestic Institutional Investors include Banks, Mutual Funds, Insurance Companies, NBFCs, Domestic VC Funds, AIFs, PMS clients etc., FII: Foreign Institutional Investors include FPIs, FDI’s and Foreign VC Funds etc., Prop traders: Proprietary Traders, Individual investors: Individual domestic investors, NRIs, sole proprietorship firms and HUFs, Others: Partnership Firms/LLP, Trust / Society, Depository Receipts, Statutory Bodies, OCB, FNs, etc. Figures in brackets indicate negative numbers. *percentage points
Share of FIIs in stock options premium turnover improved marginally in July: While the percentage share of FIIs and Others expanded marginally by 30bps MoM and 60bps MoM in July. The expansion in share of FIIs and Others was offset by decline in share of individual investors, corporates and proprietary traders.

While FIIs enjoy double-digit share in equity futures segment and index options segment, their share in stock options turnover has fallen significantly from 11% in FY16 to 5% in FY21, which was offset by proprietary traders and Individual investors. Out of total premium turnover in stock options, around 48% was contributed by Proprietary traders and 32% by Individual investors in FY21, which accounts for the largest share in equity options turnover.
Figure 204: Share of client participation in Stock Options of NSE (%)

<table>
<thead>
<tr>
<th>Client category</th>
<th>Jul-21</th>
<th>Jun-21</th>
<th>Change*</th>
<th>FY22TD</th>
<th>FY21TD</th>
<th>Change*</th>
<th>FY21</th>
<th>CY21TD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporates</td>
<td>4.6</td>
<td>4.8</td>
<td>(0.3)</td>
<td>4.6</td>
<td>6.0</td>
<td>(1.4)</td>
<td>5.3</td>
<td>4.8</td>
</tr>
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<td>0.1</td>
<td>0.0</td>
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<td>0.0</td>
<td>0.1</td>
<td>0.0</td>
<td>0.1</td>
</tr>
<tr>
<td>FII</td>
<td>7.2</td>
<td>6.9</td>
<td>0.3</td>
<td>7.1</td>
<td>4.9</td>
<td>2.3</td>
<td>5.2</td>
<td>6.8</td>
</tr>
<tr>
<td>Individuals investors</td>
<td>33.4</td>
<td>33.9</td>
<td>(0.5)</td>
<td>32.9</td>
<td>32.5</td>
<td>0.5</td>
<td>32.4</td>
<td>32.3</td>
</tr>
<tr>
<td>PRO</td>
<td>49.8</td>
<td>49.9</td>
<td>(0.1)</td>
<td>50.1</td>
<td>46.0</td>
<td>4.1</td>
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<td>49.7</td>
</tr>
<tr>
<td>Others</td>
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<td>5.1</td>
<td>10.6</td>
<td>(5.5)</td>
<td>9.4</td>
<td>6.2</td>
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</table>

<table>
<thead>
<tr>
<th>Client category</th>
<th>Stock Options (Premium turnover)</th>
</tr>
</thead>
<tbody>
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<td>Corporates</td>
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</tr>
<tr>
<td>DII</td>
<td>0.1</td>
</tr>
<tr>
<td>FII</td>
<td>8.4</td>
</tr>
<tr>
<td>Individuals investors</td>
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</tr>
<tr>
<td>PRO</td>
<td>51.0</td>
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<tr>
<td>Others</td>
<td>5.1</td>
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</table>

Stock Options (Notional turnover)

<table>
<thead>
<tr>
<th>Client category</th>
<th>Jul-21</th>
<th>Jun-21</th>
<th>Change*</th>
<th>FY22TD</th>
<th>FY21TD</th>
<th>Change*</th>
<th>FY21</th>
<th>CY21TD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporates</td>
<td>4.6</td>
<td>4.6</td>
<td>0.0</td>
<td>4.5</td>
<td>6.5</td>
<td>(2.0)</td>
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<td>4.8</td>
</tr>
<tr>
<td>DII</td>
<td>0.1</td>
<td>0.1</td>
<td>(0.0)</td>
<td>0.1</td>
<td>0.0</td>
<td>0.1</td>
<td>0.0</td>
<td>0.1</td>
</tr>
<tr>
<td>FII</td>
<td>8.4</td>
<td>7.9</td>
<td>0.5</td>
<td>8.4</td>
<td>6.2</td>
<td>2.1</td>
<td>6.8</td>
<td>8.3</td>
</tr>
<tr>
<td>Individuals investors</td>
<td>30.8</td>
<td>31.7</td>
<td>(0.9)</td>
<td>30.9</td>
<td>32.0</td>
<td>(1.1)</td>
<td>31.1</td>
<td>30.5</td>
</tr>
<tr>
<td>PRO</td>
<td>51.0</td>
<td>50.9</td>
<td>0.1</td>
<td>50.8</td>
<td>45.1</td>
<td>5.7</td>
<td>47.3</td>
<td>50.0</td>
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<td>Others</td>
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<td>4.7</td>
<td>0.4</td>
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<td>10.1</td>
<td>(4.7)</td>
<td>9.3</td>
<td>6.4</td>
</tr>
</tbody>
</table>

Source: NSE.
Note: DII: Domestic Institutional Investors include Banks, Mutual Funds, Insurance Companies, NBFCs, Domestic VC Funds, AIFs, PMS clients etc., FII: Foreign Institutional Investors include FPIs, FDIs and Foreign VC Funds etc., Prop traders: Proprietary Traders, Individual investors: individual domestic investors, NRIs, sole proprietorship firms and HUFs, Others: Partnership Firms/LLP, Trust / Society, Depository Receipts, Statutory Bodies, OCB, FNs, etc. Figures in brackets indicate negative numbers. *percentage points

Figure 205: Trends in share of client participation in Stock Options (Notional Turnover) at NSE (%)

<table>
<thead>
<tr>
<th>Client category</th>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
<th>FY19</th>
<th>FY20</th>
<th>FY21</th>
<th>FY22</th>
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</thead>
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<td>37</td>
<td>36</td>
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<td>42</td>
<td>47</td>
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<td>PRO</td>
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<tr>
<td>Others</td>
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<td>10</td>
<td>8</td>
<td>6</td>
<td>5</td>
</tr>
</tbody>
</table>

Source: NSE.
Note: DII: Domestic Institutional Investors include Banks, Mutual Funds, Insurance Companies, NBFCs, Domestic VC Funds, AIFs, PMS clients etc., FII: Foreign Institutional Investors include FPIs, FDIs and Foreign VC Funds etc., Prop traders: Proprietary Traders, Individual investors: individual domestic investors, NRIs, sole proprietorship firms and HUFs, Others: Partnership Firms/LLP, Trust / Society, Depository Receipts, Statutory Bodies, OCB, FNs, etc. FY22 considers data till July 2021.

Figure 206: Trends in share of client participation in Stock Options (Premium Turnover) at NSE (%)

<table>
<thead>
<tr>
<th>Client category</th>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
<th>FY19</th>
<th>FY20</th>
<th>FY21</th>
<th>FY22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporates</td>
<td>42</td>
<td>40</td>
<td>40</td>
<td>43</td>
<td>33</td>
<td>48</td>
<td>50</td>
</tr>
<tr>
<td>FII</td>
<td>30</td>
<td>31</td>
<td>31</td>
<td>30</td>
<td>29</td>
<td>32</td>
<td>33</td>
</tr>
<tr>
<td>PRO</td>
<td>10</td>
<td>10</td>
<td>12</td>
<td>10</td>
<td>9</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Others</td>
<td>11</td>
<td>13</td>
<td>13</td>
<td>12</td>
<td>19</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

Source: NSE.
Note: DII: Domestic Institutional Investors include Banks, Mutual Funds, Insurance Companies, NBFCs, Domestic VC Funds, AIFs, PMS clients etc., FII: Foreign Institutional Investors include FPIs, FDIs and Foreign VC Funds etc., Prop traders: Proprietary Traders, Individual investors: individual domestic investors, NRIs, sole proprietorship firms and HUFs, Others: Partnership Firms/LLP, Trust / Society, Depository Receipts, Statutory Bodies, OCB, FNs, etc. FY22 considers data till July 2021.
Share of FIIs and retail investors in currency derivatives expanded in July: The share of FIIs and retail investors expanded 80bps MoM and 70bps MoM to touch 10.6% and 21.6% respectively in the month of July. While their respective shares have expanded in July their overall share in current fiscal remains lower by 590bps YoY and 200bps from previous fiscal levels during the same period.

Proprietary traders-excl. banks maintained the highest market share in the currency segment, even as their share declined significantly over the last six years from 49% in FY16 to 43% in FY21 before rising to 51% in the current fiscal. Share of banks’ turnover declined from 16% to 8% respectively. Among other categories, individual investors have been able to increase their share in these segments during this period from 12% in FY16 to 22% in FY21. FIIs have gained a significant share in Currency futures since FY19, while DIIs—excluding banks do not have much presence in both futures and options.

**Figure 207: Share of client participation in Currency Derivatives segment of NSE (%)**

<table>
<thead>
<tr>
<th>Client category</th>
<th>Jul-21</th>
<th>Jun-21</th>
<th>Change*</th>
<th>FY22TD</th>
<th>FY21TD</th>
<th>Change*</th>
<th>FY21</th>
<th>CY21TD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currency Derivates (Premium Turnover)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporates</td>
<td>7.2</td>
<td>7.6</td>
<td>(0.4)</td>
<td>7.6</td>
<td>8.7</td>
<td>(1.1)</td>
<td>8.9</td>
<td>8.4</td>
</tr>
<tr>
<td>FIIs</td>
<td>10.6</td>
<td>9.8</td>
<td>0.8</td>
<td>10.3</td>
<td>16.3</td>
<td>(5.9)</td>
<td>14.5</td>
<td>10.7</td>
</tr>
<tr>
<td>Banks</td>
<td>7.0</td>
<td>8.1</td>
<td>(1.1)</td>
<td>7.8</td>
<td>7.4</td>
<td>0.4</td>
<td>8.7</td>
<td>9.0</td>
</tr>
<tr>
<td>DIIs-ex banks</td>
<td>0.4</td>
<td>0.4</td>
<td>(0.0)</td>
<td>0.4</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.4</td>
</tr>
<tr>
<td>PRO-ex banks</td>
<td>51.3</td>
<td>51.3</td>
<td>(0.0)</td>
<td>50.8</td>
<td>40.5</td>
<td>10.2</td>
<td>43.4</td>
<td>48.6</td>
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<td>Individuals</td>
<td>21.6</td>
<td>20.9</td>
<td>0.7</td>
<td>21.3</td>
<td>23.3</td>
<td>(2.0)</td>
<td>21.9</td>
<td>21.0</td>
</tr>
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<td>Others</td>
<td>1.8</td>
<td>1.9</td>
<td>(0.1)</td>
<td>1.9</td>
<td>3.6</td>
<td>(1.8)</td>
<td>2.4</td>
<td>1.9</td>
</tr>
<tr>
<td>Currency Derivates (Notional Turnover)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporates</td>
<td>5.3</td>
<td>5.1</td>
<td>0.2</td>
<td>5.4</td>
<td>6.8</td>
<td>(1.3)</td>
<td>7.2</td>
<td>6.2</td>
</tr>
<tr>
<td>FIIs</td>
<td>5.8</td>
<td>5.7</td>
<td>0.1</td>
<td>6.5</td>
<td>9.3</td>
<td>(2.7)</td>
<td>8.9</td>
<td>7.0</td>
</tr>
<tr>
<td>Banks</td>
<td>3.6</td>
<td>3.8</td>
<td>(0.3)</td>
<td>3.8</td>
<td>4.9</td>
<td>(1.1)</td>
<td>5.4</td>
<td>4.6</td>
</tr>
<tr>
<td>DIIs-ex banks</td>
<td>0.2</td>
<td>0.2</td>
<td>(0.0)</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.2</td>
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<tr>
<td>PRO-ex banks</td>
<td>54.9</td>
<td>56.4</td>
<td>(1.5)</td>
<td>55.8</td>
<td>49.1</td>
<td>6.8</td>
<td>50.5</td>
<td>54.1</td>
</tr>
<tr>
<td>Individuals</td>
<td>26.7</td>
<td>25.3</td>
<td>1.4</td>
<td>24.9</td>
<td>24.9</td>
<td>(0.0)</td>
<td>24.0</td>
<td>24.4</td>
</tr>
<tr>
<td>Others</td>
<td>3.5</td>
<td>3.5</td>
<td>0.1</td>
<td>3.4</td>
<td>5.0</td>
<td>(1.7)</td>
<td>3.9</td>
<td>3.5</td>
</tr>
</tbody>
</table>

Source: NSE.

Note: DIIs-ex banks include Mutual Funds, Insurance Companies, NBFCs, Domestic VC Funds, AIFs, PMS clients etc., FIIs: Foreign Institutional Investors include FPIs, FDIs and Foreign VC Funds etc., Prop traders: Proprietary Traders, Individual investors: individual domestic investors, NRIs, sole proprietorship firms and HUFs, Others: Partnership Firms/LLP, Trust / Society, Depository Receipts, Statutory Bodies, OCB, FNs, etc. Figures in brackets indicate negative numbers. *percentage points
Figure 208: Trends in share of client participation in Currency Derivatives (Notional Turnover) at NSE (%)

Figure 209: Trends in share of client participation in Currency Derivatives (Premium Turnover) at NSE (%)

Source: NSE.

Note: DII ex-banks include Mutual Funds, Insurance Companies, NBFCs, Domestic VC Funds, AIFs, PMS clients etc., FII: Foreign Institutional Investors include FPIs, FDIs and Foreign VC Funds etc., Prop traders: Proprietary Traders, Individual investors: individual domestic investors, NRIs, sole proprietorship firms and HUFs, Others: Partnership Firms/LLP, Trust / Society, Depository Receipts, Statutory Bodies, OCB, FNs, etc. Figures in brackets indicate negative numbers. *percentage points

Figure 210: Share of client participation in Currency Futures of NSE (%)

Source: NSE.

Note: DII ex-banks include Mutual Funds, Insurance Companies, NBFCs, Domestic VC Funds, AIFs, PMS clients etc., FII: Foreign Institutional Investors include FPIs, FDIs and Foreign VC Funds etc., Prop traders: Proprietary Traders, Individual investors: individual domestic investors, NRIs, sole proprietorship firms and HUFs, Others: Partnership Firms/LLP, Trust / Society, Depository Receipts, Statutory Bodies, OCB, FNs, etc. Figures in brackets indicate negative numbers. *percentage points
Figure 211: Trends in share of client participation in Currency Futures at NSE (%)  

Source: NSE.  
Note: DII ex-banks include Mutual Funds, Insurance Companies, NBFCs, Domestic VC Funds, AIFs, PMS clients etc., FII: Foreign Institutional Investors include FPIs, FDI and Foreign VC Funds etc., Prop traders: Proprietary Traders, Individual investors: individual domestic investors, NRIs, sole proprietorship firms and HUFs, Others: Partnership Firms/LLP, Trust/Society, Depository Receipts, Statutory Bodies, OCB, FNs etc. Figures in brackets indicate negative numbers. *percentage points

Figure 212: Share of client participation in Currency Options of NSE (%)  

Source: NSE.  
Note: DII ex-banks include Mutual Funds, Insurance Companies, NBFCs, Domestic VC Funds, AIFs, PMS clients etc., FII: Foreign Institutional Investors include FPIs, FDI and Foreign VC Funds etc., Prop traders: Proprietary Traders, Individual investors: individual domestic investors, NRIs, sole proprietorship firms and HUFs, Others: Partnership Firms/LLP, Trust/Society, Depository Receipts, Statutory Bodies, OCB, FNs etc. Figures in brackets indicate negative numbers. *percentage points
Share of corporates and proprietary traders in interest rate futures expanded in July:
The percentage share of corporates and proprietary traders (excl. banks) in interest rate futures expanded 450bps MoM and 540 bps MoM in the month July to touch 23.3% and 27.2% respectively. While the share of corporates and proprietary traders expanded, share of retail investors fell by 650bps MoM to touch 14.4%.

The distribution of turnover in interest rate futures across client categories changed significantly, particularly in FY21 as compared to the previous fiscal years. While, the participation of retail clients, banks and corporate in the interest rate futures had inched up in FY21, the share of proprietary traders—excluding banks declined 23 percentage points from 52% in FY20 to 28% in FY21. Notably, the market share of banks has risen from 16% in FY16 to 27% in FY21 and rising further to 31% in current fiscal.
Figure 215: Share of client participation in Interest Rate Futures of NSE (%)

<table>
<thead>
<tr>
<th>Client category</th>
<th>Jul-21</th>
<th>Jun-21</th>
<th>Change</th>
<th>FY22TD</th>
<th>FY21TD</th>
<th>Change</th>
<th>FY21</th>
<th>CY21TD</th>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporates</td>
<td>23.3</td>
<td>18.8</td>
<td>4.5</td>
<td>25.4</td>
<td>23.9</td>
<td>1.5</td>
<td>24.4</td>
<td>24.4</td>
</tr>
<tr>
<td>FIIs</td>
<td>0.8</td>
<td>1.1</td>
<td>(0.3)</td>
<td>1.1</td>
<td>0.6</td>
<td>0.6</td>
<td>0.7</td>
<td>0.8</td>
</tr>
<tr>
<td>Banks</td>
<td>34.1</td>
<td>32.8</td>
<td>1.3</td>
<td>31.1</td>
<td>26.5</td>
<td>4.5</td>
<td>27.3</td>
<td>28.0</td>
</tr>
<tr>
<td>DII ex-banks</td>
<td>0.0</td>
<td>4.5</td>
<td>(4.5)</td>
<td>2.7</td>
<td>4.3</td>
<td>(1.7)</td>
<td>5.3</td>
<td>4.9</td>
</tr>
<tr>
<td>PRO ex-banks</td>
<td>27.2</td>
<td>21.8</td>
<td>5.4</td>
<td>25.8</td>
<td>32.8</td>
<td>(7.1)</td>
<td>28.2</td>
<td>24.2</td>
</tr>
<tr>
<td>Individuals investors</td>
<td>14.4</td>
<td>20.9</td>
<td>(6.5)</td>
<td>14.0</td>
<td>11.7</td>
<td>2.3</td>
<td>14.0</td>
<td>17.6</td>
</tr>
<tr>
<td>Others</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.1</td>
<td>(0.1)</td>
<td>0.1</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Source: NSE.

Note: DII ex-banks include Mutual Funds, Insurance Companies, NBFCs, Domestic VC Funds, AIFs, PMS clients etc., FIIs: Foreign Institutional Investors include FPIs, FDIs and Foreign VC Funds etc., Prop traders: Proprietary Traders, Individual investors: individual domestic investors, NRIs, sole proprietorship firms and HUFs, Others: Partnership Firms/LLP, Trust / Society, Depository Receipts, Statutory Bodies, OCB, FNs, etc. Figures in brackets indicate negative numbers. *percentage points

Figure 216: Trends in share of client participation in Interest Rate Futures at NSE (%)

Source: NSE.

Note: DII ex-banks include Mutual Funds, Insurance Companies, NBFCs, Domestic VC Funds, AIFs, PMS clients etc., FIIs: Foreign Institutional Investors include FPIs, FDIs and Foreign VC Funds etc., Prop traders: Proprietary Traders, Individual investors: individual domestic investors, NRIs, sole proprietorship firms and HUFs, Others: Partnership Firms/LLP, Trust / Society, AIF, Depository Receipts, PMS clients, Statutory Bodies, OCB, FNs, etc. FY22 considers data till July 2021.
### Figure 217: Share of client participation in Interest Rate Options of NSE (%)

<table>
<thead>
<tr>
<th>Client category</th>
<th>J ul-21</th>
<th>Jun-21</th>
<th>Change*</th>
<th>FY22TD</th>
<th>FY21TD</th>
<th>Change*</th>
<th>FY21</th>
<th>CY21TD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Interest rate options (Premium Turnover)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporates</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>41.6</td>
<td>(41.6)</td>
<td>41.6</td>
<td>0.0</td>
</tr>
<tr>
<td>FII</td>
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<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Banks</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>19.0</td>
<td>(19.0)</td>
<td>18.9</td>
<td>0.0</td>
</tr>
<tr>
<td>DI1 ex-banks</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>PRO ex-banks</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>33.0</td>
<td>(33.0)</td>
<td>33.0</td>
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</tr>
<tr>
<td>Individuals investors</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>6.4</td>
<td>(6.4)</td>
<td>6.5</td>
<td>0.0</td>
</tr>
<tr>
<td>Others</td>
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<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

**Interest rate options (Notional Turnover)**

<table>
<thead>
<tr>
<th>Client category</th>
<th>J ul-21</th>
<th>Jun-21</th>
<th>Change*</th>
<th>FY22TD</th>
<th>FY21TD</th>
<th>Change*</th>
<th>FY21</th>
<th>CY21TD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporates</td>
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<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>47.4</td>
<td>(47.4)</td>
<td>47.2</td>
<td>0.0</td>
</tr>
<tr>
<td>FII</td>
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<td>0.0</td>
<td>0.0</td>
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<td>0.0</td>
<td>0.0</td>
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<td>0.0</td>
</tr>
<tr>
<td>Banks</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>15.6</td>
<td>(15.6)</td>
<td>15.6</td>
<td>0.0</td>
</tr>
<tr>
<td>DI1 ex-banks</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>30.5</td>
<td>(30.5)</td>
<td>30.5</td>
<td>0.0</td>
</tr>
<tr>
<td>PRO ex-banks</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>6.5</td>
<td>(6.5)</td>
<td>6.6</td>
<td>0.0</td>
</tr>
<tr>
<td>Individuals investors</td>
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<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Source: NSE.

Note: DI1 ex-banks include Mutual Funds, Insurance Companies, NBFCs, Domestic VC Funds, AIFs, PMS clients etc., FII: Foreign Institutional Investors include FPIs, FDIs and Foreign VC Funds etc., Prop traders: Proprietary Traders, Individual investors: individual domestic investors, NRIs, sole proprietorship firms and HUFs, Others: Partnership Firms/LLP, Trust / Society, AIF, Depository Receipts, PMS clients, Statutory Bodies, OCB, FNs, etc. Interest rate options were introduced in December 2019. Figures in brackets indicate negative numbers. *percentage points.

### Figure 218: Share of client participation in Interest Rate Derivatives segment of NSE (%)

<table>
<thead>
<tr>
<th>Client category</th>
<th>J ul-21</th>
<th>Jun-21</th>
<th>Change*</th>
<th>FY22TD</th>
<th>FY21TD</th>
<th>Change*</th>
<th>FY21</th>
<th>CY21TD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Interest rate derivatives (Premium Turnover)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporates</td>
<td>23.3</td>
<td>18.8</td>
<td>4.5</td>
<td>25.4</td>
<td>23.9</td>
<td>1.5</td>
<td>24.4</td>
<td>24.4</td>
</tr>
<tr>
<td>FII</td>
<td>0.8</td>
<td>1.1</td>
<td>(0.3)</td>
<td>1.1</td>
<td>0.6</td>
<td>0.6</td>
<td>0.6</td>
<td>0.8</td>
</tr>
<tr>
<td>Banks</td>
<td>34.1</td>
<td>32.8</td>
<td>1.3</td>
<td>31.1</td>
<td>26.5</td>
<td>4.5</td>
<td>27.3</td>
<td>28.0</td>
</tr>
<tr>
<td>DI1 ex-banks</td>
<td>0.0</td>
<td>4.5</td>
<td>(4.5)</td>
<td>2.7</td>
<td>4.3</td>
<td>(1.7)</td>
<td>5.3</td>
<td>4.9</td>
</tr>
<tr>
<td>PRO ex-banks</td>
<td>27.2</td>
<td>21.8</td>
<td>5.4</td>
<td>25.8</td>
<td>32.8</td>
<td>(7.1)</td>
<td>28.2</td>
<td>24.2</td>
</tr>
<tr>
<td>Individuals investors</td>
<td>14.4</td>
<td>20.9</td>
<td>(6.5)</td>
<td>14.0</td>
<td>11.7</td>
<td>2.3</td>
<td>14.0</td>
<td>17.6</td>
</tr>
<tr>
<td>Others</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.1</td>
<td>(0.1)</td>
<td>0.1</td>
<td>0.0</td>
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</tbody>
</table>

**Interest rate derivatives (Notional Turnover)**

<table>
<thead>
<tr>
<th>Client category</th>
<th>J ul-21</th>
<th>Jun-21</th>
<th>Change*</th>
<th>FY22TD</th>
<th>FY21TD</th>
<th>Change*</th>
<th>FY21</th>
<th>CY21TD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporates</td>
<td>23.3</td>
<td>18.8</td>
<td>4.5</td>
<td>25.4</td>
<td>24.3</td>
<td>1.1</td>
<td>24.6</td>
<td>24.4</td>
</tr>
<tr>
<td>FII</td>
<td>0.8</td>
<td>1.1</td>
<td>(0.3)</td>
<td>1.1</td>
<td>0.6</td>
<td>0.6</td>
<td>0.6</td>
<td>0.8</td>
</tr>
<tr>
<td>Banks</td>
<td>34.1</td>
<td>32.8</td>
<td>1.3</td>
<td>31.1</td>
<td>26.4</td>
<td>4.7</td>
<td>27.2</td>
<td>28.0</td>
</tr>
<tr>
<td>DI1 ex-banks</td>
<td>0.0</td>
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<td>(4.5)</td>
<td>2.7</td>
<td>4.2</td>
<td>(1.6)</td>
<td>5.2</td>
<td>4.9</td>
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<td>PRO ex-banks</td>
<td>27.2</td>
<td>21.8</td>
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<td>25.8</td>
<td>32.8</td>
<td>(7.0)</td>
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<td>24.2</td>
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<td>20.9</td>
<td>(6.5)</td>
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<td>11.6</td>
<td>2.4</td>
<td>13.9</td>
<td>17.6</td>
</tr>
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<td>0.1</td>
<td>(0.1)</td>
<td>0.1</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Source: NSE.

Note: DI1 ex-banks include Mutual Funds, Insurance Companies, NBFCs, Domestic VC Funds, AIFs, PMS clients etc., FII: Foreign Institutional Investors include FPIs, FDIs and Foreign VC Funds etc., Prop traders: Proprietary Traders, Individual investors: individual domestic investors, NRIs, sole proprietorship firms and HUFs, Others: Partnership Firms/LLP, Trust / Society, AIF, Depository Receipts, PMS clients, Statutory Bodies, OCB, FNs, etc. Interest rate options were introduced in December 2019. Figures in brackets indicate negative numbers. *percentage points.
Share of proprietary traders in commodities derivatives segment contracted in July:

While proprietary traders comprise nearly 90% of the overall commodities derivatives segment, their participation in the commodity options segment is comparatively lower comprising only 57% as on end of FY21 with rest of the share belonging majorly to individual investors and corporates. Their respective share in commodities futures segment amount to 3.5% and 0.5% during the same period.

July witnessed a significant contraction in the share of proprietary traders in commodities derivatives segment by 397bps MoM from 97.9% to 58.2%. The decline in share of proprietary traders can be attributed to the fall in commodities futures trading.

Figure 219: Share of client participation in Commodity derivatives segment of NSE (%)

<table>
<thead>
<tr>
<th>Client category</th>
<th>Jul-21</th>
<th>Jun-21</th>
<th>Change*</th>
<th>FY22TD</th>
<th>FY21TD</th>
<th>Change*</th>
<th>FY21</th>
<th>CY21TD</th>
</tr>
</thead>
<tbody>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporates</td>
<td>2.4</td>
<td>0.5</td>
<td>1.9</td>
<td>1.9</td>
<td>30.3</td>
<td>(28.4)</td>
<td>3.5</td>
<td>1.0</td>
</tr>
<tr>
<td>DII</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>FI</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Individuals investors</td>
<td>0.1</td>
<td>0.9</td>
<td>(0.8)</td>
<td>0.5</td>
<td>1.5</td>
<td>(1.0)</td>
<td>0.5</td>
<td>0.4</td>
</tr>
<tr>
<td>PRO</td>
<td>58.2</td>
<td>98.5</td>
<td>(40.3)</td>
<td>83.9</td>
<td>68.2</td>
<td>15.7</td>
<td>95.7</td>
<td>93.4</td>
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<td></td>
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<td></td>
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<td>Corporates</td>
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<td>(5.3)</td>
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<td>15.7</td>
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<td>Individuals investors</td>
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<td>5.6</td>
<td>30.8</td>
<td>(25.2)</td>
<td>20.8</td>
<td>6.0</td>
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<td>16.1</td>
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<td><strong>Commodities derivatives (Premium Turnover)</strong></td>
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<td>1.8</td>
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<td>(23.6)</td>
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<td>(7.5)</td>
<td>1.5</td>
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<td>(39.7)</td>
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<td>93.8</td>
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<td>38.8</td>
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<td><strong>Commodities options (Notional Turnover)</strong></td>
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<td>(23.8)</td>
<td>19.7</td>
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<td>0.2</td>
<td>16.4</td>
<td>10.1</td>
<td>19.5</td>
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162/184
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<td>(2.5)</td>
<td>4.3</td>
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<td>(24.7)</td>
<td>15.9</td>
<td>3.8</td>
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<td>15.3</td>
<td>8.1</td>
<td>13.5</td>
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</tbody>
</table>

Source: NSE. Note: DII: Domestic Institutional Investors include Banks, Mutual Funds, Insurance Companies, NBFCs, Domestic VC Funds, AIFs, PMS clients etc., FII: Foreign Institutional Investors include FPIs, FDI's and Foreign VC Funds etc., Prop traders: Proprietary Traders, Individual investors: individual domestic investors, NRIs, sole proprietorship firms and HUFs, Others: Partnership Firms/LLP, Trust / Society, AIF, Depository Receipts, PMS clients, Statutory Bodies, OCB, FNs, etc. NSE commenced trading in Commodity Derivatives with the launch of bullion futures on October 12, 2018. NSE launched commodities options contracts on June 8th, 2020 by introducing options contracts in gold mini. Figures in brackets indicate negative numbers. *percentage points.
Asset category-wise open interest (average daily volume)

**Figure 220: Average daily volume of open interest in Equity derivatives (million contracts)**

<table>
<thead>
<tr>
<th>Category</th>
<th>Jul-21</th>
<th>Jul-21 % Change</th>
<th>FY22TD</th>
<th>FY21TD % Change</th>
<th>FY21</th>
<th>CY21TD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Stock Derivatives</td>
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<td>FUTSTK</td>
<td>4,858</td>
<td>4,704</td>
<td>3.3</td>
<td>4,571</td>
<td>3,092</td>
<td>47.8</td>
</tr>
<tr>
<td>OPTSTK</td>
<td>3,941</td>
<td>3,644</td>
<td>8.2</td>
<td>3,345</td>
<td>1,539</td>
<td>117.3</td>
</tr>
<tr>
<td>Index Futures</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>BANKNIFTY</td>
<td>2.2</td>
<td>1.9</td>
<td>16.0</td>
<td>1.9</td>
<td>1.6</td>
<td>24.2</td>
</tr>
<tr>
<td>NIFTY</td>
<td>10.3</td>
<td>11.3</td>
<td>(8.4)</td>
<td>11.0</td>
<td>11.6</td>
<td>(4.6)</td>
</tr>
<tr>
<td>FINNIFTY</td>
<td>0.0</td>
<td>0.0</td>
<td>(29.7)</td>
<td>0.0</td>
<td>-</td>
<td>NA</td>
</tr>
<tr>
<td>NIFTYIT</td>
<td>-</td>
<td>-</td>
<td>NA</td>
<td>-</td>
<td>0.0</td>
<td>(100.0)</td>
</tr>
<tr>
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</tr>
<tr>
<td>BANKNIFTY</td>
<td>43.9</td>
<td>38.6</td>
<td>13.8</td>
<td>36.2</td>
<td>14.7</td>
<td>147.2</td>
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<tr>
<td>NIFTY</td>
<td>165.3</td>
<td>159.4</td>
<td>3.7</td>
<td>161.5</td>
<td>111.2</td>
<td>45.3</td>
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<td>FINNIFTY</td>
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<td>0.1</td>
<td>(61.5)</td>
<td>0.1</td>
<td>0.0</td>
<td>NA</td>
</tr>
<tr>
<td>NIFTYIT</td>
<td>-</td>
<td>-</td>
<td>NA</td>
<td>-</td>
<td>0.0</td>
<td>(100.0)</td>
</tr>
</tbody>
</table>

Source: NSE Note: Figures in brackets indicate negative numbers.

**Figure 221: Average daily volume of open interest in Currency derivatives (no of contracts)**

<table>
<thead>
<tr>
<th>Category</th>
<th>Jul-21</th>
<th>Jul-21 % Change</th>
<th>FY22TD</th>
<th>FY21TD % Change</th>
<th>FY21</th>
<th>CY21TD</th>
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<tbody>
<tr>
<td>Futures</td>
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</tr>
<tr>
<td>EURINR</td>
<td>143,441</td>
<td>142,681</td>
<td>0.5</td>
<td>158,552</td>
<td>148,726</td>
<td>6.6</td>
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<tr>
<td>EURUSD</td>
<td>2,668</td>
<td>3,076</td>
<td>(13.3)</td>
<td>2,790</td>
<td>3,961</td>
<td>(29.6)</td>
</tr>
<tr>
<td>GBPINR</td>
<td>191,413</td>
<td>178,275</td>
<td>7.4</td>
<td>210,099</td>
<td>62,062</td>
<td>238.5</td>
</tr>
<tr>
<td>GBPUSD</td>
<td>3,614</td>
<td>3,905</td>
<td>(7.5)</td>
<td>3,486</td>
<td>2,594</td>
<td>34.4</td>
</tr>
<tr>
<td>JPYINR</td>
<td>30,688</td>
<td>33,676</td>
<td>(8.9)</td>
<td>29,698</td>
<td>35,103</td>
<td>(15.4)</td>
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<td>USDINR</td>
<td>3,268,510</td>
<td>3,420,807</td>
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<td>3,737,194</td>
<td>2,997,191</td>
<td>24.7</td>
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<td>US DJ FJY</td>
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<td>249</td>
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<td>281</td>
<td>58</td>
<td>384.2</td>
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<td>6,427</td>
<td>4,416</td>
<td>45.5</td>
<td>5,106</td>
<td>181</td>
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<tr>
<td>EURUSD</td>
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<td>0</td>
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<td>(100.0)</td>
</tr>
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<td>10,281</td>
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<td>(100.0)</td>
</tr>
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<td>JPYINR</td>
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<td>446</td>
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<td>4,090,150</td>
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<td>4,121,470</td>
<td>2,697,700</td>
<td>52.8</td>
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</tbody>
</table>

Source: NSE Note: Figures in brackets indicate negative numbers.

**Figure 222: Average daily volume of open interest in Interest rate derivatives (no of contracts)**

<table>
<thead>
<tr>
<th>Category</th>
<th>Jul-21</th>
<th>Jul-21 % Change</th>
<th>FY22TD</th>
<th>FY21TD % Change</th>
<th>FY21</th>
<th>CY21TD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest rate futures</td>
<td>30,973</td>
<td>43,995</td>
<td>(29.6)</td>
<td>45,706</td>
<td>83,806</td>
<td>(45.5)</td>
</tr>
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<td>Interest rate options</td>
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<td>-</td>
<td>4,815</td>
<td>(100.0)</td>
</tr>
</tbody>
</table>

Source: NSE Note: Figures in brackets indicate negative numbers.

**Figure 223: Average daily volume of open interest in Commodities derivatives (no of contracts)**

<table>
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<th>Category</th>
<th>Jul-21</th>
<th>Jul-21 % Change</th>
<th>FY22TD</th>
<th>FY21TD % Change</th>
<th>FY21</th>
<th>CY21TD</th>
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<tbody>
<tr>
<td>Commodities futures</td>
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<td>2,549</td>
<td>1,232</td>
<td>106.9</td>
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</tbody>
</table>

Source: NSE Note: Figures in brackets indicate negative numbers. NSE commenced trading in Commodity Derivatives with the launch of bullion futures on October 12, 2018. NSE launched commodities options contracts on J une 8th, 2020 by introducing options contracts in gold mini.
Internet-based trading

Average daily gross traded value through internet declined in July: ADT of internet-based trading (IBT) in July declined 11% MoM to touch Rs157bn in CM segment and 13.6% MoM to touch Rs230bn in equity derivatives segment of NSE. The decline in average daily internet-based trades was in-line with the decline in the overall trading activity of retail investors witnessed in the month of June in the respective segments. Internet-based trading in currency derivatives remained flat at +0.6% MoM to touch an ADT of Rs41bn in July vs Rs40bn in the previous month. The ADT in interest rate derivatives declined 38.6% MoM to touch Rs235m and increased nearly 5 times in commodities derivatives to touch Rs6m.

The trend in IBT has gained momentum since March’20 due to increased retail participation, particularly since the nationwide lockdown, as retail investors and traders started utilising this online platform to trade from their homes. Barring the declines in the last two months of FY21, trading activity through internet strengthened across all segments of NSE except interest rate derivatives as compared to the same period in the previous fiscal. On an average, daily turnover through internet-based trading rose by 70% YoY in Cash market to reach Rs154bn in FY21 (vs. Rs91bn over the same period in FY20). The average daily turnover in cash segment in this fiscal has increased 16.1% YoY as compared to the same period last year.

**Figure 224: Average daily gross turnover through internet-based trading (Rsm)**

<table>
<thead>
<tr>
<th>Segment</th>
<th>Jul-21</th>
<th>Jun-21</th>
<th>% Change</th>
<th>FY22TD</th>
<th>FY21TD</th>
<th>% Change</th>
<th>FY21</th>
<th>CY21TD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash Market</td>
<td>156,669</td>
<td>175,937</td>
<td>(11.0)</td>
<td>171,644</td>
<td>147,828</td>
<td>16.1</td>
<td>154,332</td>
<td>169,905</td>
</tr>
<tr>
<td>Equity Derivatives</td>
<td>230,168</td>
<td>266,291</td>
<td>(13.6)</td>
<td>278,766</td>
<td>288,704</td>
<td>(3.4)</td>
<td>311,085</td>
<td>307,287</td>
</tr>
<tr>
<td>Index Futures</td>
<td>66,248</td>
<td>77,767</td>
<td>(14.8)</td>
<td>90,256</td>
<td>135,024</td>
<td>(33.2)</td>
<td>132,632</td>
<td>109,581</td>
</tr>
<tr>
<td>Stock Futures</td>
<td>119,521</td>
<td>141,689</td>
<td>(15.6)</td>
<td>141,198</td>
<td>130,199</td>
<td>8.4</td>
<td>147,547</td>
<td>151,464</td>
</tr>
<tr>
<td>Index Options</td>
<td>37,838</td>
<td>38,057</td>
<td>(0.6)</td>
<td>39,854</td>
<td>19,760</td>
<td>101.7</td>
<td>26,022</td>
<td>39,040</td>
</tr>
<tr>
<td>Stock Options</td>
<td>6,561</td>
<td>8,778</td>
<td>(25.3)</td>
<td>7,458</td>
<td>3,721</td>
<td>100.4</td>
<td>4,884</td>
<td>7,201</td>
</tr>
<tr>
<td>Currency Derivatives</td>
<td>41,130</td>
<td>40,872</td>
<td>0.6</td>
<td>44,595</td>
<td>39,760</td>
<td>12.2</td>
<td>39,960</td>
<td>42,278</td>
</tr>
<tr>
<td>Currency Futures</td>
<td>40,953</td>
<td>40,697</td>
<td>0.6</td>
<td>44,402</td>
<td>39,651</td>
<td>12.0</td>
<td>39,829</td>
<td>42,092</td>
</tr>
<tr>
<td>Currency Options</td>
<td>177</td>
<td>175</td>
<td>1.0</td>
<td>194</td>
<td>110</td>
<td>76.6</td>
<td>130</td>
<td>186</td>
</tr>
<tr>
<td>Interest Rate Derivatives</td>
<td>235</td>
<td>383</td>
<td>(38.6)</td>
<td>370</td>
<td>1,481</td>
<td>(75.0)</td>
<td>1,195</td>
<td>706</td>
</tr>
<tr>
<td>Interest Rate Futures</td>
<td>235</td>
<td>383</td>
<td>(38.6)</td>
<td>370</td>
<td>1,481</td>
<td>(75.0)</td>
<td>1,195</td>
<td>706</td>
</tr>
<tr>
<td>Interest Rate Options</td>
<td>0</td>
<td>0</td>
<td>NA</td>
<td>0</td>
<td>0</td>
<td>(100.0)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Commodity derivatives</td>
<td>5.7</td>
<td>0.9</td>
<td>550.4</td>
<td>3.1</td>
<td>1.0</td>
<td>219.6</td>
<td>4.1</td>
<td>2.9</td>
</tr>
<tr>
<td>Commodity futures</td>
<td>5.6</td>
<td>0.6</td>
<td>776.2</td>
<td>2.9</td>
<td>0.8</td>
<td>282.5</td>
<td>3.1</td>
<td>2.5</td>
</tr>
<tr>
<td>Commodity options</td>
<td>0.1</td>
<td>0.2</td>
<td>(51.1)</td>
<td>0.3</td>
<td>0.2</td>
<td>12.9</td>
<td>1.0</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Source: NSE. Note: Average daily trading turnover is the average of daily gross turnover i.e., buy side turnover + sell side turnover. *Premium turnover is considered in case of options contracts. Cash market turnover excludes auction market turnover.
Record statistics

**NSE registered yet another record in June 2021:** Stock options premium turnover recorded a new high on June 14th, 2021 when the single day turnover touched Rs64bn. Index options premium turnover touched a new record on January 28th, 2021 of Rs186bn in a single day. Previous record high in Index options were registered on December 22nd, 2020 to touch Rs171bn after creating a record on November 11th, 2020 to touch Rs164bn and on August 31st (Rs160bn) and March 19th (Rs146bn) this year. Stock options premium turnover also touched highest record on January 13th, 2021 to touch Rs56bn after touching Rs33bn on December 21st, 2020.

The volatility in Indian equities measured by India Volatility Index increased 46% in the last 12 months as result of sharp rise in trading across several segments. NSE hit record turnover in the Cash market to touch Rs1,475bn on November 27th, 2020 vs Rs990bn on August 31st and Rs835bn on May 29th in 2020. While other segments have recorded a significant growth in their average turnover this year, they did not cross their previous record levels. Index futures had recorded its highest turnover of Rs860bn on September 20th, 2019 after the Finance Minister slashed the corporate tax rate from 30% to 22%.

**Figure 225: Segment-wise record turnover till July 31st, 2021**

<table>
<thead>
<tr>
<th>Segment</th>
<th>Turnover (Rsbn)</th>
<th>Trading Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash market</td>
<td>1,475</td>
<td>27-Nov-20</td>
</tr>
<tr>
<td>Index futures</td>
<td>860</td>
<td>20-Sep-19</td>
</tr>
<tr>
<td>Stock futures</td>
<td>1,954</td>
<td>25-Jan-18</td>
</tr>
<tr>
<td>Index options (premium)</td>
<td>186</td>
<td>28-Jan-21</td>
</tr>
<tr>
<td>Stock options (premium)</td>
<td>64</td>
<td>14-Jun-21</td>
</tr>
</tbody>
</table>

Source: NSE
Spatial distribution of trading activities

Region-wise distribution of new investors registered

After rising exponentially over the last two fiscal years, the rise in new investors has somewhat stabilised with a marginal increase over the past three months. Monthly registration of new investors increased to an all-time high of 1.5m in July 2021. There was a significant rise in May-21 followed by a slight increase over the next two months. Except a few months, total number of new registrations maintained a positive trajectory on average over the last two fiscal years. As shown in the following chart, monthly registration jumped up six times from 273 thousand in July 2019 to 1.5m in July 2021 with a CAGR of 7.5%.

Figure 226: Region-wise distribution of new investors registered

There have been slight ups and downs in the composition of total investment registration across regions, but Northern and Western regions remained to be the front runners in terms of total number of registrations over the last two fiscal years. In July 2021, Northern part contributed around 35% of total registration which is around 5 percentage point higher than J uly 2020. The share of Western region, on the other hand, remained constant at 33%. However, the share has reduced in Southern regions from 29% to 20% between J uly 2020 and J uly 2021. This was partially taken over by the Eastern region which has a share of 12% in J uly 2021 as compared to 8% in the previous year.

Source: NSE.
Note: East India includes Mizoram, Odisha, West Bengal, Assam, Manipur, Arunachal Pradesh, Tripura, Nagaland, Meghalaya, Sikkim, Chhattisgarh; West India includes Maharashtra, Gujarat, Madhya Pradesh, Daman & Diu, Goa, Dadra & Nagar Haveli; North India includes Bihar, J harkhand, Uttar Pradesh, Uttarakhand, Haryana, Delhi, Punjab, Jammu & Kashmir, Himachal Pradesh, Chandigarh And Rajasthan; South India includes Telengana, Kerala, Andhra Pradesh, Tamil Nadu, Karnataka, Pondicherry, Lakshadweep And Andaman & Nicobar.
New investor registrations are further concentrated in a few districts, as shown in the following chart. Over the month of July, top ten districts have contributed a total of 25% of total registration. Among them, around 6.6% of all new investors are from Delhi region, which is marginally higher than Mumbai (6.4%). Among others, 2.2% of all registration over the month happened in Pune, followed by Bangalore and Jaipur (1.8% and 1.6%). Ahmedabad and Surat have registered a significant number of investors in July 2021. Notably, Barpeta from Assam continued to be one of the top 10 districts since March 2021 and registered 0.5% of total new investors in the country in July 2021. Besides, Hyderabad and K. V. Rangareddy contributed 1% and 0.9% of share over the month.

### Figure 229: Number of new investors registered in top 10 districts

<table>
<thead>
<tr>
<th>District</th>
<th>Mar-21</th>
<th>Apr-21</th>
<th>May-21</th>
<th>Jun-21</th>
<th>Jul-21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delhi-NCR</td>
<td>97.44</td>
<td>95.27</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mumbai/Punjab/TN</td>
<td>32.43</td>
<td>32.25</td>
<td>26.97</td>
<td>26.68</td>
<td>24.44</td>
</tr>
<tr>
<td>Ahmedabad</td>
<td>14.37</td>
<td>12.92</td>
<td>7.16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bangalore</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surat</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jaipur</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hyderabad</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K.V. Rangareddy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barpeta</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: NSE

Note: Top 10 districts are chosen based on the last month data.
Region-wise distribution of individual investor turnover in the cash market

Western and northern region continued to contribute largest share of turnover of individual investors: The distributional pattern remained somewhat similar over the last two fiscal years. In Jul’21, Western and Northern regions contributed 37.2% and 29.2% of total turnover by individual investors, which are much higher than the other two regions. While the southern region contributed around 24.6% of total individual investors’ turnover, the eastern region’s contribution remained around 9% over the month.

The distributional pattern remained similar for the number of individual investors as well. While West contributed 40.7% in Jul’21, Northern region continues to be the second largest contributor throughout the year, followed by Southern region which has recorded a marginal decline in the share from 21.1% to 20.7% over the period.

Figure 230: Region-wise distribution of individual investors’ turnover in cash market (%)

Figure 231: Region-wise distribution of individual investors traded

Source: NSE.

Total turnover and trade volume of individual investors are further concentrated in a few districts over the last fiscal year, as shown in the following chart. Out of total turnover, top ten districts contributed 44.9% in July 2021—slightly higher lower than 44.2% over the previous month. Amongst them, Mumbai and Delhi have contributed around 13.5% and 10.1% of total turnover respectively over the month, while Bangalore contributed 4%, followed by Ahmedabad by (3.9%) and Pune (3%) over the month.
Figure 232: Top 10 districts based on Cash turnover of individual investors

Source: NSE.
Note: Individual investors include Individual / Proprietorship firms and HUF. Top ten districts are chosen based on the last month data.

Figure 233: Top 10 districts based on individual investors traded

Source: NSE
Note: Individual investors include Individual / Proprietorship firms and HUF. Top ten districts are chosen based on the last month data.
Investment through mutual funds in India

Mutual funds’ asset under management (AUM) continued to grow since May 2020,...:
Post a significant slowdown during Mar-Apr’20, average AUM of Indian mutual funds recorded a decent growth over the last fiscal year, thanks to the continuous rally in the equity prices both globally and in India with global market rally in equity prices, significant rise in FIIs’ net inflows and an overall fall in risk-free return due to prompt fiscal and monetary responses in all major countries over the period. Besides, the recent vaccination drives, recovery in high frequency indicators reflects a sharp economic recovery globally. This may have helped MFs’ average AUM to reach at a record level of Rs35.1trn in July 2021.

...while the number of MF schemes fell gradually: Unlike AUM of MFs which registered record rise since May’20, total number of MF scheme continues to fall since March’20 from 1,916 to merely 1,735 in Mar’21 further to 1,510 schemes in Jul’21. There was a drop of 3% MoM observed in both June and July 2021. This continuous fall was largely due to rise in concentration to recategorization and rationalisation of mutual funds by the market regulator, rise in market uncertainty and weakening debt market over the period.

**Figure 234: Monthly trend of total MF schemes and average AUM**

Source: AMFI. *AAUM-Average Asset under Management.

A sharp rise in net investment of MFs in July 2021,...: Post a sharp fall in May 2021, MFs’ net investment turned positive with Rs153bn net purchases in June 2021. Post that there was a 647% increase in July 2021 to have Rs1.1trn net investment even though FIIs’ net inflows declined over the period. The sudden spike was recorded with the recent improvements in the coronavirus situation, continuous rise in the share of fully vaccinated population and slight improvements in high frequency indicators over the month.

Overall, the trend of MFs’ net investment remained quite volatile over the previous two fiscal years, as shown in the following chart. Over the period, it got fluctuated between Rs1.3trn net purchase in October 2019 and Rs2.1trn net sales in March 2020. MFs started the fiscal year FY21 with Rs460bn net purchase and maintained its stand over the next three months, before turning to a negative territory between Aug-Sep’20. The ups and downs continued over the rest of the period. In aggregate, however, MFs net
investment has been more than doubled in FY21 to Rs2.1trn as compare to Rs870 in FY20, which has again declined to merely Rs1.8trn in FY22 thus far till July 2021.

**Figure 235: Monthly trend of total investment through mutual funds**

> Fund mobilized during the month (Rsbn)  
> Repurchase/Redemption during the month (Rsbn)  
> Net Inflow (+ve)/Outflow (-ve) for the month (Rsbn) - RHS

Source: AMFI.

...partly due to a jump in fund mobilisation through new schemes: MFs’ fund mobilisation remained quite volatile over the last two fiscal years. Post a significant fall in June 2021, number of new schemes rose by 200% in July 2021 to mobilise Rs170bn as compared to Rs3.58bn over the previous month. As a result, fund mobilisation through new schemes became ~50x in July 2021 as compared to the previous month. Overall, total fund mobilisation of MFs through new schemes was Rs239bn in FY22 till July 2021, which is significantly higher than Rs121bn over the same period in FY21. On average, there is a slight recovery in fund mobilisation for mutual funds in FY22 post the sudden slowdown in FY21, even as the trend remained quite volatile over the period partly due to rise in uncertainty, several spikes in coronavirus cases, slower than expected vaccination drive and investors rising interest towards active investment given low return from mutual funds.

**Figure 236: Monthly trend of total investment through new schemes**

Source: AMFI.
Policy developments
India

Key policy measures by the SEBI during July 2021

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 5th, 2021</td>
<td><strong>Standard Operating Procedure for handling of technical glitches by Market Infrastructure Institutions (MIIs) and payment of “Financial Disincentives” thereof</strong>&lt;br&gt;For any downtime or unavailability of services, beyond such pre-defined time, there is a need to ensure that “Financial Disincentive” is paid by the MIIs as well as Managing Director (being the executive head in-charge of all day to day operations) and Chief Technology Officer (being the executive head in-charge of technology) of the MII. After extensive discussion with various stakeholders, it has been decided that, MIIs shall:&lt;br&gt;1. Follow the Standard Operating Procedure (SOP) for handling technical glitches as detailed at Annexure – I of the Circular, and&lt;br&gt;2. Comply with the “Financial Disincentive” structure as detailed at Annexure – II of the Circular.</td>
</tr>
<tr>
<td>July 9th, 2021</td>
<td><strong>Valuation of securities with multiple put options present ab-initio</strong>&lt;br&gt;In respect of valuation of securities with multiple put options present ab-initio wherein put option is factored into valuation of the security by the valuation agency, the following is decided based on the recommendation of Mutual Fund Advisory Committee:&lt;br&gt;If the put option is not exercised by a Mutual Fund, while exercising the put option would have been in favour of the scheme;&lt;br&gt;1. A justification for not exercising the put option shall be provided by the Mutual Fund to the Valuation Agencies, Board of AMC and Trustees on or before the last date of the notice period.&lt;br&gt;2. The Valuation Agencies shall not take into account the remaining put options for the purpose of valuation of the security.&lt;br&gt;The put option shall be considered as ‘in favour of the scheme’ if the yield of the valuation price ignoring the put option under evaluation is more than the contractual yield/coupon rate by 30 basis points.&lt;br&gt;The circular shall be applicable with effect from October 01, 2021.</td>
</tr>
<tr>
<td>July 16th, 2021</td>
<td><strong>Block Mechanism in demat account of clients undertaking sale transactions</strong>&lt;br&gt;SEBI has received representations from the clients undertaking sale transactions, wherein the clients give Early Pay-In (EPI) for sale trades which are yet to be executed. Based on consultations with Depositories, Clearing Corporations and Stock Exchanges it was decided that when the client intends to make a sale transaction, shares will be blocked in the demat account of the client in favour of Clearing Corporation. If sale transaction is not executed, shares shall continue to remain in the client’s demat account and will be unblocked at the end of the T day. Thus, this mechanism will do away with the movement of shares from client’s demat account for early pay-in and back to client’s demat account if trade is not executed.</td>
</tr>
</tbody>
</table>

21 For more details, please visit [http://www.sebi.gov.in](http://www.sebi.gov.in)
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 20th, 2021</td>
<td>Relaxation in timelines for compliance with regulatory requirements by Debenture Trustees due to Covid-19. In view of the prevailing situation due to Covid-19 pandemic and representations received from the Debenture Trustees, it has been decided to extend the timelines for compliance of regulatory requirements of the SEBI circular dated November 12, 2020 for the quarter/half year/year ending March 31, 2021 from July 15th, 2021 to August 31st, 2021/October 31st, 2021 as mentioned in the circular.</td>
</tr>
<tr>
<td>July 23rd, 2021</td>
<td>Extension of time for holding the Annual General Meeting (AGM) by top 100 listed entities by market capitalization. According to SEBI LODR 2015, top 100 listed entities by market capitalization are required to hold their AGM within a period of five months from the date of closing of the financial year. Due to the COVID-19 pandemic, SEBI has decided that such entities shall hold their AGM within a period of six months from the date of closing of the financial year for 2020-21.</td>
</tr>
<tr>
<td>July 26th, 2021</td>
<td>RTA inter-operable platform for enhancing investors’ experience in Mutual Fund transactions/service requests. To make it more convenient to the existing and future investors to transact and avail services while invested in Mutual Funds and pursuant to discussions with various stakeholders including AMFI, Depositories and the RTAs, SEBI has decided that RTAs shall implement standardized practices, system interoperability amongst themselves to jointly develop a common industry-wide platform that will deliver an integrated, harmonized, elevated experience to the investors across the industry.</td>
</tr>
</tbody>
</table>

**Global policy developments**

**ESMA and EBA publish final guidance on fit and proper requirements**

ESMA and EBA published the revised final joint Guidelines on the assessment of the suitability of members of the management body and key function holders. These Guidelines take into account the amendments introduced by the revised Capital Requirements Directive (CRD V) and the Investment Firms Directive (IFD), and their effect on the assessment of the suitability of members of the management body, in particular with regard to money laundering and financing terrorism risks, and gender diversity. The joint final Guidelines will apply from December 31st, 2021.

**ESMA publishes disclosure and investor protection guidance on SPACs**

ESMA issued a Public Statement on the prospectus disclosure and investor protection issues raised by special purpose acquisition companies (SPACs) to enhance the comprehensibility and comparability of SPAC prospectuses. This should help to ensure that national competent authorities (NCAs):

1. take a coordinated approach to the scrutiny of SPAC prospectuses;
2. provide SPACs with an understanding of the disclosure that NCAs will expect them to include in their prospectuses; and
3. support investors’ analysis of these transactions.


Comparison of trading activities across major exchanges globally

The market cap of major stock exchanges rose significantly in June 2021 on YoY basis, largely led by global rally of equity prices, faster than expected recovery in US economy, and the ongoing vaccination drive in all major economies. Besides, availability of ample liquidity in the system, prompt support in the fiscal and monetary domain, and better than expected financial performance of several large companies had helped the equity prices to increase at a faster pace. In this section, we have examined the overall trend of trading pattern in the securities market over the last two years in different segments across exchanges globally.

Here, we used data from World Federation of Exchanges (WFE) over the period Jun’19-Jun’21 that covers a total of 103 exchanges of which 59 are from the EMEA region, 26 from Asia-Pacific and the rest from the Americas region. We have also highlighted NSE’s contribution in different segments globally based on domestic market capitalisation and its trading activities in the cash/spot market and different derivatives markets—Equity, Index derivatives and Currency segments. The key takeaways of the analysis are:

• **Major exchanges recorded a sharp rise in their market sizes in Jun’21 on YoY basis:** Major exchanges recorded an exponential growth in their market cap on YoY basis, thanks to the positive momentum in the equity market globally, slowdown in coronavirus cases, successful vaccination drives in major economies and continuous expansionary monetary policy measures taken by the central banks. Notably, Korea Exchange and National Stock exchange recorded 72% and 68% YoY growth in June 2021, respectively, followed by Euronext (65%). Other top exchanges have also recorded magnificent growth over the same period. On average, top 10 exchanges registered 47% growth in June 2021 on YoY basis as compared to 5% decline in June 2020 due to the sudden rise in uncertainty over the unprecedented outbreak in coronavirus cases.

• **NSE continued to be one of the top 10 exchanges globally with US$3.1trn market cap in Jun’21:** NYSE and Nasdaq-US are continued to be the largest stock exchanges globally, followed by Shanghai, Euronext, Hong Kong and Japan stock exchanges. Among others, Shenzhen, LSE Group, TMX Group continued to maintain their ranks in the global market. From India, NSE remained in the top 10 exchanges globally with a market cap of US$3.1trn in June 2021.

• **Shenzhen Stock Exchange (SZSE) maintained its top position in the Cash market throughout the last two years globally:** Even as all major exchanges recorded several ups and downs over the last two years, SZSE remained to be the largest exchange globally in Cash market with 710m number of trades in June 2021, while SSE and Korea Stock exchange (KRX) were ranked second and third respectively with 532m and 519m trades over the month. Among others, NSE was ranked fourth with 504m trades in the segment, even as it recorded 8% decline in number of trades in June 2021. Over the month most of the major exchanges recorded a MoM decline in the number of trades, while Taiwan Stock Exchange and Euronext recorded 16% and 7% growth over the month.

• **NSE was ranked the fifth largest position in Stock futures globally,**...: Distribution of total trade volume is quite diverse across exchanges for Stock futures. Post a magnificent rise in Nov’20, trading activities of the top exchange - Borsa Istanbul’s number of contracts traded declined during Dec-Jun’21. Still, the exchange maintains its top position with 121m contracts traded globally in June 2021. Among others, KRX and B3 - Brasil Bolsa Balcão are the second and third
largest exchanges with 118m and 71m respectively trades in the segment in June 2021, followed by Moscow Stock Exchange (MOEX) and NSE. Over the month, NSE maintained its fifth position globally with 20.3m contracts traded in June 2021 even as it recorded a 6% decline over the month.

- **...and sixth largest stock exchange in Stock options segment**: Nasdaq-US took the top position in Jun’21 with 218m contracts traded in Stock options, which is around 23% higher than the previous month. B3 - Brasil Bolsa Balcão and CBOE ranked second and third in June 2021 with 166m and 164m contracts traded. NSE was ranked seventh over the month with 54m contracts traded in June’21, with a 16.5% growth over the month.

- **NSE is leading in the equity index options with more than 80% market share,**: NSE remains the biggest player in the equity index options segment with 84% market share in June 2021 and 12% increase in the contracts traded on MoM basis. It has maintained its top position in the segment over the last two years. Among others, KRX and CBOE Global rank second and third with 4% and 3% share respectively in Jun’21, followed by DBAG and TAIFEX with 27m and 17m contracts traded, respectively over the month.

- **In contrast, NSE’s rank remained somewhat low in Equity index futures**: With merely 9.2m contracts traded, NSE was ranked eighth largest stock exchange globally in Jun’21 that accounted only 1% market share over the month. In the segment, B3 - Brasil Bolsa Balcão retained its top position in this segment over the last two years with 391m contracts traded and 54% market share in June 2021, followed by CME Group, DBAG and J PX.

- **NSE retained its top position in the Currency options segment globally, while ranked second in Currency futures segment**: NSE continued to be the largest exchange globally in the Currency options segment over the last two years and ranked second in Currency futures in June 2021. In the options segment, NSE captures 94% market share globally with 116m contracts traded over the month, while Moscow Stock Exchange ranked second with merely 3% market share and 3.3m contracts traded. In the currency futures segment, Moscow Exchange was topped with 77.6m contracts traded, followed by NSE with 67m and B3 - Brasil Bolsa Balcão with 65m contracts traded over the month, respectively.
Figure 237: Domestic market cap of top ranked exchanges**

a. Domestic market capitalization (US$trn)*

<table>
<thead>
<tr>
<th>Exchange</th>
<th>Jun-21</th>
<th>Jun-20</th>
<th>Jun-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nasdaq - US</td>
<td></td>
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<tr>
<td>SSE</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Euronext</td>
<td></td>
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<td></td>
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<tr>
<td>HKEX</td>
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<tr>
<td>JPX</td>
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</tr>
<tr>
<td>SZSE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LSE Group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TMX Group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NSE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tadawul</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DBAG</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KRX</td>
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</tr>
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</table>

Figure 238: Number of trades in Cash market of top ranked exchanges**

b. Number of trades - Cash market (m)

<table>
<thead>
<tr>
<th>Exchange</th>
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<th>Dec-19</th>
<th>Jun-20</th>
<th>Dec-20</th>
<th>Jun-21</th>
</tr>
</thead>
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<td>SSE</td>
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<td>NASDAQ</td>
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<tr>
<td>KRX</td>
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<tr>
<td>NYSE</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Figure 239: Number of contracts traded in Stock futures of top-ranked exchanges**

c. Number of contracts traded - Stock futures (m)

<table>
<thead>
<tr>
<th>Exchange</th>
<th>Jun-19</th>
<th>Dec-19</th>
<th>Jun-20</th>
<th>Dec-20</th>
<th>Jun-21</th>
</tr>
</thead>
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<td>BIST</td>
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<tr>
<td>KRX</td>
<td></td>
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</tr>
<tr>
<td>B3 - Brasil Bolsa Balcão</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MOEX</td>
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<td>NSE</td>
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<td></td>
</tr>
<tr>
<td>DBAG</td>
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</table>

Figure 240: Number of contracts traded in Stock options of top-ranked exchanges**

d. Number of contracts traded - Stock options (m)

<table>
<thead>
<tr>
<th>Exchange</th>
<th>Jun-19</th>
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<th>Jun-20</th>
<th>Dec-20</th>
<th>Jun-21</th>
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<tr>
<td>Nasdaq - US</td>
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<tr>
<td>B3 - Brasil Bolsa Balcão</td>
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<tr>
<td>CBOE</td>
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<tr>
<td>MIAX Exchange Group</td>
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<tr>
<td>DBAG</td>
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</table>
Figure 241: Number of trades in Index futures of top ranked exchanges**

Figure 242: Number of trades in Index options of top ranked exchanges**

Figure 243: Number of trades in Currency futures of top ranked exchanges**

Figure 244: Number of trades in Currency options of top ranked exchanges**

Source: WFE monthly statistics.

Note: * NYSE market capitalisation data is missing for Jan’21.


Only WFE member exchanges are included in the analysis.
### Economic calendar for major countries (August 2021)

<table>
<thead>
<tr>
<th>Date</th>
<th>Country</th>
<th>Indicator Name</th>
<th>Period</th>
<th>Reuters Poll</th>
<th>Prior Period</th>
<th>Unit</th>
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<td>2 Aug 2021</td>
<td>Japan</td>
<td>Jibun Bank Mfg PMI</td>
<td>Jul</td>
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<td>Index (diffusion)</td>
</tr>
<tr>
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<td>China (Mainland)</td>
<td>Caixin Mfg PMI Final</td>
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<td>51.3</td>
<td>Index (diffusion)</td>
</tr>
<tr>
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<td>India</td>
<td>IHS Markit Mfg PMI</td>
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<td>50.5</td>
<td>48.1</td>
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</tr>
<tr>
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<td>Russia</td>
<td>Markit Mfg PMI</td>
<td>Jul</td>
<td></td>
<td>49.2</td>
<td>Index (diffusion)</td>
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<tr>
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<td>Euro Zone</td>
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<td>Jul</td>
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<td>62.6</td>
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</tr>
<tr>
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<td>Markit Mfg PMI</td>
<td>Jul</td>
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<td>60.6</td>
<td>Index</td>
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<td>Jul</td>
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<td>Percent</td>
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<tr>
<td>4 Aug 2021</td>
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<td>Services PMI</td>
<td>Jul</td>
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<td>Index (diffusion)</td>
</tr>
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<td>Caixin Services PMI</td>
<td>Jul</td>
<td>50.3</td>
<td></td>
<td>Index (diffusion)</td>
</tr>
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<td>60.4</td>
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<td>692k</td>
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<tr>
<td>4 Aug 2021</td>
<td>Brazil</td>
<td>Markit Services PMI</td>
<td>Jul</td>
<td></td>
<td>53.9</td>
<td>Index (diffusion)</td>
</tr>
<tr>
<td>4 Aug 2021</td>
<td>United States</td>
<td>Markit Svcs PMI Final</td>
<td>Jul</td>
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<td>4.25%</td>
<td>Percent</td>
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<td>BOE Bank Rate</td>
<td>Aug</td>
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<td>6 Aug 2021</td>
<td>India</td>
<td>Repo Rate</td>
<td>6 Aug</td>
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<td>4.00%</td>
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<td>Non-Farm Payrolls</td>
<td>Jul</td>
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<td>850k</td>
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<td>Unemployment Rate</td>
<td>Jul</td>
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<td>5.9%</td>
<td>Percent</td>
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<tr>
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<td>CPI YY</td>
<td>Jul</td>
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<td>6.5%</td>
<td>Percent</td>
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<td>1.1%</td>
<td>Percent</td>
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<td>Jul</td>
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<td>8.35%</td>
<td>Percent</td>
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<tr>
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<td>United States</td>
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<td>Jul</td>
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<td>5.4%</td>
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<td>Percent</td>
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<tr>
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<td>4.8%</td>
<td>Percent</td>
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<td>Jun</td>
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<td>13.7%</td>
<td>Percent</td>
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<td>Jul</td>
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<td>Percent</td>
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<td>South Africa</td>
<td>CPI YY</td>
<td>Jul</td>
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<td>Percent</td>
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<td>HICP Final YY</td>
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<td>Percent</td>
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<td>Euro Zone</td>
<td>Consumer Confid. Flash</td>
<td>Aug</td>
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<td>27 Aug 2021</td>
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<td>Jul</td>
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<td>31 Aug 2021</td>
<td>Japan</td>
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<td>Jul</td>
<td>2.9%</td>
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<td>Percent</td>
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<td>31 Aug 2021</td>
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<td>Aug</td>
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Source: Refinitiv Datastream
## Annual Macro Snapshot

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<thead>
<tr>
<th>National income</th>
<th>FY12</th>
<th>FY13</th>
<th>FY14</th>
<th>FY15</th>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
<th>FY19</th>
<th>FY20</th>
<th>FY21*</th>
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<tr>
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<td>87.4</td>
<td>99.4</td>
<td>112.3</td>
<td>124.7</td>
<td>137.7</td>
<td>153.9</td>
<td>170.9</td>
<td>188.9</td>
<td>203.5</td>
<td>197.5</td>
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<td>GDP (Current) Growth (%)</td>
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<td>13.8</td>
<td>13.0</td>
<td>11.0</td>
<td>10.5</td>
<td>11.8</td>
<td>11.0</td>
<td>10.5</td>
<td>7.8</td>
<td>-3.0</td>
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<td>GDP (Constant) Growth (%)</td>
<td>5.2</td>
<td>5.5</td>
<td>6.4</td>
<td>7.4</td>
<td>8.0</td>
<td>8.3</td>
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<td>5.4</td>
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<td>8.0</td>
<td>8.0</td>
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<td>4.1</td>
<td>-6.2</td>
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<td>Agriculture growth (%)</td>
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<td>1.5</td>
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<td>0.6</td>
<td>6.8</td>
<td>6.6</td>
<td>2.6</td>
<td>4.3</td>
<td>3.6</td>
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<td>Industry growth (%)</td>
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<td>3.8</td>
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<td>9.6</td>
<td>7.7</td>
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<td>5.3</td>
<td>-1.2</td>
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<td>Services growth (%)</td>
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<td>8.3</td>
<td>7.7</td>
<td>9.8</td>
<td>9.4</td>
<td>8.5</td>
<td>6.3</td>
<td>7.2</td>
<td>7.2</td>
<td>-8.4</td>
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Per Capita GDP (Curr) (Rs) 71,609 80,518 89,796 98,405 1,07,341 1,18,489 1,30,061 1,42,328 1,51,760 145,680

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<td>10.1</td>
<td>9.3</td>
<td>5.9</td>
<td>4.9</td>
<td>4.5</td>
<td>3.6</td>
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<td>4.8</td>
<td>6.2</td>
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<tr>
<td>CPI – Rural (%)</td>
<td>10.7</td>
<td>9.6</td>
<td>6.1</td>
<td>5.5</td>
<td>5.0</td>
<td>3.6</td>
<td>3.0</td>
<td>4.2</td>
<td>6.0</td>
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<tr>
<td>CPI – Urban (%)</td>
<td>9.5</td>
<td>9.1</td>
<td>5.4</td>
<td>4.1</td>
<td>4.0</td>
<td>3.6</td>
<td>3.9</td>
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Source: CMIE Economic Outlook, NSE. *FY21 GDP data pertains to Provisional Estimates. FY21 public finance data are revised estimates.
Our reports on the economy and markets since the beginning of 2020

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