

Economic activity continued to improve in Oct'20

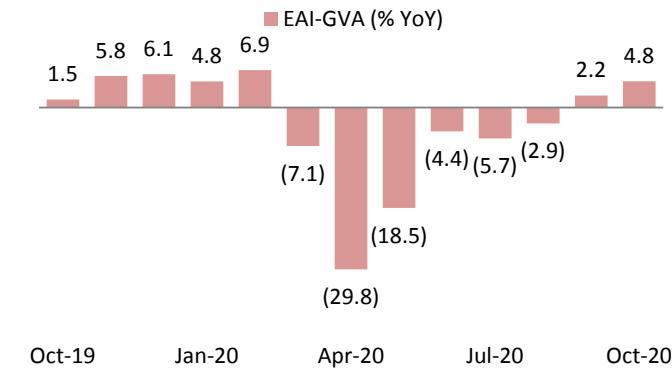
Expect real GDP to decline 1-2% YoY in 3QFY21

- Our in-house Economic Activity Index (EAI) for India's real GVA (called EAI-GVA) grew 4.8% YoY in Oct'20, marking the second consecutive growth, following an increase of 2.2% YoY in Sep'20. This is the first month in a year when non-farm activities (both industrial and services) grew faster than the farm sector.
- However, EAI-GDP index (our in-house measure of official GDP) continued to contract for the eighth successive month – down 9% YoY in Oct'20, following a contraction of 8.1% in the previous month. While personal consumption expenditure (PCE) continued to contract in double-digit for the seventh consecutive month, total investments declined 5%, the slowest fall in eight months. Excluding government spending, EAI-GDP contracted 7.6% YoY in Oct'20 v/s a fall of 5.1% YoY in Sep'20.
- Overall, EAI-GVA continues to show an improvement in economic activity, while demand measures (EAI-GDP) continue to lag. Based on a few indicators available for Nov'20 – power generation, manufacturing PMI, e-way registrations, etc., growth seems to have cooled off last month. If so, it suggests that the growth peaked out in Oct'20 (as per our expectations) and is likely to moderate in coming months. Real GDP could contract again in 3QFY21 before posting a growth in 4QFY21. The second wave of the COVID-19 pandemic, however, remains a valid risk.

Preliminary estimates reveal that EAI-GVA grew 4.8% YoY in Oct'20, marking the second consecutive growth and better than the 2.2% YoY in Sep'20

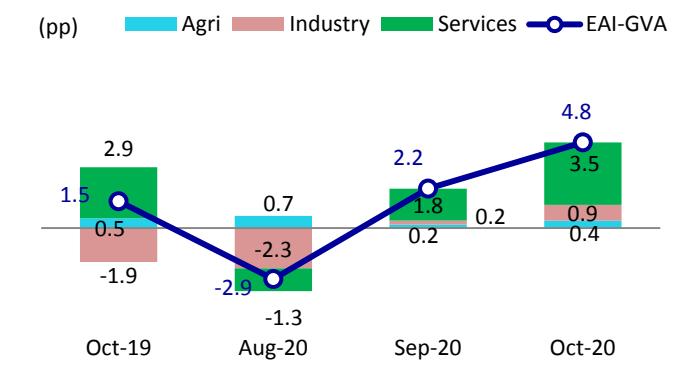
- **EAI-GVA continues to gather pace in Oct'20...**: Preliminary estimates reveal that EAI-GVA grew for the second consecutive month in Oct'20. At 4.8% YoY, EAI-GVA posted its highest growth in eight months, following an increase of 2.2% YoY in Sep'20 (*Exhibit 1*). Although farm activities grew for the sixth successive month, non-farm sector (both industrial and services) grew faster for the first time in a year (*Exhibit 2*).
- **...while EAI-GDP contracted at a faster pace**: EAI-GDP, however, continued to contract for the eighth consecutive month in Oct'20 and that too faster than the previous month (*Exhibit 3*). While personal consumption expenditure (PCE) continued to contract in double-digits for the seventh consecutive month, total investments declined 5%, the slowest fall in eight months (*Exhibit 4*). Excluding government spending, EAI-GDP contracted 7.6% YoY in Oct'20 v/s a fall of 5.1% YoY in Sep'20.

Exhibit 1: India's EAI-GVA gathers pace in Oct'20...



Please refer to our earlier [report](#) for details

Exhibit 2: ...led by strong growth in the non-farm sector



Contribution of different components to EAI-GVA growth
Source: Various national sources, CEIC, MOFSL

Exhibit 3: EAI-GDP, however, declines faster in Oct'20...

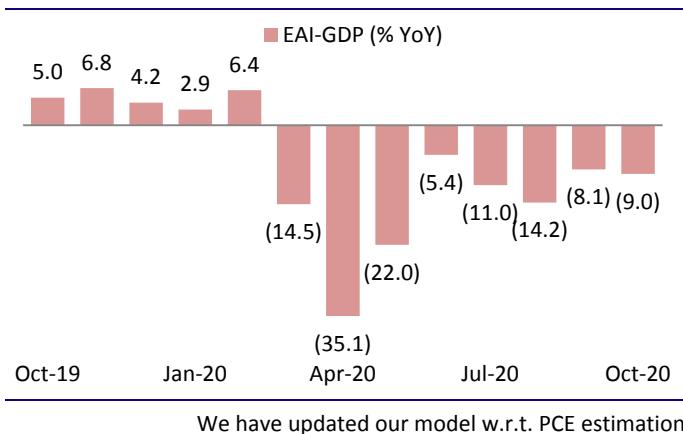
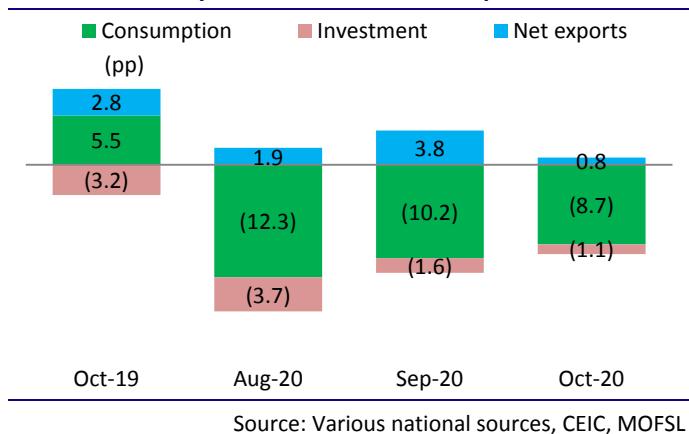


Exhibit 4: ...led by lower external trade surplus



Source: Various national sources, CEIC, MOFSL

While PCE declined 10.2% YoY, government consumption spending fell 19% YoY in Oct'20

Based on few indicators available for Nov'20 – power generation, manufacturing PMI, e-way registrations, etc., growth seems to have cooled off last month

- **Non-farm sector drove EAI-GVA growth:** Details of EAI-GVA suggest that while the farm sector grew 3.5% YoY in Oct'20, industrial activity increased 4.6% YoY and services expanded by 6% (Exhibit 5-6). Sharp growth (9% YoY, a 27-month high) in industrial fuel sales and eight-month high growth of 10% YoY in power generation supported the industrial sector, while strong growth in automobile sales, freight traffic, financial sector (deposits/trade credit) and services PMI led to better growth in the services sector (Exhibit 13). Consequently, the non-farm sector grew 5.4% YoY in Oct'20 – faster than the farm sector for the first time in a year.
- **Consumption continues to post double-digit fall in Oct'20...:** Our updated model suggests that consumption (personal + government) spending declined by 11.3% YoY in Oct'20, marking its fourth straight double-digit fall (Exhibit 7). While PCE declined 10.2% YoY, government consumption (revenue spending *less* interest payments *less* subsidies) fell 19% YoY in Oct'20. Faster growth in consumer automobile sales and petrol consumption helped real PCE decline at its slowest pace in seven months (Exhibit 14).
- **...while investments declined at a slower pace:** Investments shrank by only 5% YoY, marking the 16th fall in the past 17 months, but the slowest contraction in the past eight months (Exhibit 8). Strong growth in freight traffic, diesel sales and cement production helped reduce the contraction rate in investments in Oct'20 (Exhibit 15).
- **Expect 1-2% decline in 2QFY21 real GDP:** Overall, EAI-GVA continues to show an improvement in economic activity, while demand measures (EAI-GDP) continue to lag. Based on few indicators available for Nov'20 – power generation, manufacturing PMI, e-way registrations, etc., growth seems to have cooled off last month (Exhibit 9-10). If so, it suggests that the growth peaked out in Oct'20 (as per our expectations) and likely to moderate in coming months. Although there is no one-to-one correlation between our EAIs and the official GDP/GVA due to the **underlying differences**, our composite indices are moving in sync with official real GDP (ex-discrepancies) and real GVA estimates (Exhibit 11-12). We believe that real GDP could contract again in 3QFY21 before posting a growth in 4QFY21. The second wave of the COVID-19 pandemic, however, remains a valid risk.

Exhibit 5: Industrial activity grew 4.6% YoY in Oct'20...

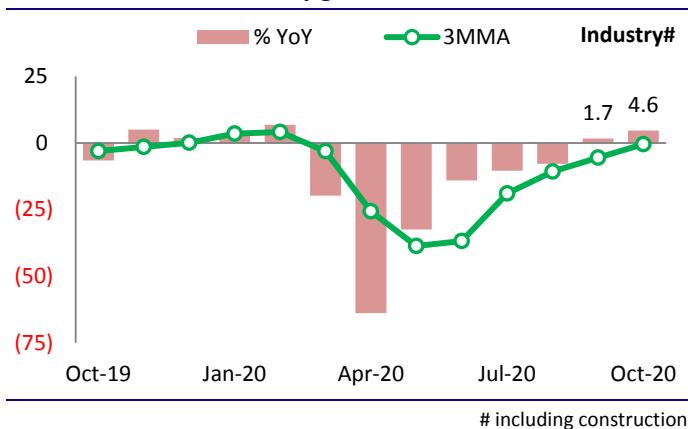


Exhibit 6: ...and services sector growth at eight-month high

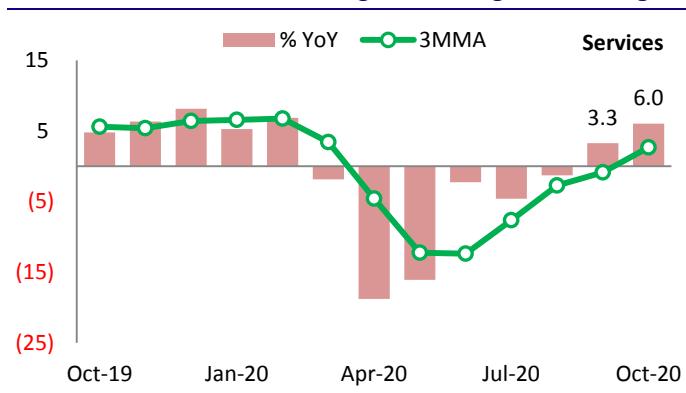


Exhibit 7: Total consumption continued its double-digit fall...

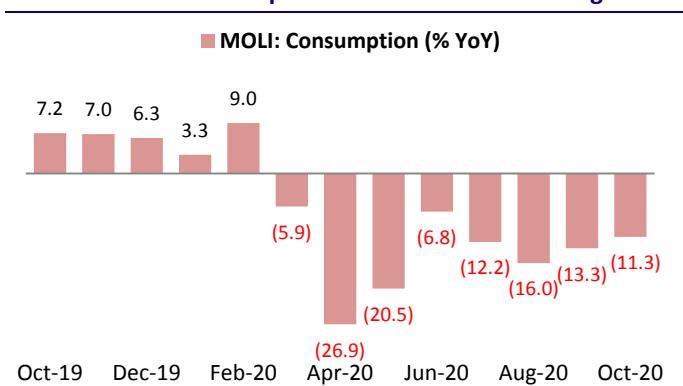


Exhibit 8: ...while investment decline moderated in Oct'20

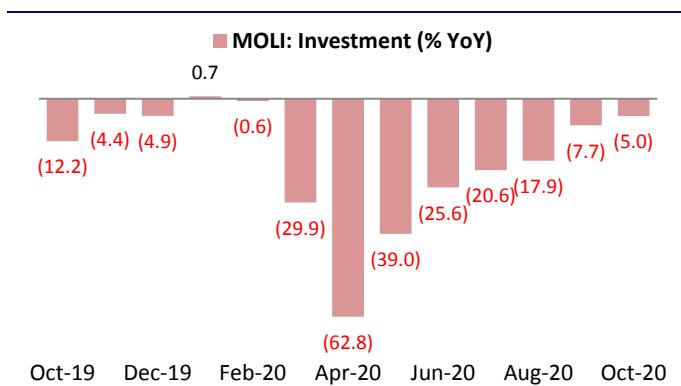


Exhibit 9: Power generation growth was up only 3.5% YoY...

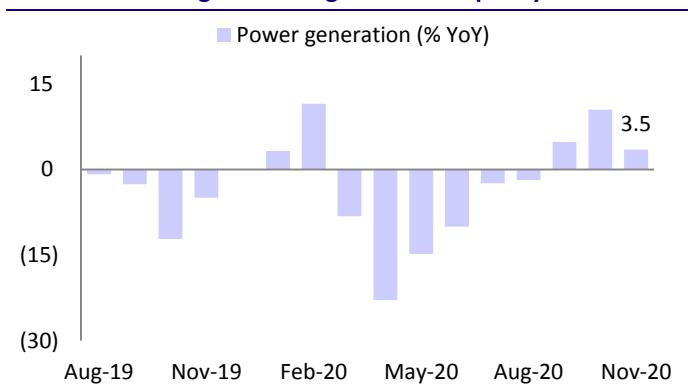


Exhibit 10: ...and manufacturing PMI also eased in Nov'20

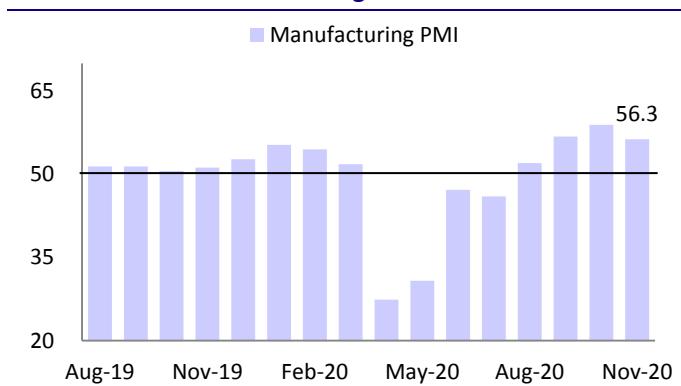


Exhibit 11: EAI-GVA moving in line with official real GVA...

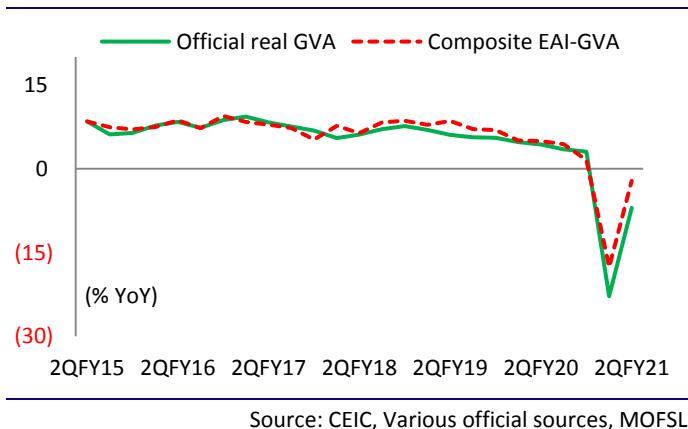


Exhibit 12: ...and is linked with official real GDP* growth also

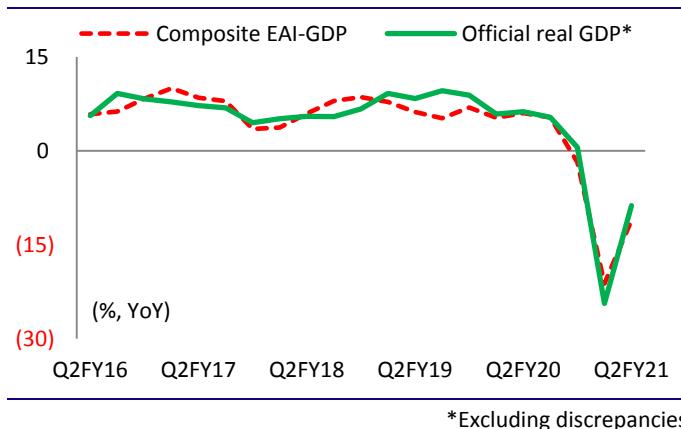


Exhibit 13: Key indicators used in the creation of EAI-GVA on a monthly basis

% YoY	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20
Agriculture and Allied activities													
IIP: Fertiliser	11.8	13.6	10.2	(0.1)	2.9	(11.9)	(4.5)	7.5	4.2	6.9	7.3	(0.3)	6.3
Domestic tractor sales	(5.5)	(12.8)	4.0	3.3	19.6	(50.2)	(80.1)	0.5	20.2	35.9	64.8	26.7	9.0
Real rural wages ¹	(3.6)	(4.6)	(6.0)	(5.6)	(4.8)	(4.1)	(1.3)	1.1	2.4	1.9	0.3	0.9 ⁸	0.8 ⁸
Reservoir levels	36.0	49.4	58.7	65.6	55.5	75.2	65.9	83.1	115.7	71.5	3.6	1.4	(3.6)
Agriculture sector	4.0	3.9	6.0	5.8	7.2	(0.1)	(3.4)	7.1	10.8	10.4	10.0	5.4	3.5
Industrial sector													
Coal	(17.6)	(3.5)	6.1	8.0	11.3	4.0	(15.5)	(14.0)	(15.5)	(5.7)	3.6	21.2	11.6
Crude oil	(5.1)	(6.0)	(7.4)	(5.3)	(6.4)	(5.5)	(6.4)	(7.1)	(6.0)	(4.9)	(6.3)	(6.0)	(6.2)
Natural gas	(5.6)	(6.4)	(9.2)	(9.0)	(9.6)	(15.1)	(19.9)	(16.8)	(12.0)	(10.2)	(9.5)	(10.6)	(8.6)
IIP: Mining	(8.0)	1.9	5.7	4.4	9.6	(1.3)	(26.9)	(20.4)	(19.5)	(12.8)	(9.0)	1.4	0.3 ⁸
Mining	(5.6)	0.2	1.7	3.1	5.0	(1.7)	(18.0)	(14.7)	(12.6)	(6.7)	(4.4)	3.0	1.2
Electricity	(12.2)	(4.9)	(0.0)	3.2	11.5	(8.2)	(22.9)	(14.8)	(10.0)	(2.4)	(1.8)	4.8	10.5
IIP: Manufacturing	(5.7)	3.0	(0.3)	1.8	3.8	(22.8)	(66.6)	(37.8)	(17.0)	(11.6)	(7.9)	(0.6)	(2.0) ⁸
Credit growth ²	3.4	1.8	(1.1)	(1.0)	(1.6)	0.3	3.4	5.2	4.1	1.1	0.1	(1.3)	(3.1)
Fuel consumption	(8.8)	7.8	(0.0)	1.8	5.3	(19.1)	(49.6)	(24.1)	(9.8)	(16.7)	(18.7)	(4.0)	9.1
Manufacturing	(4.8)	9.3	2.8	5.2	8.3	(22.3)	(67.9)	(34.9)	(13.2)	(13.0)	(11.4)	0.7	5.7
Steel production	(0.5)	7.0	8.7	1.6	2.9	(21.9)	(82.8)	(40.4)	(23.2)	(6.5)	(1.7)	2.8	(2.7)
Cement output	(7.7)	4.3	5.5	5.1	7.8	(25.1)	(85.2)	(21.4)	(6.8)	(13.5)	(14.5)	(3.5)	2.8
IIP: NMMP ³	(9.2)	1.4	2.1	4.2	9.5	(23.7)	(86.6)	(27.3)	(10.0)	(13.5)	(12.5)	(7.1)	(6.4) ⁸
IIP: Construction	(9.7)	(0.7)	0.2	(0.3)	2.8	(24.3)	(85.0)	(39.0)	(18.3)	(8.6)	(1.6)	0.7	(0.5) ⁸
Construction	(9.7)	(0.7)	0.2	(0.3)	2.8	(24.3)	(85.0)	(39.0)	(18.3)	(8.6)	(1.6)	0.7	(0.5) ⁸
Industry	(6.6)	5.0	1.9	3.5	6.8	(19.8)	(63.9)	(32.4)	(14.1)	(10.4)	(7.8)	1.7	4.6
Services sector													
Auto sales [#]	(13.3)	(12.1)	(13.1)	(13.8)	(19.1)	(45.0)	(100.0)	(84.1)	(41.5)	(16.6)	1.2	10.4	13.4
Trade credit ⁴	5.2	4.0	2.9	1.2	4.4	4.2	9.2	9.8	8.1	9.4	12.0	10.0	12.4
Foreign tourist arrivals	6.2	7.9	2.9	0.6	(6.9)	(66.4)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)
Freight traffic ⁵	(7.1)	0.5	4.9	2.8	5.7	(10.8)	(30.0)	(22.0)	(10.2)	(7.8)	(1.6)	8.9	9.1
Passengers traffic ⁵	(2.3)	0.2	(1.3)	(1.7)	4.5	(38.1)	(101.2)	(100.6)	(99.4)	(98.0)	(96.8)	(94.3)	(91.2)
MFs AUMs	18.4	11.9	13.0	15.1	15.0	(6.8)	(1.9)	(2.0)	7.0	10.8	7.5	8.2	5.7
Fiscal Spending ⁶	35.4	14.9	54.4	(14.9)	16.1	31.3	42.1	(20.3)	105.0	5.5	(26.2)	(42.9)	(4.5)
Real deposits ⁷	10.2	8.9	6.7	7.3	7.8	7.4	11.7	14.4	11.7	12.4	10.5	9.1	8.5
Telecom subscribers	1.1	(1.5)	(2.1)	(2.2)	(2.0)	(0.5)	(1.2)	(1.6)	(2.2)	(2.1)	(2.0)	(1.3) ⁸	(1.6) ⁸
PMI: Services	(5.7)	(1.9)	0.2	6.3	9.5	(5.2)	(89.4)	(74.9)	(32.1)	(36.4)	(20.2)	2.3	10.0
Services sector	4.8	6.3	8.1	5.3	6.9	(1.8)	(18.8)	(16.1)	(2.3)	(4.6)	(1.3)	3.3	6.0
Aggregates													
EAI-GVA	1.5	5.8	6.1	4.8	6.9	(7.1)	(29.8)	(18.5)	(4.4)	(5.7)	(2.9)	2.2	4.8
Non-farm EAI-GVA	1.1	6.1	6.1	4.8	7.0	(7.9)	(32.6)	(21.2)	(6.0)	(6.8)	(3.7)	2.3	5.4

¹ Rural wages; deflated by CPI for rural workers² Banks' industrial credit growth; deflated by WPI³ Non-metallic minerals products (NMMP)⁴ Bank's non-food trade credit; deflated by WPI⁵ Railways and aviation⁶ Total non-interest spending by the central government; deflated by WPI⁷ Bank deposits; deflated by WPI⁸ Our forecasts

Sale of commercial vehicles within total auto sales starting Apr'20 has been derived using CV sales of Ashok Leyland, Eicher Motors Ltd., and Mahindra & Mahindra Ltd.; the three account for ~50% of all CV sales



Worse than previous month and a year ago

Worse than the previous month but better than a year ago

Better than the previous month but worse than a year ago

Better than previous month and a year ago

Exhibit 14: Key leading indicators for consumption

% YoY	Passenger traffic ¹	Revenue spending ²	Petrol sales	Rural wages ³	Consumer durable: IIP	Currency	Auto sales ⁴	Imports ⁵	Foreign tourists arrival	Personal credit	Services PMI
Oct-19	(2.2)	42.7	8.9	(3.6)	(3.3)	15.1	(13.2)	(5.4)	6.2	17.2	49.2
Nov-19	0.4	20.9	9.3	(4.6)	1.1	12.8	(12.4)	(4.2)	7.9	16.4	52.7
Dec-19	(1.2)	49.1	3.3	(6.0)	(3.2)	11.9	(14.2)	(5.2)	2.9	15.9	53.3
Jan-20	(1.6)	(8.1)	3.5	(5.6)	(0.6)	11.9	(14.6)	(3.6)	0.6	16.9	55.5
Feb-20	4.6	36.0	11.3	(4.8)	(0.3)	11.5	(18.1)	1.3	(6.9)	17.0	54.5
Mar-20	(38.1)	45.7	(16.4)	(4.1)	(22.3)	14.5	(41.7)	(28.5)	(66.4)	15.0	49.3
Apr-20	(101.1)	50.6	(60.4)	(1.3)	(48.1)	15.7	(100.0)	(47.5)	(100.0)	12.1	5.4
May-20	(100.6)	(32.8)	(35.3)	1.1	(9.7)	18.4	(84.0)	(31.9)	(100.0)	10.6	12.6
Jun-20	(99.2)	98.7	(13.5)	2.4	6.9	20.6	(39.8)	(36.4)	(100.0)	10.5	33.7
Jul-20	(97.7)	24.5	(10.4)	1.9	1.8	22.2	(14.0)	(16.9)	(100.0)	11.2	34.2
Aug-20	(96.4)	(26.9)	(7.5)	0.3	(2.3)	23.2	4.2	(24.5)	(100.0)	10.6	41.8
Sep-20	(93.9)	(43.0)	3.3	0.9 ⁶	4.1	22.7	13.3	(5.2)	(100.0)	9.2	49.8
Oct-20	(90.6)	(19.0)	4.5	0.8 ⁶	3.9 ⁶	20.3	16.5	1.0	(100.0)	9.3	54.1

¹ Railways and aviation² Revenue spending less interest payments of the central government³ Real rural wages; deflated by CPI for rural workers⁴ Includes passenger vehicles and two-wheelers⁵ Imports of agricultural items, leather products, newsprint and electronic goods, textiles (excluding gold, silver, precious metals)⁶ Our forecasts

Exhibit 15: Key leading indicators for investment

% YoY	Cargo traffic ¹	Electricity	Auto sales ^{2,**}	Diesel sales	Capital goods' imports ³	Cement Production	IIP: Non-metallic products	IIP: Capital goods	Industrial credit	Govt capex ⁴	Manufacturing PMI
Oct-19	(7.1)	(12.2)	(14.6)	(7.3)	(6.1)	(7.7)	(9.2)	(22.4)	3.4	(5.1)	50.6
Nov-19	0.5	(4.9)	(6.8)	9.1	(21.8)	4.3	1.4	(8.9)	2.4	(12.3)	51.2
Dec-19	4.9	(0.0)	0.2	(0.0)	(16.5)	5.5	2.1	(18.3)	1.6	104.4	52.7
Jan-20	2.8	3.2	(3.8)	(1.8)	6.6	5.1	4.2	(4.4)	2.5	(31.8)	55.3
Feb-20	5.7	11.5	(32.1)	6.2	14.1	7.8	9.5	(9.6)	0.7	(15.7)	54.5
Mar-20	(10.8)	(8.2)	(76.8)	(24.2)	(16.5)	(25.1)	(23.7)	(38.8)	0.7	(4.4)	51.8
Apr-20	(30.0)	(22.9)	(100.0)	(55.6)	(54.2)	(85.2)	(86.6)	(92.7)	1.7	(7.5)	27.4
May-20	(22.0)	(14.8)	(86.4)	(29.5)	(33.6)	(21.4)	(27.3)	(65.9)	1.7	57.2	30.8
Jun-20	(10.2)	(10.0)	(67.4)	(15.5)	(42.1)	(6.8)	(10.0)	(37.4)	2.2	116.2	47.2
Jul-20	(7.8)	(2.4)	(55.9)	(19.5)	(37.7)	(13.5)	(13.5)	(22.8)	0.8	(47.1)	46.0
Aug-20	(1.6)	(1.8)	(45.7)	(20.7)	(42.0)	(14.5)	(12.5)	(14.8)	0.5	(20.9)	52.0
Sep-20	8.9	4.8	(34.1)	(5.9)	(29.2)	(3.5)	(7.1)	(3.3)	(0.0)	(38.9)	56.8
Oct-20	9.1	10.5	(33.7)	7.4	(23.8)	2.8	(6.4) ⁵	(7.3) ⁵	(1.7)	129.5	58.9

¹ Railways and waterways² Includes commercial vehicles and three-wheelers³ Machinery and equipment, transport equipment, machine tools and project goods⁴ Capital spending of the central government⁵ Our forecasts

** - Data for total CV sales starting Ap'20 derived using CV sales of Ashok Leyland, Eicher Motors Ltd., and Mahindra & Mahindra Ltd.; the three account for ~50% of all CV sales

Worse than previous month and a year ago

Worse than the previous month but better than a year ago

Better than the previous month but worse than a year ago

Better than previous month and a year ago

NOTES

Explanation of Investment Rating	
Investment Rating	Expected return (over 12-month)
BUY	>=15%
SELL	< - 10%
NEUTRAL	< - 10 % to 15%
UNDER REVIEW	Rating may undergo a change
NOT RATED	We have forward looking estimates for the stock but we refrain from assigning recommendation

*In case the recommendation given by the Research Analyst becomes inconsistent with the investment rating legend, the Research Analyst shall within 28 days of the inconsistency, take appropriate measures to make the recommendation consistent with the investment rating legend.

Disclosures

The following Disclosures are being made in compliance with the SEBI Research Analyst Regulations 2014 (herein after referred to as the Regulations). Motilal Oswal Securities Ltd. (MOFSL)* is a SEBI Registered Research Analyst having registration no. INH000000412. MOFSL, the Research Entity (RE) as defined in the Regulations, is engaged in the business of providing Stock broking services, Investment Advisory Services, Depository participant services & distribution of various financial products. MOFSL is a subsidiary company of Motilal Oswal Financial Service Ltd. (MOFSL). MOFSL is a listed public company, the details in respect of which are available on www.motilaloswal.com. MOFSL is registered with the Securities & Exchange Board of India (SEBI) and is a registered Trading Member with National Stock Exchange of India Ltd. (NSE) and Bombay Stock Exchange Limited (BSE), Multi Commodity Exchange of India (MCX) & National Commodity & Derivatives Exchange Ltd. (NCDEX) for its stock broking activities & is Depository participant with Central Depository Services Limited (CDSL) & National Securities Depository Limited (NSDL) and is member of Association of Mutual Funds of India (AMFI) for distribution of financial products. Details of associate entities of Motilal Oswal Securities Limited are available on the website at <http://onlinereports.motilaloswal.com/Dormant/documents/List%20of%20Associate%20companies.pdf>

MOFSL and its associate company(ies), their directors and Research Analyst and their relatives may; (a) from time to time, have a long or short position in, act as principal in, and buy or sell the securities or derivatives thereof of companies mentioned herein. (b) be engaged in any other transaction involving such securities and earn brokerage or other compensation or act as a market maker in the financial instruments of the company(ies) discussed herein or act as an advisor or lender/borrower to such company(ies) or may have any other potential conflict of interests with respect to any recommendation and other related information and opinions.; however the same shall have no bearing whatsoever on the specific recommendations made by the analyst(s), as the recommendations made by the analyst(s) are completely independent of the views of the associates of MOFSL even though there might exist an inherent conflict of interest in some of the stocks mentioned in the research report

MOFSL and / or its affiliates do and seek to do business including investment banking with companies covered in its research reports. As a result, the recipients of this report should be aware that MOFSL may have a potential conflict of interest that may affect the objectivity of this report. Compensation of Research Analysts is not based on any specific merchant banking, investment banking or brokerage service transactions. Details of pending Enquiry Proceedings of Motilal Oswal Securities Limited are available on the website at <https://galaxy.motilaloswal.com/ResearchAnalyst/PublishViewLitigation.aspx>

A graph of daily closing prices of securities is available at www.nseindia.com, www.bseindia.com. Research Analyst views on Subject Company may vary based on Fundamental research and Technical Research. Proprietary trading desk of MOFSL or its associates maintains arm's length distance with Research Team as all the activities are segregated from MOFSL research activity and therefore it can have an independent view with regards to Subject Company for which Research Team have expressed their views.

Regional Disclosures (outside India)

This report is not directed or intended for distribution to or use by any person or entity resident in a state, country or any jurisdiction, where such distribution, publication, availability or use would be contrary to law, regulation or which would subject MOFSL & its group companies to registration or licensing requirements within such jurisdictions.

For Hong Kong:

This report is distributed in Hong Kong by Motilal Oswal capital Markets (Hong Kong) Private Limited, a licensed corporation (CE AYY-301) licensed and regulated by the Hong Kong Securities and Futures Commission (SFC) pursuant to the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong) "SFO". As per SEBI (Research Analyst Regulations) 2014 Motilal Oswal Securities (SEBI Reg No. INH000000412) has an agreement with Motilal Oswal capital Markets (Hong Kong) Private Limited for distribution of research report in Hong Kong. This report is intended for distribution only to "Professional Investors" as defined in Part I of Schedule 1 to SFO. Any investment or investment activity to which this document relates is only available to professional investor and will be engaged only with professional investors." Nothing here is an offer or solicitation of these securities, products and services in any jurisdiction where their offer or sale is not qualified or exempt from registration. The Indian Analyst(s) who compile this report is/are not located in Hong Kong & are not conducting Research Analysis in Hong Kong.

For U.S.

Motilal Oswal Securities Limited (MOFSL) is not a registered broker - dealer under the U.S. Securities Exchange Act of 1934, as amended (the "1934 act") and under applicable state laws in the United States. In addition MOFSL is not a registered investment adviser under the U.S. Investment Advisers Act of 1940, as amended (the "Advisers Act" and together with the 1934 Act, the "Acts"), and under applicable state laws in the United States. Accordingly, in the absence of specific exemption under the Acts, any brokerage and investment services provided by MOFSL , including the products and services described herein are not available to or intended for U.S. persons. This report is intended for distribution only to "Major Institutional Investors" as defined by Rule 15a-6(b)(4) of the Exchange Act and interpretations thereof by SEC (henceforth referred to as "major institutional investors"). This document must not be acted on or relied on by persons who are not major institutional investors. Any investment or investment activity to which this document relates is only available to major institutional investors and will be engaged in only with major institutional investors. In reliance on the exemption from registration provided by Rule 15a-6 of the U.S. Securities Exchange Act of 1934, as amended (the "Exchange Act") and interpretations thereof by the U.S. Securities and Exchange Commission ("SEC") in order to conduct business with Institutional Investors based in the U.S., MOFSL has entered into a chaperoning agreement with a U.S. registered broker-dealer, Motilal Oswal Securities International Private Limited. ("MOSIPL"). Any business interaction pursuant to this report will have to be executed within the provisions of this chaperoning agreement.

The Research Analysts contributing to the report may not be registered /qualified as research analyst with FINRA. Such research analyst may not be associated persons of the U.S. registered broker-dealer, MOSIPL, and therefore, may not be subject to NASD rule 2711 and NYSE Rule 472 restrictions on communication with a subject company, public appearances and trading securities held by a research analyst account.

For Singapore

In Singapore, this report is being distributed by Motilal Oswal Capital Markets Singapore Pte Ltd ("MOCMSPL") (Co.Reg. NO. 201129401Z) which is a holder of a capital markets services license and an exempt financial adviser in Singapore. As per the approved agreement under Paragraph 9 of Third Schedule of Securities and Futures Act (CAP 289) and Paragraph 11 of First Schedule of Financial Advisors Act (CAP 110) provided to MOCMSPL by Monetary Authority of Singapore. Persons in Singapore should contact MOCMSPL in respect of any matter arising from, or in connection with this report/publication/communication. This report is distributed solely to persons who qualify as "Institutional Investors", of which some of whom may consist of "accredited" institutional investors as defined in section 4A(1) of the Securities and Futures Act, Chapter 289 of Singapore ("the SFA"). Accordingly, if a Singapore person is not or ceases to be such an institutional investor, such Singapore Person must immediately discontinue any use of this Report and inform MOCMSPL.

Specific Disclosures

- 1 MOFSL, Research Analyst and/or his relatives does not have financial interest in the subject company, as they do not have equity holdings in the subject company.
- 2 MOFSL, Research Analyst and/or his relatives do not have actual/beneficial ownership of 1% or more securities in the subject company
- 3 MOFSL, Research Analyst and/or his relatives have not received compensation/other benefits from the subject company in the past 12 months
- 4 MOFSL, Research Analyst and/or his relatives do not have material conflict of interest in the subject company at the time of publication of research report
- 5 Research Analyst has not served as director/officer/employee in the subject company
- 6 MOFSL has not acted as a manager or co-manager of public offering of securities of the subject company in past 12 months
- 7 MOFSL has not received compensation for investment banking/ merchant banking/brokerage services from the subject company in the past 12 months
- 8 MOFSL has not received compensation for other than investment banking/merchant banking/brokerage services from the subject company in the past 12 months
- 9 MOFSL has not received any compensation or other benefits from third party in connection with the research report
- 10 MOFSL has not engaged in market making activity for the subject company

The associates of MOFSL may have:

- financial interest in the subject company
- actual/beneficial ownership of 1% or more securities in the subject company
- received compensation/other benefits from the subject company in the past 12 months
- other potential conflict of interests with respect to any recommendation and other related information and opinions.; however the same shall have no bearing whatsoever on the specific recommendations made by the analyst(s), as the recommendations made by the analyst(s) are completely independent of the views of the associates of MOFSL even though there might exist an inherent conflict of interest in some of the stocks mentioned in the research report.
- acted as a manager or co-manager of public offering of securities of the subject company in past 12 months
- be engaged in any other transaction involving such securities and earn brokerage or other compensation or act as a market maker in the financial instruments of the company(ies) discussed herein or act as an advisor or lender/borrower to such company(ies)
- received compensation from the subject company in the past 12 months for investment banking / merchant banking / brokerage services or from other than said services.

The associates of MOFSL has not received any compensation or other benefits from third party in connection with the research report

Above disclosures include beneficial holdings lying in demat account of MOFSL which are opened for proprietary investments only. While calculating beneficial holdings, It does not consider demat accounts which are opened in name of MOFSL for other purposes (i.e holding client securities, collaterals, error trades etc.). MOFSL also earns DP income from clients which are not considered in above disclosures.

Analyst Certification

The views expressed in this research report accurately reflect the personal views of the analyst(s) about the subject securities or issues, and no part of the compensation of the research analyst(s) was, is, or will be directly or indirectly related to the specific recommendations and views expressed by research analyst(s) in this report.

Terms & Conditions:

This report has been prepared by MOFSL and is meant for sole use by the recipient and not for circulation. The report and information contained herein is strictly confidential and may not be altered in any way, transmitted to, copied or distributed, in part or in whole, to any other person or to the media or reproduced in any form, without prior written consent of MOFSL. The report is based on the facts, figures and information that are considered true, correct, reliable and accurate. The intent of this report is not recommendatory in nature. The information is obtained from publicly available media or other sources believed to be reliable. Such information has not been independently verified and no warranty, representation of warranty, express or implied, is made as to its accuracy, completeness or correctness. All such information and opinions are subject to change without notice. The report is prepared solely for informational purpose and does not constitute an offer document or solicitation of offer to buy or sell or subscribe for securities or other financial instruments for the clients. Though disseminated to all the customers simultaneously, not all customers may receive this report at the same time. MOFSL will not treat recipients as customers by virtue of their receiving this report.

Disclaimer:

The report and information contained herein is strictly confidential and meant solely for the selected recipient and may not be altered in any way, transmitted to, copied or distributed, in part or in whole, to any other person or to the media or reproduced in any form, without prior written consent. This report and information herein is solely for informational purpose and may not be used or considered as an offer document or solicitation of offer to buy or sell or subscribe for securities or other financial instruments. Nothing in this report constitutes investment, legal, accounting and tax advice or a representation that any investment or strategy is suitable or appropriate to your specific circumstances. The securities discussed and opinions expressed in this report may not be suitable for all investors, who must make their own investment decisions, based on their own investment objectives, financial positions and needs of specific recipient. This may not be taken in substitution for the exercise of independent judgment by any recipient. Each recipient of this document should make such investigations as it deems necessary to arrive at an independent evaluation of an investment in the securities of companies referred to in this document (including the merits and risks involved), and should consult its own advisors to determine the merits and risks of such an investment. The investment discussed or views expressed may not be suitable for all investors. Certain transactions -including those involving futures, options, another derivative products as well as non-investment grade securities - involve substantial risk and are not suitable for all investors. No representation or warranty, express or implied, is made as to the accuracy, completeness or fairness of the information and opinions contained in this document. The Disclosures of Interest Statement incorporated in this document is provided solely to enhance the transparency and should not be treated as endorsement of the views expressed in the report. This information is subject to change without any prior notice. The Company reserves the right to make modifications and alterations to this statement as may be required from time to time without any prior approval. MOFSL, its associates, their directors and the employees may from time to time, effect or have effected an own account transaction in, or deal as principal or agent in or for the securities mentioned in this document. They may perform or seek to perform investment banking or other services for, or solicit investment banking or other business from, any company referred to in this report. Each of these entities functions as a separate, distinct and independent of each other. The recipient should take this into account before interpreting the document. This report has been prepared on the basis of information that is already available in publicly accessible media or developed through analysis of MOFSL. The views expressed are those of the analyst, and the Company may or may not subscribe to all the views expressed therein. This document is being supplied to you solely for your information and may not be reproduced, redistributed or passed on, directly or indirectly, to any other person or published, copied, in whole or in part, for any purpose. This report is not directed or intended for distribution to, or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction, where such distribution, publication, availability or use would be contrary to law, regulation or which would subject MOFSL to any registration or licensing requirement within such jurisdiction. The securities described herein may or may not be eligible for sale in all jurisdictions or to certain category of investors. Persons in whose possession this document may come are required to inform themselves of and to observe such restriction. Neither the Firm, not its directors, employees, agents or representatives shall be liable for any damages whether direct or indirect, incidental, special or consequential including lost revenue or lost profits that may arise from or in connection with the use of the information. The person accessing this information specifically agrees to exempt MOFSL or any of its affiliates or employees from, any and all responsibility/liability arising from such misuse and agrees not to hold MOFSL or any of its affiliates or employees responsible for any such misuse and further agrees to hold MOFSL or any of its affiliates or employees free and harmless from all losses, costs, damages, expenses that may be suffered by the person accessing this information due to any errors and delays.

Registered Office Address: Motilal Oswal Tower, Rahimtullah Sayani Road, Opposite Parel ST Depot, Prabhadevi, Mumbai-400025; Tel No.: 022-3980 4263; www.motilaloswal.com. Correspondence Address: Palm Spring Centre, 2nd Floor, Palm Court Complex, New Link Road, Malad (West), Mumbai- 400 064. Tel No: 022 3080 1000. Compliance Officer: Neeraj Agarwal, Email Id: na@motilaloswal.com, Contact No.:022-38281085.

Registration details: MOFSL: SEBI Registration: INZ000158836 (BSE/NSE/MCX/NCDEX); CDSL: IN-DP-16-2015; NSDL: IN-DP-NSDL-152-2000; Research Analyst: INH000000412. AMFI: ARN 17397. Investment Adviser: INA000007100. Motilal Oswal Asset Management Company Ltd. (MOAMC): PMS (Registration No.: INP000000670) offers PMS and Mutual Funds products. Motilal Oswal Wealth Management Ltd. (MOWML): PMS (Registration No.: INP000004409) offers wealth management solutions. *Motilal Oswal Securities Ltd. is a distributor of Mutual Funds, PMS, Fixed Deposit, Bond, NCDs, Insurance and IPO products. *Motilal Oswal Real Estate Investment Advisors II Pvt. Ltd. offers Real Estate products. * Motilal Oswal Private Equity Investment Advisors Pvt. Ltd. offers Private Equity products.

* MOFSL has been amalgamated with Motilal Oswal Financial Services Limited (MOFSL) w.e.f August 21, 2018 pursuant to order dated July 30, 2018 issued by Hon'ble National Company Law Tribunal, Mumbai Bench. The existing registration no(s) of MOFSL would be used until receipt of new MOFSL registration numbers.