GDP and Economic Analysis -Perspective & importance for CAs

Economy during pandemic – a roller coaster ride

- India's <u>April-June quarter</u> GDP contracted by a massive 23.9 per cent year-on-year (YoY), the first GDP contraction in more than 40 years
- The sectoral performance was as follows:
 - Trade, hotels, transport and communication saw 47% dip
 - Manufacturing shrank 39.3%, while construction took a 50.3% hit
 - Mining output struggled at 23.3%, and electricity and gas dipped by 7%
 - The lone bright spot was agriculture, growing at 3.4%
- In the same period the report card of other economies were as follows:
 - US contracted around 9 %. UK by 21%, Germany and other majors of Europe contracted within a range 10% to 17%
 - China GDP grew by 3.2%
- "The Reserve Bank of India (RBI) won't lose too much sleep on this number as it was expected. The RBI still has its focus on growth. This (GDP number) slightly improves chances of a rate cut in October. Unless the inflation comes below 5% in the next reading, the RBI still might postpone the rate cut to December," Rupa Rege Nitsure, group chief economist, L&T Financial Holdings told Reuters in a commentary on the numbers.







- In line with analyst estimates for its performance in the July-September quarter (Q2) of 2020-21, the Indian economy contracted 7.5 per cent from the same quarter last year, official data released by the National Statistics Office
- This was a significant improvement over an unprecedented 23.9 per cent year-on-year contraction witnessed in the April-June quarter of this year. In the September quarter of 2019-20, the country had reported a year-on-year gross domestic product (GDP) growth of 4.5 per cent
- The Reserve Bank had earlier projected that India's economic contraction for full 2021-20 would be 9.5 per cent
- Indian economy have made a V shaped recovery in contrast to the much-talked prolonged U shaped one
- India continues to be in a technical recession
- Significant drop in the rate of GDP contraction signals a revival for the economy after a major plunge in the wake of the <u>coronavirus</u> pandemic
- However, even with a smaller rate of contraction, the <u>Indian economy</u> remains one of the worst performers among 24 major countries. Apart from India, the UK has shown a contraction of 9.6 per cent, USA - -2.9, Italy -4.7 in the July-September period
- Countries such as Singapore, Japan, Germany, Hong Kong, Sweden recorded better economic growth as compared to India in Q2
- China, on the other hand, is the only country that has shown growth at 4.9 per cent during the same period



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Can we relate to these headlines?

2 may arrest fall in GDP ASSERVATE WALVINARY The ADI has fallen from h INDIA MAY STILL ENTER peak of November 12 (pre Puble, 26 November **TECHNICAL RECESSION** Diwali) to 75 per cent from conomic activity in March 1 levels now, The GMI which had fully recovered a Lindia is improving, as every rating agency, barring GDP contraction in Q2 Diwali approached, has not Barclays, has projected fallen to 92 per cent. indicators such as diesel and either less contraction in Both US-based tech giant power consumption, rall India's economy in the began giving out mobilin freight, and mobility suggest. second quarter or the same BofA Securities 7.8. Z.8 indices at the beginning a The uptick in activity, as it was earlier. The 8.0 8.5 Barclays guided by an improving Covidpredictions differ widely as KRA gress of mobility, and thus eco 11-12.5 9.5 19 simulation, has prompted Both Securities expected nomic activity, coming back b observers such as Moody's 9.0 9.9 **CARE** Ratings normal open to the public. the fall in GDP at 7.8 per investors Service and State Bank of India to Infor that eco- cent and NCAER at 12.7 per Don & Bladdree 5 9.9 Hypertrack is a 5i Francisco-bused live location nomic growth in the July- cent. CRISIL says the decline set assearch 77.5 107 API start-up for businesses th September quarter wouldn't be in the economy would be India Ratings tracks deliveries, visits, as less than 10 per cent as bad as expected. A new way of looking at the against its earlier estimate NLACR 27 23 rides. CEO Kashyap Dees said that while deliveries go Shurter Apenities nevtval - comparing two dif- of 12 per cent. India's dramatically and stayed ferent mobility indices economy shrank at an visits dipped at each lockd unprecedented 23.9 per cent in the first quarter. As points to a similar conclusion. and then slowly recovered such, if projections come true, India would be in a The two indicators are Apple. similar levels. Driving Index - essentially technical recession. The numbers are Rides, on the other h scheduled to be Nieased on friday. composed of libone users dipped dramatically and st moving out in cars - and the ed recovering much slower TROPIES DISCOLARS. -Ocoge Mobility Index (grocery they represent ride-shar and pharmacy), which pertains to Google Maps users accessing Crease brasic goods. were consistent with the Al in the initial months of he said. "People started gol Covid-19, when India faced a back to essential places fast lockdown, Google's mobility than they started driving index for groceries and pharmuch, Google's index refle-#55-0F macy (GMO-GP) recovered to as coverage of place and d much as 80 per cent of March 100 counts frequency of visit, the 1. 2020 levels towards the end recovering faster. Apple's ind of June. reflects overall moveme The Apple Driving Index with (ADI), on the other hand, had about 3 per cent of India's relaxations, and could probthus recovering slows not even crossed 50 per cent of smartphone users have ably reflect in a positive GDP Deorah told Business Standar Analysts have noted a baseline mobility at the end of 1Phones, majority of 1Phone growth number for Q2.

QL as compared to March L customers fit into the top On similar lines, the RBTs Come Q2, while the GMI-GP income/consumption decile of estimate of 9.8 per cent confaced near-stagnation, though the population in a higher range of 80-90 per Assumption 2 Google users lowed by its "Noncoast" model, portion of current consum cent, the ADI for Delhi got a are more broad-based in terms predicting Q2 GDP growth at tion for consumer applian boost and recovered to 80 per of consumption or income pro- 8.6 per cent. in the same period when data to Google

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cent of March 1 levels in the file, or a considerably large promiddle of September. The pick- portion of both the rich and the cent in QL, the National up in ADI happened peechely poor use phones that provide Statistical Office will release Delhi's first wave of Covid-19 As the Private Pinal The analysis, however, is not infections subsided (see cham). Consumption Expenditure an amempt to correlate mobil-It can be reasonably (PPCE) forms 55-60 per cerr of hy indices with GDP growth, as the economy strongly is observed that the gradual carch. Indices with GDP growth as the economy strongly in the indices with GDP growth. Inferred that the gradual cach. India's good doments product the latter depends on numerup of the ADI with the GML-GP (GDP), a readiness to travel and outs other factors represents improved con-consume more among the among the However, applying the the uptick temporary "Co-sumption from well-off Phone

traction in Q2 growth was foi-

data for Q2 on November 27,



recession for the first time after with the June quarter's record 23.9% contraction, data released on Friday showed. GDP grew 4.4% Manufacturing surprised The government and experts st an 8.6% contraction. Quarter on quarter, September quarter GDP rose 23.2% from the June quarter, said. "The sustainability of the the sharpest baunce-back among major accomics such as the US (7.4%) and the UK (6.5%). so the pandemic " "Q2GDP at -7.5% buttresses reco-

FY21 GDP CONTRACTION ESTIMATE REVISED TO 7.5% FROM 9.5% EARLIER **Rates Unchanged, RBI Bets on** Liquidity to Boost Economy Projects retail inflation What RBI Did **Gaining Momentum** Banks not to pay dividends for first half of next overnance, risk standards catching up with buoyan fiscal year at 4.6-5.2% unchanged at 4% More tools to be used if rural demand to craft an Reverse repo economic revival that, while still forex intervention goes C Our Bureau facing risks, is of sufficient magnitude evere punishments likely to brighten India's growth outlook Mumbai The Reserve Rank of In dia (RBI), which kept rates un changed on Friday amid inflation concerns, will use excess liquidity from what it was a few months ago isumer protection the RBI said Friday. >> 6 **Banks Told to Raise** RRBs now allowed to participate in money market **Corp Gov Standards** Shaktikanta Das Friday ha directors liquidity seeps through the fi-nancial system The signs of recovery are far The signs of recovery are far through the composition of the secon-through the fi-nancial system through the fi-nancial system through the fi-through the fi-through the fi-nancial system through the fi-through the fi and entrata bank is strengthening from bring broad-based and are stitutions to improve their corp. Innancial stability by barring di- support, governor Shaktikanta dards. The technologue statistical and the strengthening strengthening and the statistical stability by barks for the Dassid. that still has many segments. contraction of 1.50 ministication of the second sec dards. The technology backbone of the financial industry needs further improvements, he said. >> 6

Sensex Scales 45k Peak on Central Bank Move

After 2 consecutive quarters of negative growth. economy technically in recession for first time EMERGING of flattening of

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pnomic Times, Mumbai, Saturday, 28 November 2020

Core Sector Output

Shrinks 2.5% in Oct

leased on Friday showed gross tax collections were up nearly 17% in October, the first positive rise in this fiscal, indicating a pickup in demand and consumption.

"The core sector data for October disappointed, with a sharper pace of contraction of 2.5% relative to our forecast of a muted 0.5-1% year-on-year decline," said Aditi Nayar, principal economist, ICRA. Decline in core sector was driven

by natural gas (-8.6%) and crude (-6.2%) – supply side indicators and refinery products (-17%), which also included impact of some production shutdowns.

Negative Territory

Gas, crude, refinery steel show output show production picture on construction side volatility

Electricity production rose further to 125 8-month



Except fertilisers, other 7 items have contracted in Apr-Oct



venience and safety reaso respectively," notes a Kor

However, if well-off iPp users going out and addim

consumption bump in Q2, a attributed most of it to pentdemand. "It is possible that and automobiles may refi While India's GDP fell 24 per 'pull-forward' demand for or



Can we relate to these headlines?



RBI leans towards grow

C REPO RATE UNCHANGED ANUP ROY Mambal, & December AT 4%, STANCE STAYS ACCOMMODATIVE

FY21 GDP TO CONTRACT BY 7.5%, INFLATION **OUTLOOK ADVERSE**



SCRUTINISED O be Reserve Bank of India (RBI) on Friday BASIS OF SCALE kept its policy rates unchanged and promlised to continue its accommodative staince In an attempt to enhan this fiscal year and into the next, while oversight of regulated e sharply revising its inflation forecast upward and retaining its earlier stand that the economy could scale-based approach t start recording growth from the third quarter itself. systemic risk contributi The repo rate stays at 4 per cent and the stance regulating non-banking "accommodative". The rate pause was on expected companies (NBFCs).

lines, and all the six members on the Monetary Policy Committee were unanimous on the matter, RBI Governor Shalelkanta Das said in a post-policy interaction with the modia. Economists and bankers had expected the central

bank to remove some of the liquidity overhang that had brought down money market rates way below the policy repo rate. But the central bank did not seem to be in a mood to spoll the party for the bond market, perhaps to manage the U2 trillion borrowing programme by the government.

The central bank will continue to support easy liquidity, Das said. based inflation to average at 6.8 pe The Reserve Bank, on its part, stands ready to

cent in the December quarter. undertake further measures as necessary to assure market participants of access to liquidity and easy financing conditions," Das said. SENSEX BREACHES 4^r

The central bank will continue to employ instruments such as open market operations (OMO), pur-ON UPBEAT FORECAS chasing secondary market bonds, operation twists, and reverse repos at appropriate times and calibrate

them to ensure ample liquidity. "Our paramount objective is to support growth while ensuring that financial stability is maintained and preserved at all times," the RBI governor said. Turn to Page 13 +

44,632.7 OUR PARAMOUNT OBJECTIVE IS TO SUPPORT GROWTH WHILE ENSURING THAT FINANCIAL STABILITY IS MAINTAINED AND PRESERVED AT ALL TIMES'

VER OF I SHAKTIKANTA DAS, GOVERNOR, RBI

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Rank's Monetary Policy C

'Wherever we've seen unlocking, we've seen a revival in demand'

Q&A

Sugar output for Oct-Nov doubles to 4.29 mt

Centre working to **CAPITAL NEEDS OF** position India as VACCINE MAKERS textiles hub: Secy THERE IS ALSO AN INHERENT RIS 0.0

"INFLATION RAT IN EXCESS OF 7% IS ESSENTIALLY ATTRIBUTED TO SUPPLY-SIDE

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ember, reports Saloni Shukla ++ 7

adu. Delhi-NCR and Guiarat hit

-85% levels of the normal in No-

Sensex to New High

contraction in the Indian economy are

keeping the stock market humming.

reports Sanam Mirchandani >> 7

Key Indices closed at

record highs on Tuesday.

Unabated foreign investor

In signs that a major part

of the labour force has returned to urban pockets,

Nov Data Add Heft to Revival, But **Experts Want More Govt Spending**

On The Mend ower demand, employment drive aBRI to post-lockdown high of 89.2	Indicator Nov'20 GST collections (r L cr) 1.04 Rail freight (MT) 109	Oct 20 Nov 19 1.05 1.03 1.08 1.00		Urban Remittar at 80-85% of No
Aanufacturing PMI above 50 or 4th straight month in Nov DP shrinks 7.5% in Q2 vs 3.9% contraction in Q1	E-way bills (million) 55.3* Passenger vehicle sales (units) 286,353	64.1 53.3 310,294 263,773 T0II Nov 29		of the labour force returned to urban remittances from Maharasht
EXPERT TAKE Dec crucial to confirm strength, recovery sustainability	Growth likely in Q4 If Indicators stay positive, Infections under control	Govt must step up spending to lift economy	27	80-85% levels of the normal vember, reports Saloni Shu
	the March quarter at	anomine vice	P DK Selvaceava Congun	FPI Flows Take

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New Delhi: India's economic turnaround narrative was bolstered by November data for goods and services tax (GST) collections, nassenger car sales the Purchasing Managers' Index (PMI) for manufacturing, railway freight lo ading and the Nomura India Rostmption Index (NIBRI). If this momentum is sustained. quarter," said EY chief policy ad-India could return to growth in

visor DK Srivastava. Consump March quarter, economists tion and capital expenditure sho uld be driven by the government, he said. The government's total said, urging the government to provide more fiscal stimulus to sustain demand. "November was a busier month than October." saexpenditure was up lust 0.4% in id Nomura economists Sonal Var-ma and Aurodeep Nandi. The the first seven months of the cur rent fiscal year. Centre needs to step up on the ex-GST collections crossed ri lakh

purchases and lower-than-expected enditure front, economists said. "The government should start crore for a second month, rising to C.04 lakh crore from C.03 lakh ig now else the recovery crore a year ago but down slightly made so far can well taper out to rom #1.05 lakh crore in October ward the last month of the third



GDP: Emerging **From Covid Slump**

Fiscal stimulus needed to sustain momentum

The good news from GDP numbers for the second, July September, quarter is that economic contraction has come down to 7.5% from almost 24% in the first quarter. To contain contraction for the year as a whole to 10%, the fall in GDP for the second half of the fiscal must be contained at 4.5%. The growth that is underway is more than likely to achieve this target, assuring that negative growth for 2020-21 would be well below 10%. Especially if the govern ment makes good on its stimulus promises. A word of caution, though. The pick-up in economic activity in September and October that was led by pent-up festive demand has moderated since. The growth in electricity consumption, labour participation and eway bill volumes has softened a shade. This strengthens the case for a stimulus all the more, to sustain momentum.

The difference between nominal and real GDP growth is a measure of economywide price changes. It is somewhat troubling that this has been a positive 3.5% even as the economy contracted. The change in the wholesale



price index has been only 0.9%. Cascading fuel taxes and lockdown-related logistical bottlenecks could be responsible for rising prices in the midst of an economic slump and declining pressure on the currency, thanks to moderate global crude prices and a compression of the current account

deficit. There must be no more talk of lockdowns, and restrictions on movement of goods must be avoided in toto. Gross fixed capital formation as a proportion of GDP, in current prices, has, at 25.7%, recovered from Q1's disastrous 19.5%, but is still below the levels we saw last fiscal, these themselves being well below the desirable 30%-plus. This, too, brings us to the need for another strong dose of government-led investment.

Expenditure on public administration, defence and other services declined in Q2, compared to Q1: 11.9%, compared to 19.1%. While the tendency is for individuals to cut expenditure when revenues dip, governments cannot afford to follow that logic. It is their job to make countercyclical interventions

(MPC) underlined that consumer inflation is on the higher side. The MPC expects consumer price index



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Can we relate to these headlines?

SBI Research Revises FY21 GDP Contraction Forecast to 7.4%

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ON A BINGE: SUBSCRIPTION **GROWTH FOR OTT** FIRMS UP 60%



GROWTH IN

TV v/s OTT

SUBSCRIBERS:

(figures in million)

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The pandemic has led to an increase in growth of over-the-top (OTT)

subscriptions by 60 per cent, according to a new report by Boston Consulting Group (BCG), released on Wednesday. The trend is expected to stay as life returns to normal, said BCG, pointing to the propensity of Indian consumers. to now pay for content that they watch. OTT platforms, in particular, are investing heavily in content creation as well as acquisition as they eye a large customer base in India. Already, the number of hours spent per day on digital video in India, according to BCG, has risen by 14.5 per cent over the last two years, though television content consumption has also grown at a rate of 6.7 per cent. COMPILED BY VIVEAT SUSAN PINTO

DIGITAL CONSUMPTION **ON THE RISE** Segment Growth in hours/day (2018-2020; CAGR in %) Digital video 14.5



entimate; 52v billion includes impact of Covid-19 pandemic and lockdown

mantra for economic revival State support As part of the Atmanistrate Bharat mitiative, three mo-mackages were noting out to help those hit by the pan NEW DECHI

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reflect to the poor and workers, credit flow to es, liquidity to power ion utilities and relay

dividuals and fit Farm reforms, which lifted strictions on holdings and pply of produce and sought usher in private investnts, however, have led to tests by farmers. The Cen-



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small businesses have been issued to 4 million businesses.

Use of tariff and non-tariff

Housing for all Rural jobs Covid vaccine R&D Capital, industrial spending Project exports Production kniked incentive Equity Infusion in NEE debt platform Atmanuthar Bhatat Rogar Yojane (PF)

stantially stepped up its bor-rowing to fund higher spend-ing on rural jobs, housing and infra projects and fertilizer EXPLAINER T COCOUR

stic manufacturing, a

MSMEs) by govern what is the package size? opencies and state-run firms as The first round of stimulas and humanitarian aid package which included giving credit cards to farmers and emerwell as payments to them have more than doubled in October compared to May In Cictober sourcing from MSMEs touched \$5,124 crore. gency working capital to basi-nesses, totalled \$20.9 trillion Doesself-reliance mean an and was the largest. Including inward-looking econo the other two, the Centre' economic package goes up to

Exports Decline 9.07% in Nov; Trade Gap Narrows to \$9.96 b

ILL Contract for second consecutive month after seeing growth in Sept; imports drop 13, 33%

New Delhi: India's expensibilitative from a year outlier in November, storper than the 5.12% drup in October, to \$25.43 billon, according to proliminary data released by the commerce and industry ministry on Wednesday Trade-Jeffcit in the past month was \$9,96 Million. This is the second consecutive month of contraction in exports, after 5.99% growth in September: Imports were at \$20.00 billion, as compared to \$38.52 billion in Novem ber 2018, a decline of 13, 33%.

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As por the statement, exports of rice. pharma and iron ore rose while those of petroleum products, engineering

goods chemicals and plastics fell. that is what drow petroleum experts down. Also, there are supply slife disruptions such as restricted container

peri Onanisations (FIEO) prosident imports were \$25.67 billion. Sharad Rumar Saraf said.



HOW KEY SECTOR S FARED

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"Petroleum prices have crashed and Exports of rice, pharma and iron ore up, while those of petro products, engineering goods, chemicals and plastics fall

movement," Federation of Indian Ex. scal year, were \$73.49 billion, while as compared to \$1.07 billion in Novem-The FIEO expects India's full year or: ports declined 122% to 827.12 billion flowen 0.44% Non-oil and non-sold im-Exports during April Neuenber, the ports to clock around \$500 billion in from \$27.45 billion. "Several critical on ports are an indicator of the sprength first eight months of the ongoing fi 2020-20. Oil imports were \$8.27 billion, port sectors including engineering es. of domestic demand.

including disruptions in production, transportation, and increasing country-specific restrictions," EEPC halla chairman Mahesh Dosai said. Gold imports rose 2.65% on year in November while imports of machine tools, machinery and transport equipmentdeclined. Continence secretary Anap Wadhawan on Wednesday said the silver it

ning was that the trade deficit had toworsed, but to an extent it was indicati ve of a slowdown. Trade deficit was \$12 15 hillion in November last year. Industry expects the onaoina far more adtation to cause further disruptions in supply "Under these circumstances some of the deable things like easy refund of GST and ensuring anallability of raw material at reasonable prices can provide much-needed relief to ex-

ports are realize under a host of lasters.

Non-oil, non-gens and jewellery mold, silver & proctous mosais) imber 2018 a decline of 45.36%. Non-off imports were \$22.35 billion in November

porters," Despirated

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Direct-to-home

Source: BCD

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Measuring a Nation's Well Being

- Economics has two branches: Microeconomics & Macroeconomics
- Microeconomics is the study of how individual households & firms make decisions while
 Macroeconomics is the study of economy as a whole
- Economists analyze Macroeconomics to analyze economy, as it provides an indication of overall well-being
- Common way to measure well-being of economy is GDP, which measures the total income of the nation
- GDP is basically the final value of the goods and services produced within the country during a specific interval (Year or Qtr.). Since GDP

includes only the value of final goods, this would lead to double counting, if we count intermediates

For e.g., When a paper company sells paper to greeting card company, the paper is called an *intermediate good* and card is *final good*. And value of ink, colour, labour, etc. (intermediate goods) is already in final value of goods.





Economy's Income & Expenditure



- Income is used as a measure of well being because income can be used to purchase necessities and luxuries
- Goods and services purchased by the population = Standard of Living
- Higher Income = Higher Standard of Living, i.e., better Housing, Healthcare, etc.
- In the same way, we judge economy i.e., we look at the total income that everyone earning in the economy.
 This is the task of GDP
- GDP measures Total income and Total expenditure
- In every transaction, the buyer's expenditure becomes the seller's income. Thus, the sum of all expenditure
 equals the sum of all income
- The equality of income and expenditure can be seen through this Circular flow diagram (in next slide).
 This diagram describes all the transactions between the household and firms in an economy
- In the economy market of good and services -> place of interaction of household and firms
- The firms produce goods and services which are procured by the households while the households provide factors of production (land, labour & capital) for which the firms pays the households

Economy's Income & Expenditure (Cont'd)



The Circular-Flow Diagram



Economy's Income & Expenditure (Cont'd)



- The factor Income received from household (wages rent, dividend & interest) is used to
 procure goods and services from the firm
 - Not all incomes of household received are spent in the market for goods and services
 - Some of the income is subjected to tax
 - Some income will be saved -> Flow to the Fls -> pension saving, insurance & assurances, deposits in bank accounts
 - Some income is spent on imports (M) and also the firms generate income from exports (X). The Exports less imports (X-M) or NX is known as Net exports
 - The incomes of firms spent on Imports (M), Taxes (T) and Savings (S) are considered as leakages (from the perspective of firms)
 - Governments use tax revenue and borrowings from FIs to spend (G) on Govt Services and investment on infrastructure, education, health, defense and so on representing Govt spending (G) which goes back in the circular flow
 - Firms borrows from FIs to fund investments on new plant, equipment and expansion.
 This investment (I) flows back to the market of goods and services

Economy's Income & Expenditure (Cont'd)

- The FIs lend money overseas and firms also borrow from FIs of other countries. The same is recorded as Net Capital Outflow (NCO)
- In theory, GDP measured through income and expenditure will lead the same result
- A common measure of showing GDP is:

NY=C+I+G+NX

Where,

NY=GDP, C=Consumer spending, I=Investment Spending, G=Government Spending

NX=Difference between import and export proceeds

• These spending's are injections to the circular flow





GDP Components (NY=C+I+G+NX)

- Consumption(C): Spending on goods (Durable and Non-Durable) & services by the household
- Investment (I): Spending on Capital (Capital equipment ,inventory, New Housing etc.) or on goods bought for Future productive output(P&M)
- Government Spending (G): spending on goods & services by national and local govt but excludes transfer payments (like social security benefits to elders) because they are not made in exchange of goods & services
- Net Exports (NX): Spending on domestic goods & services by the foreigner *minus* spending on foreign goods & services by domestic resident. i.e., Export- Import. Import are deducted because are included in other components of GDP. For e.g., If Indian household buy Car of Rs 5 lakh from Volvo, the Swedish car maker. It increase the Consumption(C) in India because car purchase are part of consumer spending simultaneously reduce net export (NX) because car is an import (export from Sweden)
- **GDP per capita:** Useful in comparing GDP across different countries. Arrived by *dividing* GDP by the population of that country



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Measurement of GDP





- GDP includes all items whether tangible (food, clothing) or Intangible services (Healthcare) currently produced (i.e., excludes transaction involves item produced in the past) in the economy and sold in the market
- But there is some activities/transactions which may not appear in GDP figures, these activities are called "informal", "shadow" or "black" economy. This affect the value of GDP

For Ex: 1. Plumber do a repair in cash and not declares this as a part of their income.

2. Transaction which are illegal and not declare to tax authorities.

 There are also some other activities which are not black or informal but still its contribution is not considered in GDP calculation as a result undervalue the true measure of well-being

For Ex: Value of work carried out by housewives, childcare work carried out by grandparents, etc.

Real vs. Nominal GDP



- Change in Total Expenditure on goods & services from one year to another can be of two ways:
 - 1. Due to production of larger output of goods & services (Real increase)
 - 2. Goods & services sold at higher prices (Nominal increase)
- As we already discussed GDP is the **value** of all final goods and services produced
 - 1. Nominal GDP measures these values using current prices
 - 1.1 Change in Nominal GDP can be due to:
 - 1.1.1 Changes in prices
 - 1.1.2 Changes in quantities of output produced
 - 2. Real GDP measure these values using the prices of a base year Nominal GDP



2.1 Changes in real GDP can only be due to changes in quantities, because real GDP is constructed using constant base-year prices

For example:

Year	Price of P(Rs)	Quantity of P(Kg)	Price of Q(Rs)	Quantity of Q(Kg)
2020	1	10	10	3
2021	2	15	15	4

Real vs. Nominal GDP (Cont'd)



Nominal GDP 2020: Rs 1 x 10 + Rs 10 x 3 = Rs 40 2021: Rs 2 x 15 + Rs 15 x 4 = Rs 90 **Real GDP** 2020: same i.e., Rs 40 2021: Rs 1 x 15 + Rs 10 x 4 = Rs 55

...So in real terms, GDP did not rise as much as it would seem from nominal terms

- 3. Real GDP Growth Rate: Difference between GDP across the two time periods.
- **4. GDP Deflator:** Measure of the price level is the GDP Deflator. It reflects what's happening to prices, not quantity. Calculated as, (Nominal GDP/Real GDP)*100

This can be understood with the help of an example:

Imagine Qty rises in the economy but price remains same, in this case both Real and Nominal GDP will be same and so the GDP deflator is constant.

Now if vice versa of the above happens, Nominal GDP rise but Real GDP remains same, so the GDP deflator rises as well. Notice in both the case GDP Deflator reflects what's happening to prices



- In Real GDP, GDP is calculated using the price that existed at a particular base year this can lead to inconsistencies because circumstances change
- To overcome these problems "Annual chain linking" method is used which calculates GDP based on prices in the previous year



Other Measures of Income

- Reliance
- Gross National Product (GNP): Total income earned by the permanent residents and also includes income that domestic citizens earn abroad
- Net National Product (NNP): is GNP *minus* Depreciation of the assets held by a country



- National Income (NY): Income earned by the residents in the production of goods and services. i.e., NNP *minus* Indirect Taxes
 - Personal Income (PI): NY + Income received but not earned (like social security payments) + Interest income – Retained earnings – Corporate income tax
- Disposable Personal income (DI): Represents what people actually have that they can spend i.e., PI *minus* Personal Income Taxes

Limitation of GDP as a Measure of Well-Being

- There are many things that are not measured by GDP but contribute to economic well-being like:
 - The exclusion of nonmarket transactions

Ex: Value of goods & services produced at home and volunteer work.

Environment Quality

Ex: Due to eliminating environmental regulation firm could produce more goods & services without considering the effects on pollution, here

the GDP might rise but well-being would fall.

Distribution of income

Ex: Society in which 100 people have annual incomes of Rs 50,000 has GDP of Rs 5 Million and GDP per capita of Rs 50,000,so does a society in which 10 people earn Rs 5 Lakh and 90 suffer with nothing at all.



GDP

Limitations

The Economics of Happiness





- Prof. Richard Layard identified some key factors that may contribute to "happiness" like relaxing, praying, worshipping, eating, watching TV etc. Also, other factors like level of education, health, level of income can all be contributory factors
- If our current measure is not reflecting the factors that can contribute to making someone "happy", then we look for other measures and one of the measure is **Measure of Domestic progress (MDP).** The MDP consider many of these factor that GDP calculation do not consider
- For Ex: It assign negative effect to various social & environmental impacts of growth such as pollution, cost of crime.



GDP, Life Expectancy and Literacy

The table shows GDP per person (measured in US dollars) and two measures of the quality of life for 13 countries

	GDP per capita (Current	Life expectancy at birth (males and females)	Literacy rate (% of people
Country	US\$) 2015	total years (2013)	over 15), adult total (2013)
United States	54,629	79	99
Germany	47,627	81	99
United Kingdom	45,603	81	99
Russia	12,735	71	100
Mexico	10,230	77	94
Brazil	11,384	74	91
China	7,594	75	94 (2010)
Indonesia	3,492	71	93 (2011)
India	1,595	66	69 (2011)
Pakistan	1,334	67	57 (2012)
Bangladesh	1,092	71	60
Mozambique	602	50	51 (2012)
Niger	427	58	15 (2012)

The table also shows life expectancy (the expected life span at birth) and literacy (the percentage of the adult population who can read). These data show a clear pattern. In rich countries, such as the United Kingdom. **Source:** World Bank and UNICEF

Saving and Investment in the National Income Accounts



GDP (denoted as Y) is divided into four components of expenditure: consumption (C), investment (I), government purchases (G) and net exports (NX)

Y = C + I + G + NX

This equation is an identity because every rupee of expenditure that shows up on the left-hand side also shows up in one of the four components on the right-hands side. Because of the way each of the variables is defined and measured, this equation must always hold. Sometimes we make this clear by using an identify sign, with three bars, instead of the usual equals sign with two bars.

Y = C + I + G + NX

 A closed economy does not engage in international trade, imports and exports are exactly zero. Therefore, net exports (NX) are also zero which leaves the identify:



Saving and Investment in the National Income Accounts (Cont'd) Reliance

To see what this identity can tell us about financial markets, if we take Y, on the left hand side of the equation, to the GDP, we can subtract from this things that are consumed (Consumption spending and government spending). To retain the equation, we must also subtract C and G from the right hand side, which gives:

```
Y - C - G = (C - C) + I + (G - G)
Y - C - G = I
```

• Given Y - C - G = S we can substitute this into equation



To understand the meaning of national saving, it is helpful to manipulate the definition a bit more. Let T denote the amount that the government collects from households in taxes (a withdrawal from the circular flow) minus the amount it pays back to households in the form of transfer payments (such as social security payments). We can then write national saving in either of two ways



Government Policies



Fiscal Policies

- Fiscal policy, measures employed by governments to stabilize the economy, specifically by manipulating the levels and allocations of taxes and government expenditures. Fiscal measures are frequently used in tandem with monetary policy to achieve certain goals
- Fiscal policy is therefore the use of government spending, taxation and transfer payments to influence aggregate demand. These are the three tools inside the fiscal policy toolkit

Monetary Policies

- Monetary policy is the macroeconomic **policy** laid down by the central bank. It involves management of money supply and interest rate and is the demand side economic **policy** used by the government of a country to achieve macroeconomic objectives like inflation, consumption, growth and liquidity
- The three instruments of monetary policy are open market operations, the discount rate and reserve requirements.
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Concept Check – GDP



Which of the following is a macroeconomic variable?

- A. The price of a BigMac meal relative to that of a Whopper hamburger
- B. The number of employees of British Airways
- C. The average wage rate of production workers at Boeing
- D. The price of a dollar in terms of euro
- E. The price of IBM stock



The GDP of a country in a given year _____.

- A. Includes the value of goods and services produced in the past and resold in that year
- B. Includes the value of intermediate goods imported into the country
- C. Does not include the value of any intermediate good produced in the country
- D. Does not include the value of the country's exports
- E. Includes the value of goods and services currently produced in that year in the country



Aggregate income in an economy is always equal to the aggregate expenditure on the goods and services produced in that economy because _____.

- A. Every dollar spent on the goods and services produced in the economy is a dollar earned by the economy's households as wages, rents, or profits
- B. Households spend all their income as soon as they receive it
- C. The dollars that are spent on the goods and services produced in the economy but not earned as income are not counted as part of aggregate expenditure
- D. Households eventually spend all their income



GDP deflator is a measure of the price level for the goods and services

- A. Imported into a country
- B. Produced in a country
- C. Consumed in a country
- D. Exported from a country



In country M, households have been going to restaurants for half of their meals and for the rest they have been enjoying their own cooking at home. This year, habits have changed and households are having only one quarter of their meals in restaurants. Assume that the total expenditure on all other goods and services remains unchanged from last year.

As a result of this change, the GDP of country M ______.

- A. Goes up this year
- B. Goes down this year
- C. Does not change this year
- D. May go up or down this year



Mr X purchases a house of Rs 3 crore. The house has some leakage. He did leakage proofing (Rs 5 lakhs material cost) ,painted the house (paint Rs 10 lakhs and mason Rs 1 lakhs). Mr Y a interior designer helped him to choose the colour of paint etc. and charged Rs 50,000

- The purchase of _____.
- A. A used house does enter GDP
- B. Materials for painting & Water proofing + Mason improving a enter GDP
- C. Both a used house and the materials + mason for improving a used house enter GDP
- D. A used house does not enter GDP, but the purchase of water proofing , paints , mason and interior designer does



An Indian company buys a new machine made in Britain by a Japanese company. No additional resources are used in India for the investment. The machine is made entirely with British labor and British-made parts. Assume that other activities in India, Britain, and Japan are unaffected by this purchase.

As a result, _____.

- A. Britain's GDP increases, but Indian and Japanese GDPs remains unaffected
- B. Japan's GDP increase, but British and Indian GDPs are unaffected
- C. The GDPs of all three countries increase
- D. India's GDP increases, but Japanese and British GDPs are unaffected



Total public and private consumption and investment in a country may add up to more than the total of the country's GDP because _____.

- A. Public investment expenditure is not included in GDP
- B. In addition to these, GDP includes budget surplus, which can be negative
- C. In addition to these, GDP includes net exports, which can be negative
- D. These types of expenditure include intermediate goods that not included in GDP



Last year in country C, the GDP was \$3000 billion, private consumption was \$2000 billion, investment was \$300 billion, and government expenditure was \$600 billion.

How much was the net exports of country C last year?

- A. -\$100 billion
- B. -\$10 billion
- C. \$0 billion
- D. \$10 billion
- E. \$100 billion



In macroeconomic analysis, why does one have to distinguish between consumption and investment expenditures?

- A. Investment expenditure is included in GDP, but consumption expenditure is not
- B. Consumption and investment expenditures are determined by different factors
- C. Consumption expenditure has many sub-components, but investment does not
- D. Consumption expenditure is included in GDP, but investment expenditure is not



Suppose that the aggregate income in a country is \$100 billion, aggregate private consumption is \$60 billion, and total tax payment is \$20 billion.

How much does the private sector save in this economy? (Answer in billions of dollars.)

This year, country K has a budget deficit of \$30 billion, taxes are \$70 billion, and government expenditures are \$80 billion. How much did the government spend in providing transfers?

- A. \$0 billion
- B. \$20 billion
- C. \$40 billion
- D. More information is needed



This year in Country L, GDP is \$500 billion, private consumption is \$300 billion, government expenditure is \$100 billion, and trade surplus is \$20 billion. How much is total (public and private) domestic savings?

- A. \$120 billion
- B. \$150 billion
- C. \$80 billion
- D. \$100 billion

GST Indicators

August 6, 2021

GST Indicators

- PMI Indicators
- Mobility
- Automotive sales
- Card Spending
- Electrical Demand
- Railway freight
- Bank credit
- Deposit growth
- Exports
- Imports
- GST collection
- Core Production
- 2 wheeler sales
- Tractor sales
- 3Wheeler sales

- 3-wheeler sales
- Petrol & Diesel consumption
- IIP
- Credit growth
- CP growth
- Bond Sales
- And Many other

Aggregate Economic Indicator at Pre-Covid Level for July







Note: The indicator is calculated using 9 ultra high frequency economic indicators

PMI manufacturing recovered sharply and back in expansion zone in July



PMI manufacturing at Mar-Apr levels and back in expansion zone in July



Mobility at 90% of pre-COVID level but still below post-first wave high



Note: Latest data as of 30th July

Re



Broad-based flattening witnessed across almost all components of mobility





July sales data indicates strong recovery for PV/CV segment as 2W still lags

Segment	Company	Jul-21	Jul-19	Jul-21 over Jul- 19 (%)
	Maruti	162	109	49
PV	Tata Motors	30	10	188
	Hyundai India	60	57	5
	Hero Motorcorp	454	536	-15
2\\/	Bajaj Auto	331	322	3
2 • •	TVS Motors	263	266	-1
	Royal Enfield	44	54	-19
	Ashok Leyland	9	11	-21
CV	Escorts	7	5	35
	Mahindra	27	20	36

PV & CV July sales above Jul-19 levels but 2W yet to catch up

Card spending data has remained strong and almost at pre-2nd wave highs





Card spending data settling at pre-2nd wave highs

> 4 4



Electricity demand at its highest in several months

While rail freight tonnage has been flattish





Bank credit growth has seen marginal pick-up to 6.5% y/y growth



Credit growth seeing marginal pick-up but remains weak

Deposit growth seeing uptick towards 11% growth





Tax collections running well ahead of levels seen over last decade Fiscal deficit trending much lower vs history on strong revenue collections



Fiscal deficit as % of BE at 18% much lower vs. last 5Y avg. of 57%







Non-oil non-gold imports have been resilient



Strong exports growth in merchandise as well as services will keep current account supported; we forecast \$12bn CAD in FY22

Reliance

July GST collections could reach Rs1.2-1.25trn vs Rs1.16trn for June

GST collection could reach Rs1.2-1.25 tn (previous high Rs 1.4 tn) in August backed by strong E-way bill run-rate in July



India rainfall has normalized due to recent rainfalls in Northwest





Region	Actual (mm)	Normal (mm)	% departure from LPA
East and Northeast	698	802	-13
Northwest	305	303	1
Central	515	514	0
South Peninsula	443	391	13
India	466	471	-1

Monsoon has normalized after turning 6% deficient in early July

Note: LPA is Long period average



Daily run-rate has picked up and at 5.3 mn/day

Total doses administered at 479 mn



27% of total population given atleast one dose, ~8% fully vaccinated







Major urban centers vaccinating at 1.7x of India average

Top urban centers soon to cover 50% population with at least dose

S. No.	District	Population given atleast one dose (%)		S. No.	District	Population given atleast one dose (%)	
1	Gurugram	81		12	Mumbai	41	
2	Kolkata	71		13	Vadodara	40	
3	Gautam Buddha Nagar	69		14	Surat	39	
4	Indore	65		15	Delhi	36	
5	Bangalore	62		16	Nagpur	36	
6	Chennai	60		17	Jaipur	35	
7	Bhopal	56	56		Lucknow	29	
8	Thiruvananthapuram	47		19	Visakhapatnam	26	
9	Pune	46		20	Kanpur Nagar	19	
10	Ahmedabad	45		Aver	age of top 20 cities	47	
11	Hyderabad	43			India average	27	



Ultra high frequency data (% of Feb-20 level)

Sector	(as % of Feb-20 level)	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21
	Electricity Demand	72	78	92	98	101	99	105	99	91	96	100	104	111	111	100	107	113
Industry	Rail Freight tonnage	91	59	73	85	84	83	93	95	100	104	105	109	115	101	101	102	96
	Google mobility (overall)	77	36	48	63	61	64	71	77	81	87	87	92	93	78	55	76	90
	Google mobility (grocery and pharmacy)	81	48	74	98	91	89	95	107	110	110	107	116	119	106	75	103	120
Mobility	Google mobility (workplace)	77	38	56	69	68	71	76	76	76	82	83	85	86	71	53	69	79
	Apple Mobility Index	60	15	28	46	51	65	79	88	105	121	125	129	114	79	47	89	126
	Rail passenger traffic	65	0	0	1	2	3	5	8	15	24	29	41	40	28	12	20	25
	CTS (cheque)	66	20	30	49	51	50	59	61	60	72	65	71	85	67	40	58	65
Payment	IMPS	88	55	74	93	98	103	112	120	125	127	126	133	143	135	116	128	136
indicators	UPI	87	66	92	114	122	125	143	162	170	175	181	198	212	214	206	238	255
(value)	BBPS (Bill payments)	93	68	104	147	177	181	194	189	183	186	194	223	248	257	300	392	459
	NETC (toll collections)	72	13	58	79	82	87	102	109	110	117	122	144	157	146	108	135	151
	Vehicle Registration	125	21	11	55	63	65	77	78	104	100	87	91	90	66	29	68	84
Retail	PV	90	9	15	62	82	88	97	111	128	121	123	125	125	91	36	86	121
	2W	133	24	12	59	64	66	77	76	107	103	85	88	87	64	30	69	81
	India Total	8.8	23.5	21.7	10.2	7.4	8.4	6.7	7.0	6.5	9.1	6.7	6.7	6.5	7.8	11.9	9.2	7.0
Unemployment	Rural	8.4	22.9	21.1	9.5	6.5	7.7	5.9	6.9	6.3	9.2	6.4	6.3	6.2	7.0	10.6	8.8	6.5
	Urban	9.4	25.0	23.1	11.7	9.4	9.8	8.5	7.2	7.1	8.8	7.3	7.7	7.2	9.5	14.7	10.1	8.3
Tax collections	E-way Bill	67	15	42	73	79	81	97	105	98	105	103	116	117	99	68	92	105



High frequency data (% of Feb-20 level)

Туре	Indicators (% of Feb-20 level)	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21
	Tractor Sales	51	20	98	156	102	105	182	187	138	99	127	136	138	106	90	185
Rural	2W	63	0	20	76	93	113	138	148	119	81	103	114	108	74	25	79
Consumption	2W registrations	133	24	12	59	64	66	77	76	107	103	85	88	87	64	30	69
	3W	63	0	6	24	29	33	44	59	55	50	60	69	72	32	3	22
	PV Sales	53	0	13	43	72	85	110	122	107	99	108	122	114	106	35	94
Urban	Petrol consumption	80	37	66	88	84	89	94	99	103	101	97	102	102	92	74	93
Consumption	Air passenger traffic	63	0	2	16	17	23	32	43	51	59	62	63	63	46	17	25
	NONG import	76	49	73	61	79	73	93	97	96	109	108	110	112	112	107	118
	Diesel Consumption	74	44	72	85	72	63	74	91	95	94	89	95	94	90	72	84
	Coal India production	119	59	58	57	53	52	59	66	75	82	85	97	115	61	59	58
	Sea Cargo	101	80	74	83	84	84	90	92	100	103	105	106	117	104	99	99
	Airport Cargo Traffic	73	17	33	59	67	71	86	90	88	90	86	95	99	95	83	86
Industry	Exports	72	36	65	76	80	77	96	84	82	92	93	103	116	107	109	113
muustry	Exports - Non Oil	73	36	68	80	85	80	95	90	88	96	98	106	119	107	104	113
	Core output	94	59	75	84	86	84	88	88	92	95	97	100	105	94	87	91
	IIP	82	39	63	78	82	82	89	90	91	96	95	100	101	91	81	
	PMI Mfg	52	27	31	47	46	52	57	59	56	56	58	58	55	56	51	48
	PMI Services	49	5	13	34	34	42	50	54	54	52	53	55	55	54	46	41
Fiscal Account	GST revenue (p.m)	93	31	59	86	83	82	91	100	100	109	114	107	118	134	97	88
riscal Account	E-way bill (daily run rate)	67	15	42	73	79	81	97	105	98	105	103	116	117	99	68	92
	Bank credit growth	6	7	5	5	6	5	5	5	6	6	6	6	5	6	5	6
	Agri	4	5	5	2	5	5	6	7	9	9	10	10	12	11	10	11
	Industry	1	2	2	2	1	0	0	-2	-1	-1	-1	0	0	0	1	0
	Services	7	11	10	11	10	9	9	10	9	9	8	9	1	1	2	3
Crodit	Personal	15	12	11	10	11	11	9	9	10	9	9	10	10	13	12	12
Great	Bank deposit growth	8	9	10	9	11	10	10	11	10	10	11	11	11	11	9	9
	CP growth	-29	-23	-23	-22	-26	-25	-21	-18	-19	-12	-3	-2	6	-10	-9	-4
	Cash Deposit Ratio	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5
	Investment Deposit Ratio	27	29	29	30	30	31	31	31	31	30	30	30	30	30	30	30
	Credit Deposit Ratio	76	75	74	74	72	73	72	72	72	73	72	72	72	72	70	71

You are the Finance Minister



- Its July 20 (almost a year back from now) and it's been peak of pandemic India. There has been strict lockdown
 across the country, the core sector production is decreasing and so are of non-sector. LPR are steadily going down,
 Unemployment index going up, the consumer sentiments are touching new bottom. The GST collections are
 coming down and the direct tax collections are also lower
- The information from Ministry of Health The pandemic will last for another 1 year. There are chances of 2nd and 3rd wave. Thus, it is almost certain that the period of disturbance will last for a long time, at least 1 year to 2 year

The group of advisers have given the following advice:

- Mr A: The govt is going through a financial stress, tax collections are at new low and additional expenses on pandemic is increasing – Thus Govt should cut down all capex and should concentrate on all emergency and necessary expenses. He does not advocate spending through loan
- Mr B: Govt should raise taxes to finance the pandemic .Govt should not cut on the capex
- Mr C: RBI should increase the rate of interest so as to ensure that retired (fixed income group) are supported and citizen's will be able to get higher return on their investments (FDs and other fixed rate income)
- Mr D: Govt should print money to support the pandemic
- Mr E: Govt to increase immediately expense on infrastructure taking loan

As FM what you would decide

Government Policies



Fiscal Policies

- Fiscal policy, measures employed by governments to stabilize the economy, specifically by manipulating the levels and allocations of taxes and government expenditures. Fiscal measures are frequently used in tandem with monetary policy to achieve certain goals
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Indian Economy @ Aug 21

- 1. Early data from July indicates strong recovery with our ultra-high frequency indicator back at pre-COVID level
 - PMI manufacturing back in expansion at 55.3 from 48.1 in June
 - Exports up 34% over July-19 and at \$35bn, highest exports in a month driven by strong global growth
 - Non-oil non-gold imports, indicator of domestic demand back at July-19 level in July-21
 - Mobility at ~90% of pre-COVID level similar to level seen in Jan-Feb-21
 - Car sales above July-19 level (40-50% higher) though 2W lagging (10-15% below July-19); Card spends back at Mar-21 level
- 2. E-way bills in July indicates Rs1.2-1.25 Lcr collection after strong Rs1.16Lcr collection in June
- 3. Fiscal data also indicating strong recovery net tax collections in 3MFY22 at 27% of BE vs 14% average over last 10 year more comfort emerging on the revenue side in fiscal reducing additional borrowing risk
- 4. Credit growth showing some pick-up at 6.5% y/y in mid-July while deposit growth also picked up to 10.7%
- 5. Good progress on vaccination as nearly 50% population in top 20 urban centers have got least one dose nearly 2x of 27% in India overall vaccinated with at least one dose; our calculation indicates 60% to be vaccinated by Dec-21
- 6. We estimate CPI to ease in July to 5.7-5.8% after 2 months of >6% print; Monsoon has normalized vs 6% deficient in early July
- **7. RBI will remain dovish in August policy –** we expect RBI to revise CPI inflation forecast upwards (RBI at 5.1% vs 5.7% consensus in FY22), growth forecast to be unchanged at 9.5%, outside chance of announcement of longer duration VRR to reduce liquidity





Indian Economy @ Aug 21

- 8. RBI divided in two camps –inflation Vs growth
- 9. Broadbased capital expenditure planned by private sector towards Q4 21-22 :
 - Vedanta to double its capacity USD 20 billion
 - Reliance Industries USD 10 billion investments in renewable energy
 - Adani foray into petrochemicals
 - Tata group announced investment in semiconductor business
 - ITC announced investments of USD 2 billion to beef up capacity
- 10. Bankers feel India is on the cusp of the multi year capex cycle- Govt is expected to award usd 356 billion of orders in next
 - 2 years + 6 trillion infrastructure monetization plan
- 11. Govt plans to open up monopoly sector (Gas/power distribution ,railways mining etc) will also drive private capex
- 12. US are showing signs of recovery USD 1 trillion infrastructure stimus by US government would drive exports from large corporates. (L&T, ABB, Cummins etc to benefit)
- 13. As per CEA the expected growth from Fiscal 23 onwards will be in the range of 6,5% to 7% supply side reforms taken by the govt agriculture, PLI scheme, MSME ,privatization etc

14. CONCERNS : Third wave prediction , tapering off incentives by FED & Inflation





Role of Chartered Accountants

- CAs in industry :
- ✓ Project decisions
- ✓ Investing decisions
- ✓ Commodity markets
- ✓M&As
- CAs as analysts
- CAs as economist
- CAs in Media

