HDFC MF
Yearbook 2022

HDFC MUTUAL FUND
BHAROSA APNO KA

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Don't miss Incredible India slides portraying Warrior Queens of India

Refer disclaimers on slide 85

Global Economy and Markets

You may have to fight a battle more than once to win it – *Margaret Thatcher*

The pendulum of Fear and Optimism!!!

Headlines in 2020

COVID-19 CRUSHING WORLD ECONOMY
Worst year since Great Depression

Stock markets in biggest fall since 2008 as virus fears trigger panic selling

WORLD'S WORST OUTBREAK

Life put on hold

'NOTHING LIKE IT USED TO BE'

Biggest economic shock in 300 years

Support for jobs and firms a priority

COVID-19: A strategic shock shakes the world

GREAT DEPRESSION 2.0: IMF

Trillions of pounds wiped off global stock markets in new Black Monday

Headlines in 2021

India's GDP grows at over 20% in Q1FY22, highest ever quarterly expansion

S&P 500 NEW ALL-TIME HIGH

Growth recovers from the second wave

Emergency stimulus fuels record $400bn company funding frenzy

• Markets buoyed by crisis response • $170bn above January average • Junk debt soars

India to Grow Fastest in FY22, says IMF

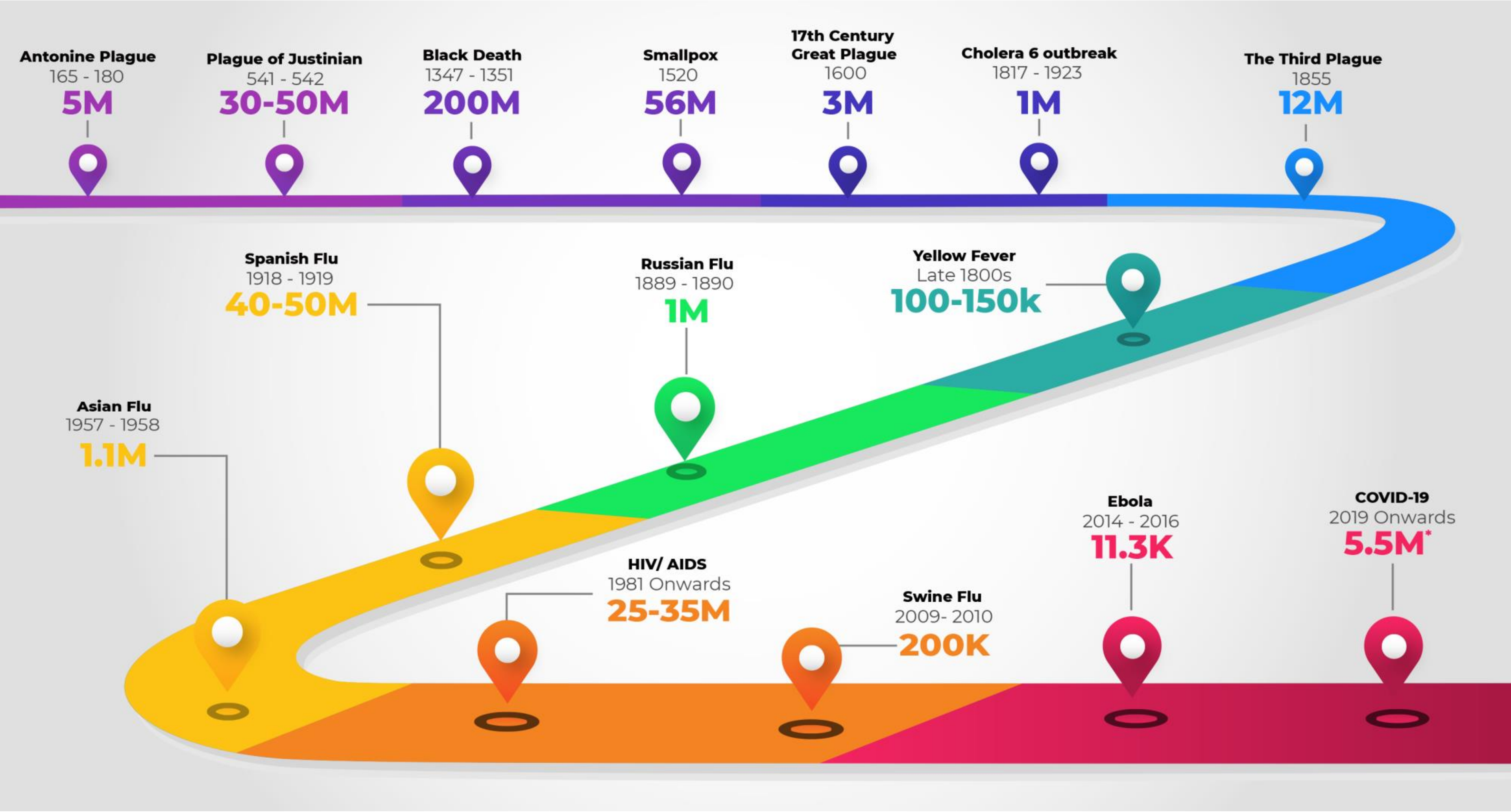
US: The bounce-back gains momentum

World Economy Will Bounce Back in 2021, OECD Says

Nifty hits all-time high of 18,000; Sensex trades above 60,300-mark

Source: Publicly available information

The long history of Pandemics



Source: https://www.visualcapitalist.com/history-of-pandemics-deadliest/

Numbers indicates estimated deaths during the pandemics; * Till 31 December 2021

2021 : A Year of robust recovery

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Global growth

- Global economy has bounced back to pre-pandemic path and most major economies, except Japan, have recovered the nominal output lost during the pandemic
- Fiscal and monetary stimulus, vaccination, reopening of economy and pent up demand aided the rebound in growth
- Growth is likely to normalize over the medium term aided by recovery in services consumption, infrastructure push, high accumulated savings, etc.
- Waning of pent up demand, unwinding of fiscal/monetary stimulus, slowdown in China etc. are key risks going ahead

Advanced Economies (AEs) - United States (US), Euro Area and Japan

- Growth driven by fiscal and monetary measures like income transfers, unemployment benefits, reduction in interest rates, liquidity injections, etc.
- 2nd and 3rd wave of Covid-19 resulted in intermittent lockdowns / restrictions but the economic impact was relatively low
- Growth momentum is expected to soften as incremental monetary and fiscal stimulus normalises. Nevertheless, growth is expected to sustain above pre-pandemic levels on back of fall in unemployment, pool of excess savings, higher services spending, etc.
- Significant fiscal and monetary tightening, imposition of strict lockdowns, etc. are key risks

China

- China's GDP in CY21 is likely to be higher than pre-pandemic level estimates but growth is expected to normalise
- Economic recovery was driven by strong global demand that aided exports along with measures by Government to revive the infrastructure/manufacturing sectors
- Driven by robust growth over past 2 decades, China's share in world GDP has steadily risen
- Slowdown in real estate sector, regulatory crackdown with agenda of "common prosperity", moderation in global merchandise trade, etc. are key risks to growth

Nominal GDP Estimates for CY21 in October 2019 and October 2021

USD bn	Oct-19E	Oct-21E	Change
World	95,353	94,935	-0.4%
US	23,180	22,940	-1.0%
Euro Area	14,236	14,518	2.0%
China	16,579	16,863	1.7%
Japan	5,592	5,103	-8.7%

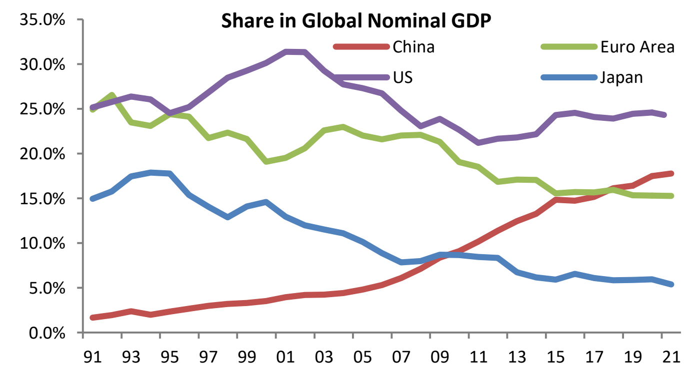
Source: IMF

Real GDP Growth (%)	Pre-pandemic			Current		Post pandemic	
	2017	2018	2019	2020	2021E	2022E	2023E
US	2.3	2.9	2.3	-3.4	6.0	5.2	2.2
Euro area	2.6	1.9	1.5	-6.3	5.0	4.3	2.0
China	6.9	6.8	6.0	2.3	8.0	5.6	5.3
Japan	1.7	0.6	0.0	-4.6	2.4	3.2	1.4

Source: IMF

Unemployment Rate (%)	Pre-pandemic			Current		Post pandemic	
	2017	2018	2019	2020	2021E	2022E	2023E
US	4.4	3.9	3.7	8.1	5.4	3.5	3.0
Euro area	9.1	8.2	7.6	7.9	8.0	8.1	7.8
China	3.9	3.8	3.6	4.2	3.8	3.7	3.6
Japan	2.8	2.4	2.4	2.8	2.8	2.4	2.3

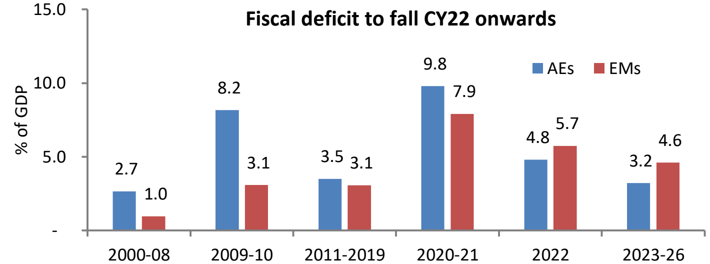
Source: IMF



Source: IMF

After effects of Covid-19: Higher Fiscal deficit, Higher Sovereign debt, Higher Inflation

- Fiscal deficit widened for both AEs and EMs in response to pandemic and is likely to normalize over next few years



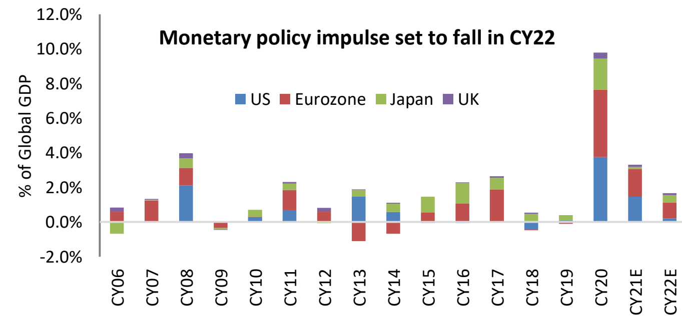
Source: IMF; Figures for 2021-26 are IMF estimates

- Consequently, Sovereign debt rose sharply for most countries led by AEs
  - Sovereign debt to GDP is likely to stabilize at current levels, except for China, where it is expected to continue inching up

Gross Sovereign Debt to GDP (%)	Pre-pandemic			Current		Post pandemic	
	2017	2018	2019	2020	2021E	2022E	2023E
US	106.0	107.1	108.5	133.9	133.3	130.7	131.1
Euro area	87.7	85.7	83.7	97.5	98.9	96.3	95.4
China	51.7	53.8	57.1	66.3	68.9	72.1	74.5
Japan	231.4	232.5	235.4	254.1	256.9	252.3	250.8

Source: IMF

- All major Central banks in AEs injected significant liquidity to ease financial conditions through purchases of securities but this is likely to normalize by CY22



Source: Kotak Institutional Equities

- Surge in demand, energy prices and base effect resulted in higher inflation in US and Euro Area
  - Barring US, Inflation is forecast to normalize to pre-pandemic levels by CY23

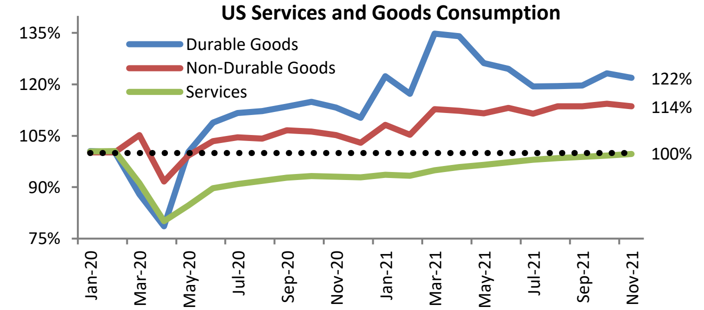
Average CPI (%)	Pre-pandemic			Current		Post pandemic	
	2017	2018	2019	2020	2021E	2022E	2023E
US	2.1	2.4	1.8	1.2	4.3	3.5	2.7
Euro area	1.5	1.8	1.2	0.3	2.2	1.7	1.4
China	1.6	2.1	2.9	2.4	1.1	1.8	1.9
Japan	0.5	1.0	0.5	-0.0	-0.2	0.5	0.7

Source: IMF

Life will let you get away with something for a while, but sooner or later, you will pay the price

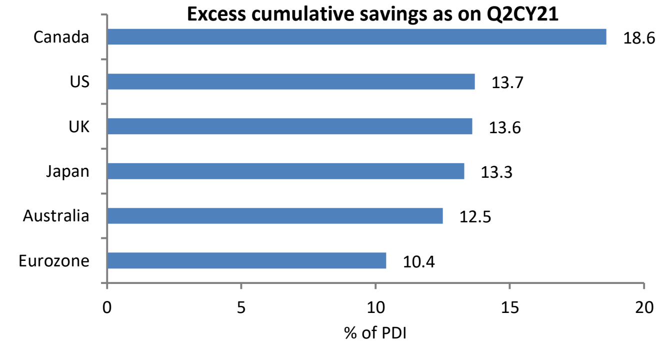
Monetary impulse = Increase in select central Bank Balance sheet / Global GDP; EMs – Emerging Market Economies; EA – Euro Area

- Reopening, easing restrictions and high vaccination coverage along with higher accumulated savings should boost consumption, especially services
  - Services spending has lagged goods spending till now in AEs and is likely to catch up



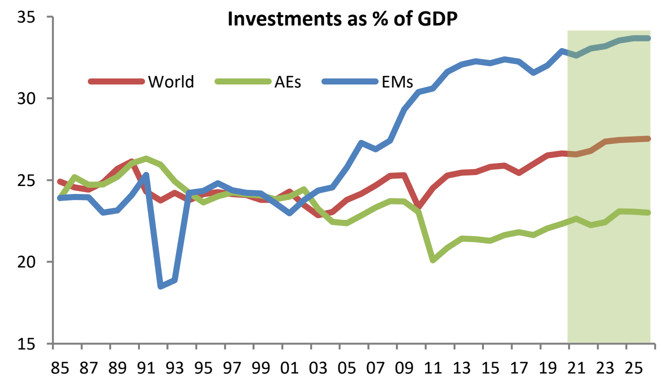
Source: Bloomberg, JM Financials, Dec 2019 value is indexed to 100%

- Large income transfers and limited spending has resulted in above trend savings for Households (HHs) in AEs
  - Excess accumulated savings with US HHs is estimated to be over USD 2.5 trillion



Source: Motilal Oswal Financial Services; PDI – Personal Disposable Income

- Investments as % of GDP during 2022-26 (~27.5%) estimated to be higher than pre-GFC era (2004-08, 24.6%) and pre-Covid-19 period (2010-19, 25.7%)
  - Spending on green technology, infrastructure spends, etc. to boost investments
  - Growth in investments will be driven mainly by China. In AEs investments are likely to be higher than pre-Covid-19 era but below pre-GFC period

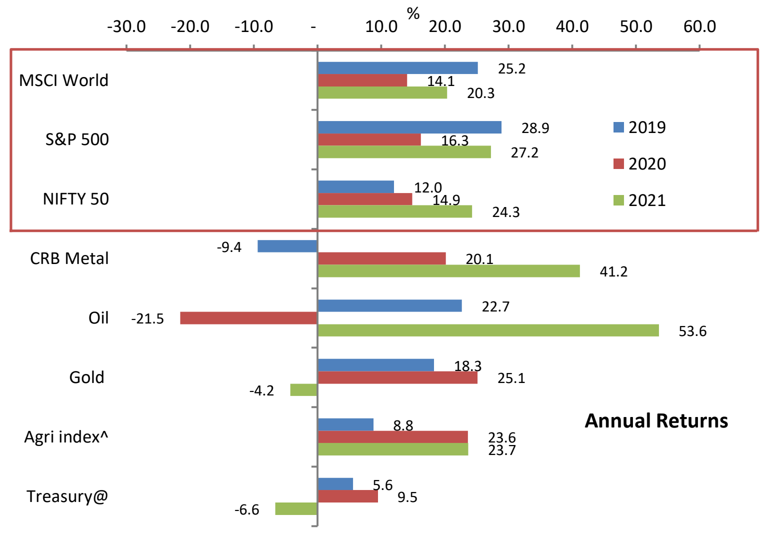


Source: IMF; Figures beyond 2020 are IMF estimates

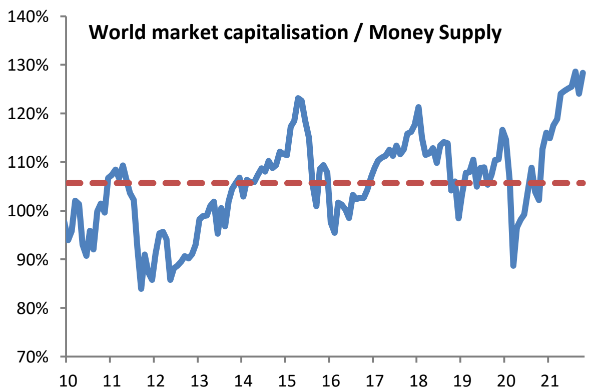
Source: Bloomberg, JM Financials, IMF, Motilal Oswal Financial Services

Stellar returns across asset classes, Time to celebrate or be cautious ?

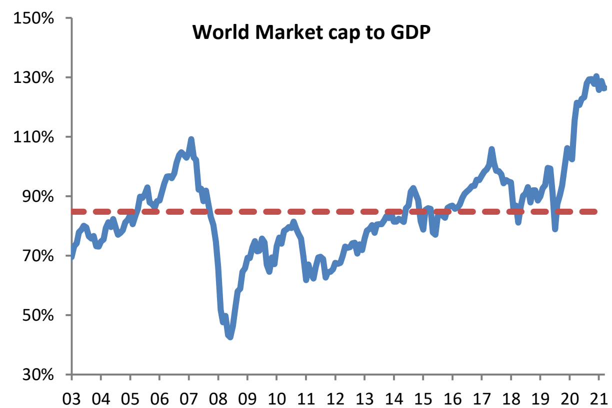
- Most asset classes continued their stellar run and major equity indices, metals, agriculture commodities, etc. delivered double digit returns in 2021
  - **2021 marked the 3rd consecutive year of double digit returns by S&P500 and MSCI World**
  - Safe haven assets like gold and treasury delivered negative returns
- **Are there signs of market excesses?**
  - World market capitalisation to Money supply is near two decades high
  - World market cap to GDP has trended higher and is significantly above historical average
  - Funds raised through IPOs are near all-time highs
- Given the likely normalization of liquidity and growth, strong past returns, likely increase in cost of capital, etc. one should moderate returns expectations over the near to medium term

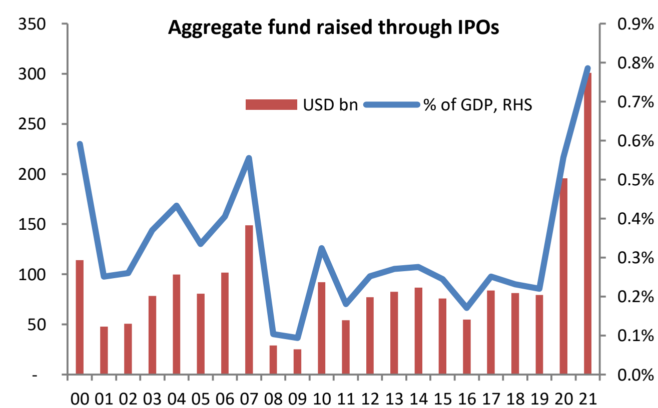


Source: Bloomberg; Updated till 31 December 2021, ^Bloomberg Agri Index, @ - Bloomberg Aggregate treasury total return index



Money supply = Aggregate M2 for US, UK, EA, Japan and China





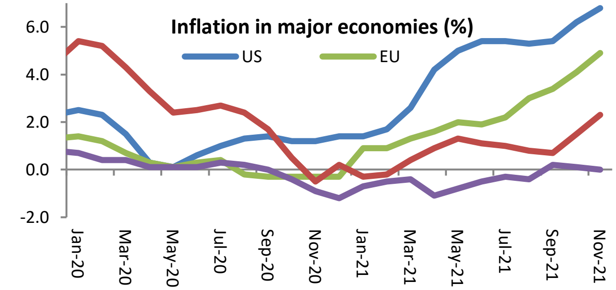
Based on aggregate IPOs in US, Germany, Japan, UK and India and their GDPs

Bull markets are born on pessimism, grow on skepticism, mature on optimism and die on euphoria – *Sir John Templeton*

Source: Bloomberg, JM Financials, IMF, Axis Securities

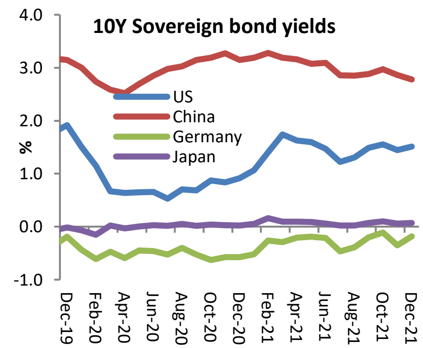
Inflation, Bond Yields and Currencies

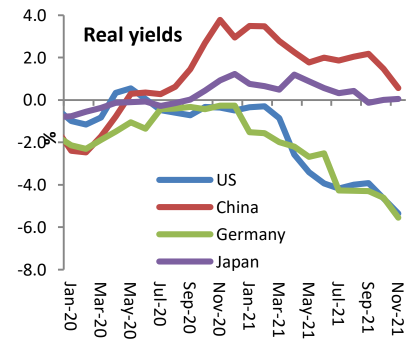
- CPI in US and EU surprised on the upside as CPI touched decadal highs in 2021 driven by
  - Pent up demand and shift of spending from discretionary services to goods
  - Supply chain imbalances, labour unavailability, port congestion and containers unavailability exacerbated the shock
  - Rise in energy prices and food prices



Source: Bloomberg

- Sovereign yields were largely range bound during most part of 2021 driven by narrative of transitory inflation, benign liquidity and largely accommodative central banks
  - After rising in Q1, US 10Y treasury yields have since been rangebound
- Real yields turned significantly negative for US and Germany





Source: Bloomberg, Real Yield = Month-end 10Y Yield – CPI for the month

- USD appreciated in CY21 against most major currencies driven by
  - Rise in US yields along with strong rebound in US's growth and inflation
  - Accelerated pace of tapering and likely normalization of monetary policies
  - Rise in demand of safe haven assets

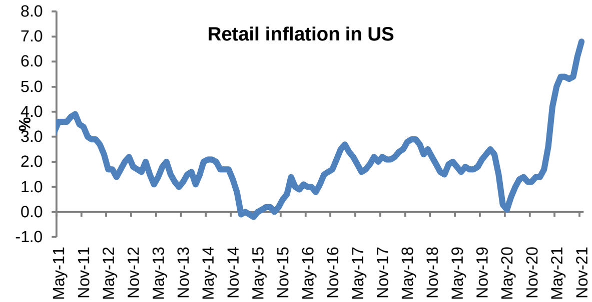
vs USD \ CAGR (%)*	1 Year	3 Year	5 Year	10 Year	Absolute in 10 years
Korean Won	-9.9%	-2.4%	0.2%	-0.4%	-3.6%
Japanese Yen	-9.8%	-1.1%	0.6%	-4.0%	-47.4%
Australian Dolllar	-8.0%	0.3%	-0.2%	-3.7%	-43.3%
Euro	-7.9%	-0.4%	1.5%	-1.4%	-14.5%
Pound	-2.5%	1.5%	1.5%	-1.5%	-16.5%
South African Rand	-10.8%	-4.3%	-3.5%	-7.2%	-101.3%
Mexican Peso	-10.1%	-3.7%	-1.1%	-4.6%	-57.3%
Brazilian Real	-7.9%	-13.0%	-11.5%	-11.6%	-200.1%
Indian Rupee	-2.5%	-2.4%	-2.0%	-3.5%	-41.1%
Indonesian Rupiah	-2.2%	0.1%	-1.3%	-4.7%	-58.3%
Russian Ruble	-2.1%	-2.9%	-4.2%	-8.9%	-135.3%
Vietnamese Dong	1.8%	0.7%	0.1%	-0.8%	-7.8%
Chinese Yuan	2.1%	2.4%	1.6%	-0.2%	-1.6%

Source: Bloomberg; Updated till 31st December 2021

US wage inflation

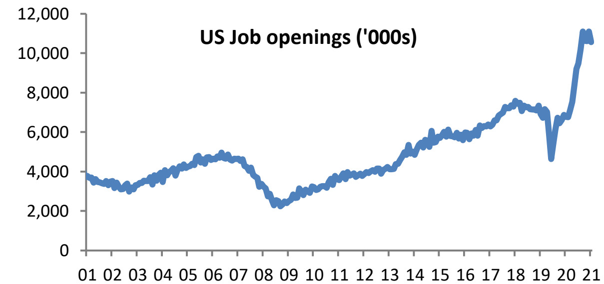
- After moving within a range for last decade, US CPI has jumped to decadal highs on back of surge in demand, fiscal and monetary stimulus, supply chain bottlenecks, etc.

Changing Inflation Narrative



Source: Bloomberg

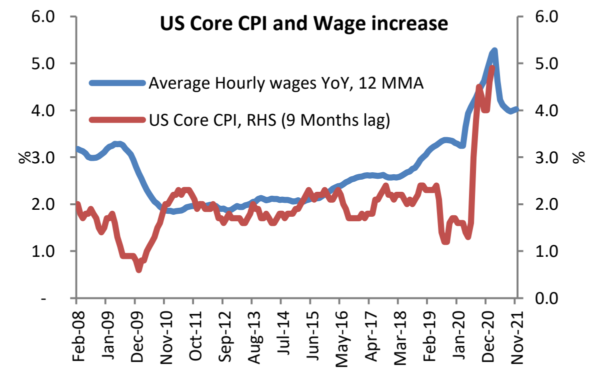
- US Job openings have risen significantly since pandemic and are now near decadal highs
  - Labour supply remains subdued impacted by unwillingness to join jobs due to care-taking needs, large unemployment benefits, high savings, etc.



Source: Bloomberg

- Wage inflation has increased significantly and is now, higher than pre-pandemic period. If wage inflation persists, it could pose an upside risk to US inflation

- Normalization of supply chain and waning of pent up demand could have a moderating impact on inflation



Source: Bloomberg

Persistence of wage inflation is a key monitorable

Crude Oil supply to peak before Demand ?

Environmental concerns are building pressure on oil supplies

- Driven by increasing climate awareness and 'Net Zero target' objectives, it appears that investments in supply are being scaled back
- Global upstream capex is at a 15 year low after it was cut 30% in 2020 (down 50% from peak)
  - Notably, despite higher oil drawn in 2021, capex has remained flat and unlikely to increase meaningfully as implied by consensus forecasts
- Access to capital across both equity and debt markets is likely to become increasingly constrained
  - JPMorgan and Barclays have announced decarbonisation targets for their high-emissions lending portfolios
  - Managements are under pressure to prioritize cash returns to shareholders over production growth

What happens if capex doesn't increase?

- If capex remains ~$350 bn p.a., while oil production is likely to grow in 2022 and 2023, driven by on-going projects, but it is expected to peak in 2024 and decline thereafter

Environmental factors and technological innovations impacting demand side too

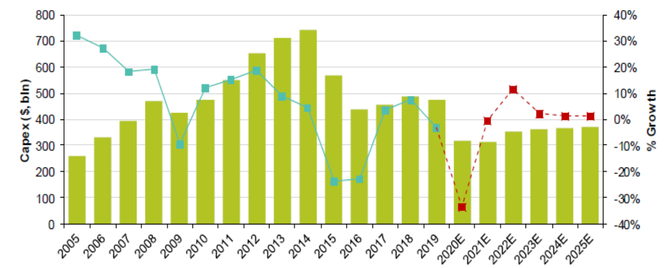
- While adoption of EVs remains a key long term headwind considering overall transportation is 55% of oil demand with ~30% demand from personal mobility, over next decade, population of ICE vehicles is likely to continue increasing

Millions barrel per day (mbpd)	2014	2019	2025E	2030E
Oil Demand (Source: IEA)	93	98	103	104

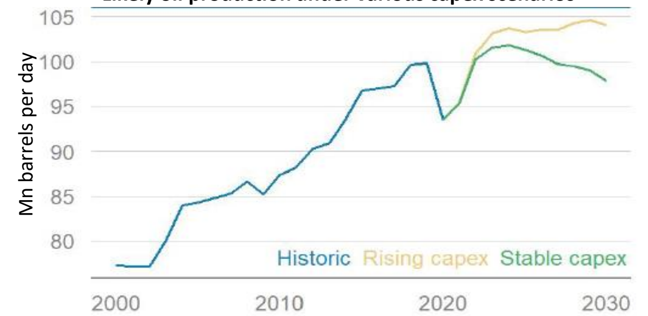
Sans higher capex, oil supply is likely to peak before oil demand

- Estimates suggests that global oil demand can peak between 2025-2030 vs supply, which is likely to peak ~2025, in absence of higher capex

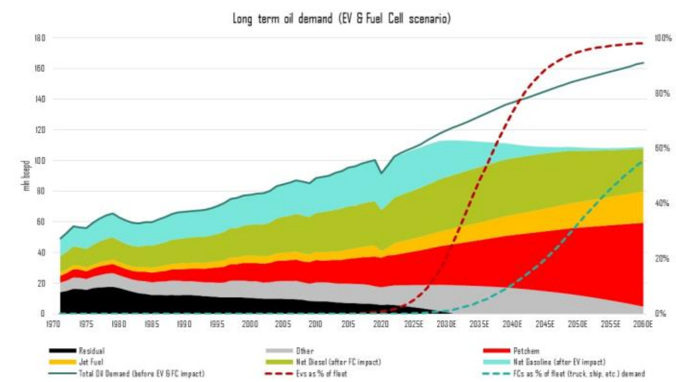
Global upstream capex near 15 years low



Likely oil production under various capex scenarios



Demand to peak in 2030 and then gradually decline

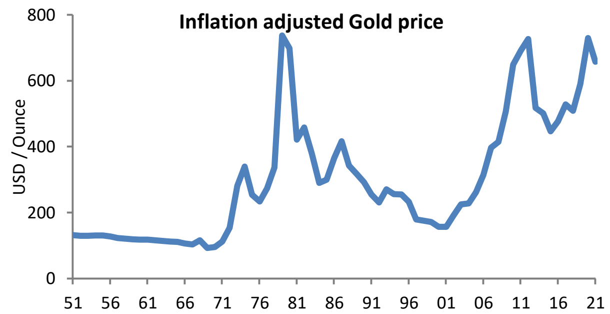


If supply peaks ahead of demand, oil prices could increase

Sources: IEA, USGC, Bernstein Research reports

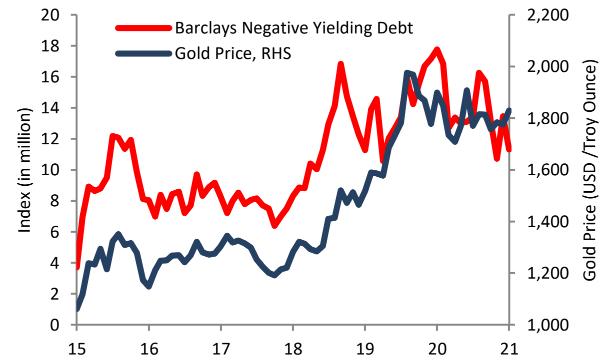
Gold – Will the glitter continue ?

- Gold preserves purchasing power and acts as a hedge against currency depreciation and inflation over the long term
- Inflation adjusted gold prices have come off highs but still remain close to the past peaks



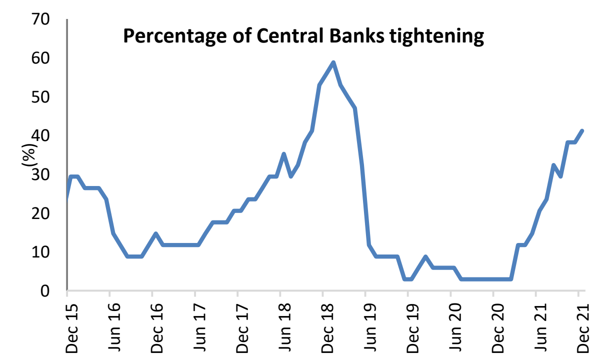
Sources: Bloomberg

- Gold prices moved within a narrow range during most part of CY21 driven by
  - Rebound in global growth and risk-on sentiments resulting in shift to riskier asset classes
  - Liquidity injection remained healthy but incrementally slowed down after peaking in 2020
  - High inflation in major economies
  - Successive waves of Covid-19



Sources: Bloomberg

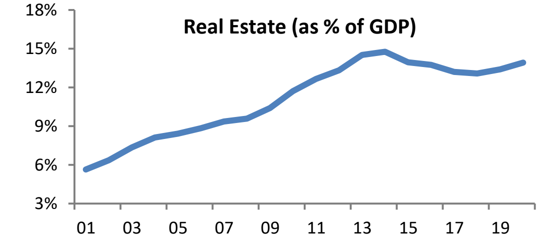
- For the future, key drivers of gold prices are likely to be- inflation and interest rates, especially US treasury yields. While higher inflation is supportive of gold prices, rise in treasury yields is negative
  - Given the current inflation adjusted gold prices are high, logically they could correct over the medium term
  - Rising treasury yields and its expectations are likely to keep a lid on gold prices

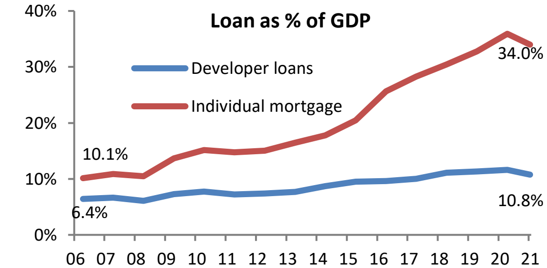


Based on 34 major central banks calculated by Edelweiss Research
Sources: Edelweiss, Bloomberg

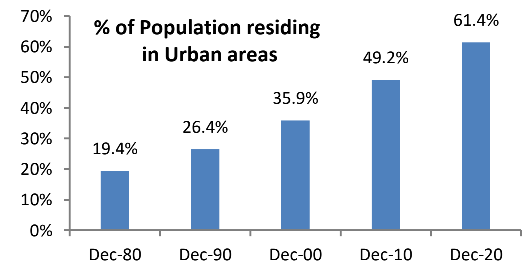
China Real Estate – In the News !

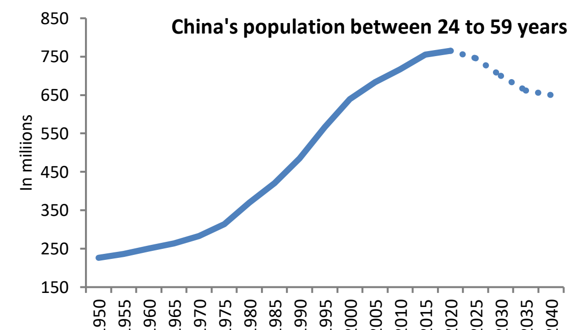
- Post Evergrande episode and defaults by a few real estate (RE) players, there is growing concern on China's real estate sector, particularly on its leverage
- Real estate is one of the large contributors of GDP and has been a growth driver for China
  - After China started to liberalize its economy, real estate prices saw significant increase with prices in Cities rising sharply and real estate became a preferred investment class
  - This was supported by rapid urbanization over the past three decades and low bank deposit rates
  - Factors like social status, cultural considerations, relatively under developed financial markets, etc. supported property demand / investments
- Thus, leverage in real estate increased driven by rise in both mortgage and developer loans





- China's RE sector is now maturing and growth rates should moderate over the medium term
  - Government policy is guided by philosophy that "Houses are for living in, not for speculation" and thus, Government is likely to keep a check on investments in this sector
  - Real estate price growth has slowed down and is in low single digits now
  - Slowdown witnessed in loan growth to RE sector – mortgages as well as developers
  - Structural factors are not in favour as the population in the 19-64 years category is likely to degrow over next decade and incremental growth in urbanization is likely to be slower
- **Impact –** Since majority of China's real estate debt is internal, the effect of slowdown in Chinese real estate on global financial markets is likely to be low, though impact on commodities needs to be watched





Source: Bloomberg, IMF, JM Financials, UBS, UN population data

Our Report Card for 2021

What we said in Yearbook 2021	What actually happened
Expect strong Global Recovery driven by fiscal and monetary stimulus, increase in HH savings, pent up demand and vaccination	Global Growth beat expectations with recovery in most advanced economies being stronger than anticipated
Risk of inflation driven by under investments in capital intensive sectors over the past decade	Inflation has surpassed expectations across most major countries
Uncertain outlook on gold prices	Gold prices declined in USD terms (-4.2%)
India's FY21 fiscal deficit is a temporary blip and deficit likely to narrow in FY22	Fiscal deficit is set to moderate in FY22 vis-à-vis FY21 despite additional Covid-19 related spending due to strong revenue growth
Crises have been drivers of reforms and Covid-19 is likely to be no different	Multiple reforms carried out in India – formation of bad bank, national monetisation pipeline (NMP), strategic divestments, regulatory changes in telecom sectors, etc.
Logistics was pointed as India's Achilles heel and a key constraint for manufacturing growth in India	Government unveiled a "Maha Gati Shakti" program to address the logistics bottlenecks and improve efficiency
Highlighted narrow nature of equity market rally and sectoral valuation divergences	Rally in equities became broad based in 2021 and valuation divergences narrowed
Long end yields likely to remain rangebound while short end could rise over time	Yields at longer and short end moved up nearly equally (~60 bps)

Warrior Queens: Rani Lakshmibai, Uttar Pradesh

Above is the picture of Jhansi fort and Ganesh temple therein

Picture courtesy: Esamskriti.com, esamskriti.com is a treasure-house of all things Indic and contains Over 2,000 articles and 17,000 pictures.

- Rani Lakshmibai, who awakened India’s dormant urge for freedom from British rulers, was born in 1828 to a Marathi Karhade Brahmin family in Varanasi
- Her actual name was Manikarnika Tambe and learnt archery, horse riding, etc. during her childhood
- She was married at the tender age of 8 years with Maharaja of Jhansi, Gangadhar Rao Newalkar in 1842 and was afterwards called Lakshmibai. They adopted a son name, Damodar Rao, just before her husband died
- She ascended the throne of Jhansi after the death of her husband in 1853
- After the British passed the controversial Doctrine of Lapse, under which they did not recognize Lakshmibai’s adopted son as the next heir to the throne, she decided to fight the British. She valiantly fought the British valiantly but eventually, succumbed to her injuries in the battle
- **This battle is called the First war for India’s Independence** and Rani Lakshmibai is remembered amongst the bravest fighters in the Indian history
- She has been immortalized in a poem by Subhadra kumari Chauhan, “Jhansi ki Rani”, wherein the famous line “खूब लड़ी मर्दानी वह तो झाँसी वाली रानी थी” is often used to described Rani Lakshmibai

Source: Publicly Available information

Key Future Trends

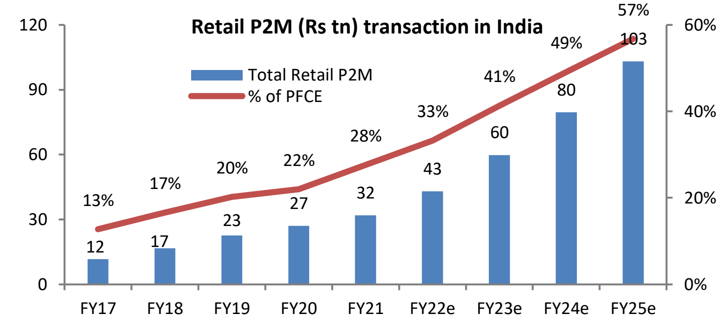
1. Digitization and BNPL
2. Consumer Tech
3. Climate Change and the road to Net Zero
4. Electric Vehicles (EVs)
5. Blockchain and Crypto

Change is the new constant – ***Heraclitus, A Greek philosopher***

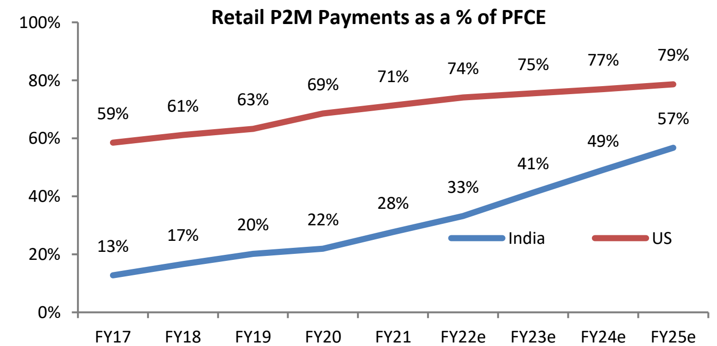
Digitization and BNPL

Digitization of transactions

- **India is witnessing significant increase in Person to Merchant (P2M) transactions value over the last 5 years. If the growth sustains, it would eventually reduce usage of cash**
  - Rollout of UPI and Zero MDR on it has been a game changer
  - Rise in Internet/smartphone penetration and low data charges are supporting increasing use of digital payments
- **P2M transactions as % of PFCE is increasing; India can close the gap with US in medium term**
  - Indian Retail P2M digital payments as a % of PFCE has increased to 28% from 13% in 2017
  - In US, digital payments are ~71% of its PFCE. India can close the gap with US over next 5 years
- **Cost of transaction through different sources**
  - UPI transactions are free for merchants. On the other hand, Debit card (DC) / Credit card (CC) transactions attract MDR (regulated / capped by RBI)
  - This along with ease of doing transactions is leading to substantial increase in penetration of digital payments
- **Implications of digitization**
  - Formalization of economy
  - Penetration of Banking at the bottom of the pyramid
  - Small ticket loans would get commoditized and will be driven by better data availability / analytics / machine learning



Source: Investec, National Payment Corporation of India (NPCI)



Source: Investec

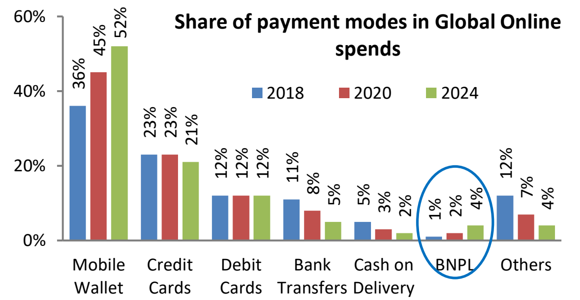
Type of Transaction	Cost / transaction	Average ticket size (INR)
Credit card	2% MDR	4,000
Debit card	0.4% MDR	2,900
UPI	Zero	1,800
ATM	INR 17	4,700
Branch	INR 60	na

Source: Investec

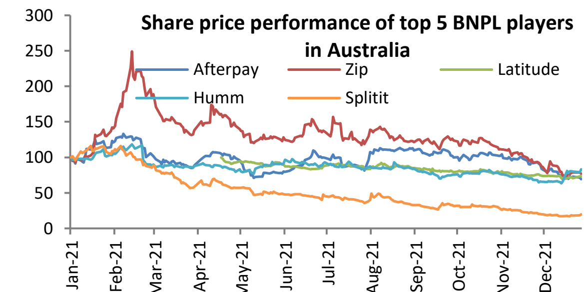
PFCE – Private Final consumption expenditure, PoS- Point of Sale, MDR – Merchant Discount Rate

BNPL – Opportunities and Challenges

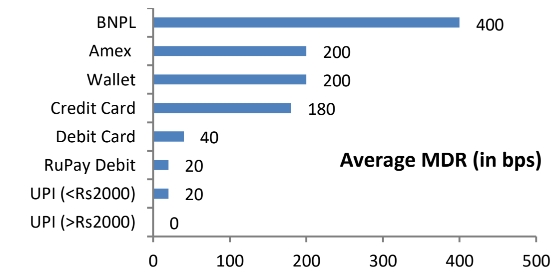
- **BNPL i.e. Buy Now, Pay Later** refers to purchases done through installments, usually of less than 6-months at the payment gateway / POS. While the concept is old, with digitalization, data availability and analytics, loan availability for customers, especially for small ticket transactions, has improved significantly
- **Globally, BNPL is only ~2% of total online spend while share of DC / CC spends is ~35%**
  - BNPL has grown significantly in countries where CC offers less value. For e.g. in Australia, where MDR charges on CC/DC transactions are borne by customers.
  - However, till now, few BNPL players such as Afterpay in Australia and Klarna in Sweden have gained size and scale, although they also remain unprofitable due to higher customer acquisition costs and weak asset quality. In contrast, CC companies are highly profitable.
- **BNPL value proposition from merchants perspective**
  - BNPL has increased the pool of customers as "new to credit" customers have option to avail financing for small value purchases. This has led to increase in average transaction size and purchase frequency
  - While BNPL's customer acquisition cost is higher than CC, it is lower than alternate mediums like advertisement, leads from social media platforms, etc.
  - A typical BNPL transaction size is significantly lower than credit card transactions. For e.g. In India, average ticket size of BNPL is ~INR 500 as against ~INR 4,000 for CC
- **BNPL opportunity in India**
  - Currently, online BNPL (~INR 0.2 trillion) is <1% of online spend in India while off line BNPL is ~15-16% of POS spends and is estimated at ~INR 1.2 trillion (~0.6% of GDP)
  - Estimates suggest, BNPL's market size can nearly triple to ~INR 4 trillion by FY24
- **Risks to watch out for**
  - Offered to customers with limited credit history and relatively low access to formal credit
  - Collection costs are high due to lower ticket size and large numbers of loans



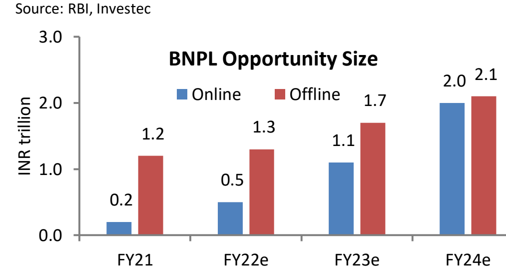
Source: World payment reports & Investec



Source: Investec



Source: RBI, Investec



Source: Investec

POS – Point of Sales

Consumer Tech

Consumer Tech is a broad term and includes– E-commerce [Retail – Grocery and Non-Grocery (apparel, electronics, beauty, etc.)], Food delivery, Education, Social, Gaming, Health, etc.

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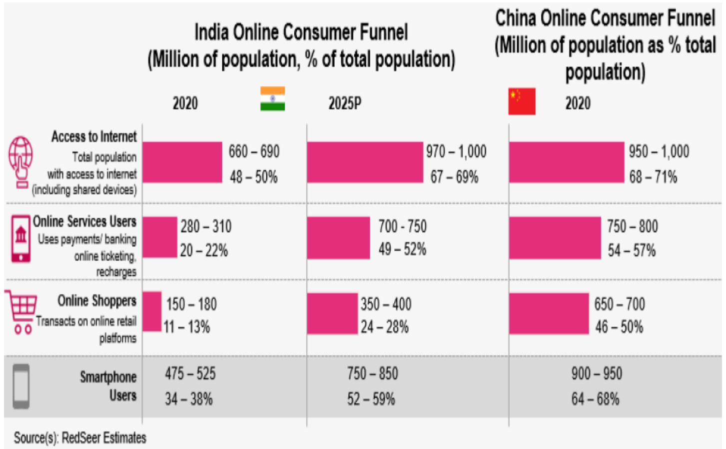
Consumer Tech – A Game Changer

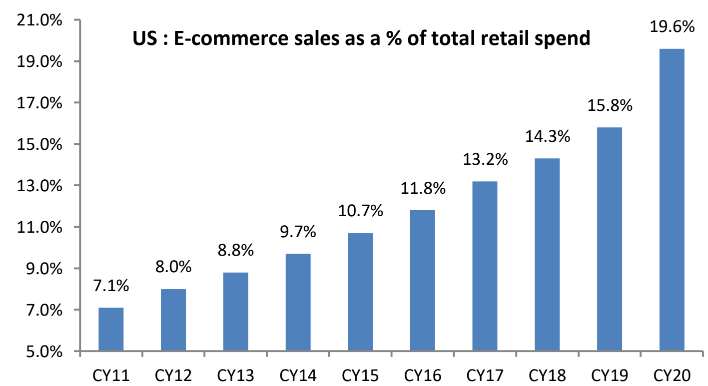
- Digital penetration has gone up significantly in India on account of:
  - Significant increase in smartphone penetration leading to easy access
  - India ranks lowest in mobile data cost at USD 0.09/GB with strong 4G infrastructure
  - Government working as enabler of digital ecosystem (E.g. UPI based payment, UIDAI system, etc.) and has reduced the transaction cost significantly
  - Strong capital availability from Private Equity and Global Tech players is leading to capital and technological support
- Key benefits to the consumers include
  - Convenience of home delivery and 24x7 access
  - More choice across brands and price points across cities (especially tier II & III)
  - Seamless mode of payment and option of EMIs
- **Implication for Physical Retailers / Service providers**
  - Online retailers/service providers are growing at a rapid pace and are gaining market share at the expense of offline retailers. For e.g. US ecommerce sales now form ~20% of total retail spend
  - Physical retailers/service providers need to invest significantly on digital infrastructure with omni-channel presence to stay relevant in the current shift
- Investors interest has been one of the highest in this space given the untapped potential and limited options.
  - Strong listing of Zomato and FSN E-Commerce Ventures (Nykaa) has also aided the sentiments toward this sector

India vs China: Online Consumer Funnel



Source: FSN E-Commerce Ventures (Nykaa) Nykaa Red Herring Prospectus (RHP)

US: E-commerce is now ~20% of total retail sales



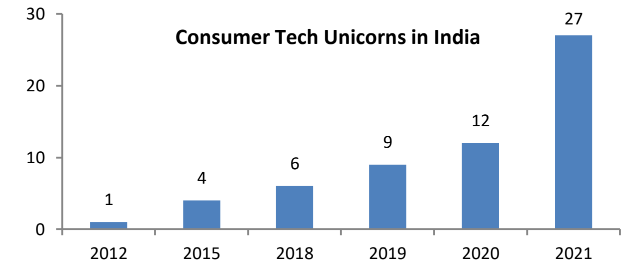
Source: Digital Commerce 360 analysis of U.S. Department of Commerce data

TAM – Total Addressable Market

India Consumer Tech - Background

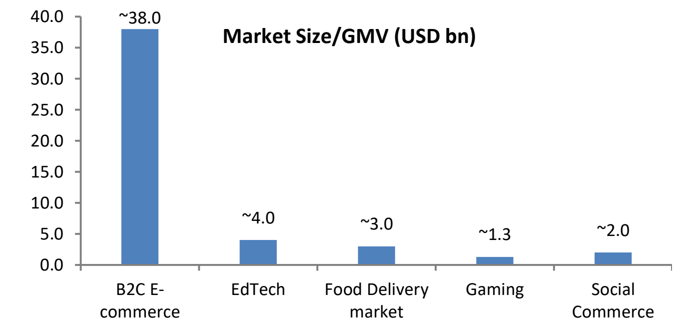
- Consumer Tech has been one of the fastest growing sectors in the startup space and has produced one of the highest number of Unicorns in India in last decade
  - Out of the 81 unicorns in India, 27 are from this space.
- B2C retail is the largest segment and accounts for ~75% of the Gross Merchandise Value (GMV) of entire consumer tech space
- **Differentiation from US/China- Higher chances of success for Consumer Tech/ vertical e-commerce companies in India** as compared to social media based tech companies because (1) India is not a very large advertising spender (Advertising spend is ~0.38% of GDP in India vs ~5.0% in US) and (2) presence of dominant large global social media companies
- **Penetration of consumer tech** is low and there is a long runway of growth
  - Covid-19 led inflection for digital adoption in India. Online shoppers are expected to grow at ~20% CAGR with overall online channel expected to grow >30% p.a. in the next 5 years (source: Redseer)
- **Large Total Addressable Market (TAM) provides long runway for growth-** Consumer tech companies have large TAM providing them long runway for growth
  - For e.g. Market Size of fashion and food Service in India in FY20 was ~USD 77 bn & USD 65 bn respectively with low online penetration in the range of ~6-8%

Consumer Tech Unicorns are ~30% of all Unicorns in the last 10 years



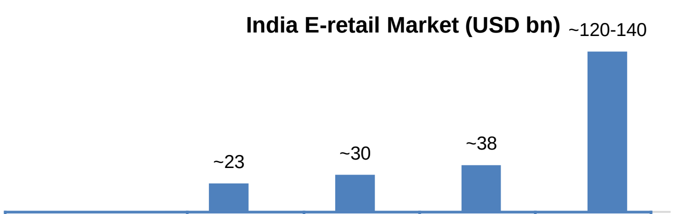
Source: www.inc42.com

FY21 GMV : B2C E-commerce is the largest segment



Source: Bain & Company, Publicly available information

E-Retail is ~4.6% of total retail market in India



Penetration %	FY19	FY20	FY21	FY26P
Overall	~2.8%	~3.5%	~4.6%	10-11%
Ex-Grocery	~9%	11-12%	19%-20%	26-28%

Source: Bain & Company, RHP of FSN E-Commerce Ventures (Nykaa)

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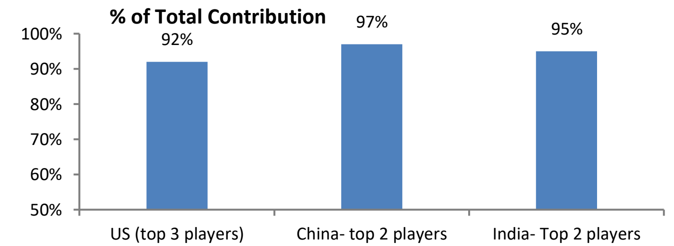
India Consumer Tech companies – Key Trends and Outlook

- **Oligopolistic nature of market-** In line with global trend, India's consumer tech segment is largely oligopolistic in nature with top 2/3 players commanding over 80% of market share.
- **B2C E-commerce, EdTech and Hyperlocal platforms lead in PE/VC funding,** with Social commerce, Health-Tech and Travel & Hospitality being other emerging segments
- Leveraging on their existing consumer base, many companies have / are likely to diversify into multiple businesses. For e.g. Swiggy has forayed into grocery delivery (Instamart) & Supr Daily.
  - Large players have ambitions to develop Superapp which will integrate multiple platforms built / acquired over time. For e.g. GRAB, Go-Jek, Wechat, etc.
- **Path towards profitability-** Global experience suggests that companies tend to become profitable on achievement of scale and size, fall in customer acquisition costs and increase in bargaining power with customers/vendors. Given the relatively less capital intensive nature of business, return ratios can improve quickly.
- **Business valuations- how to value these companies?**
  - Given the loss making/ early stage profitability phase of these businesses, most traditional multiple based valuation methods are not considered appropriate. However, Discounted cash flow (DCF) with longer term assumptions should capture the intrinsic value.
  - Apart from management and execution capabilities, valuation of such businesses should take into account factors like TAM, likely scale or market share of the company, contribution margins, high operating leverage, etc.
- **Evolving Regulatory framework-** Regulators are adapting to changing requirements and enacting regulations with the objectives of reducing monopolistic practices, protecting consumer interests and ensuring data privacy

Superapps, an app which provide multiple services on one app thus providing self contained commerce and communication online platform

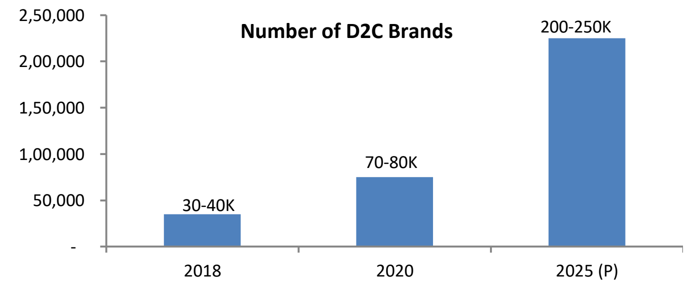
Food Delivery market: Top 2-3 players contribute more >90%



Source: Publicly available information

	2018		2019		2020	
	Funding (USD mn)	No. of Deals	Funding (USD mn)	No. of Deals	Funding (USD mn)	No. of Deals
Edtech	742	18	325	28	1,833	59
Hyperlocal	1,637	15	617	23	1,642	30
Fintech	348	23	1,391	68	982	63
Social	200	14	481	41	565	53
Logistic tech	78	10	984	24	463	23
B2C	1,002	32	1,241	45	360	36
Online classifieds	236	11	426	34	417	18
Gaming	104	4	114	10	346	10
Wallets / Payments	564	8	1,275	15	334	21
Mobility	387	16	883	35	252	20
Health Tech	260	22	537	31	236	34
B2B	540	16	923	22	138	22
Travel & Hospitality	1,026	8	1,152	19	131	10
Agritech	41	1	156	14	49	17
Others	229	16	163	20	435	28
Total	**7,394**	**214**	**10,668**	**429**	**8,183**	**444**

Source: E&Y



Source: Bain & Company

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Climate Change and the Road to Net Zero

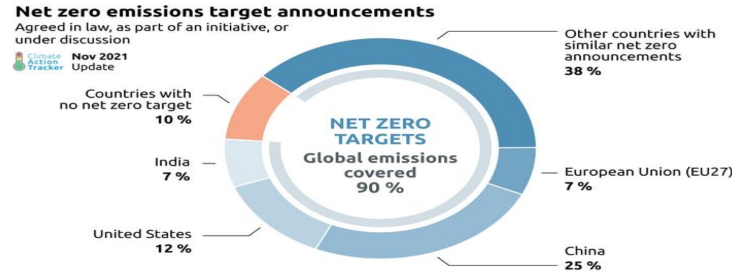
Climate change to drive significant investments

- Climate changes are widely believed to be primarily caused by rise in Green House Gas (GHG) emissions resulting in increase in mean temperature globally.
  - Consensus view is that aggressive net zero emission targets are necessary to limit the increase in temperature and consequently, over 140 countries have announced or are considering net zero targets (~90% of global emissions)

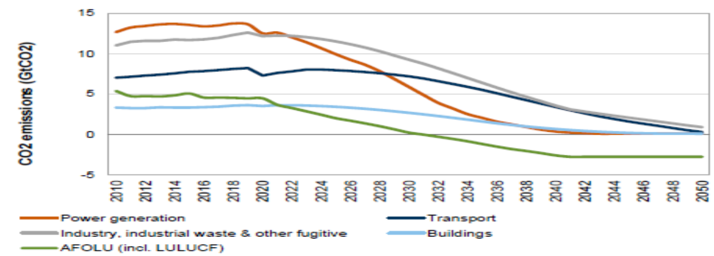
- Net zero target will require significant investments across sectors – Power, Transport, Buildings, Real estate, etc.
  - Power, Transport and Industry are the key carbon emitting sectors

- For achieving net zero emission goal by 2050, it is estimated that aggregate incremental investments of ~USD 50-60 trillion will be required across major sectors
  - Above presents an investment opportunity of ~USD 2 trillion p.a. (~2% of global GDP)
  - Investments in power sector including on distribution networks, charging networks, renewable capacity expansion, etc. are likely to have largest share
  - Investments in Industry to control waste and pollution along with Buildings upgrades are also expected to be high

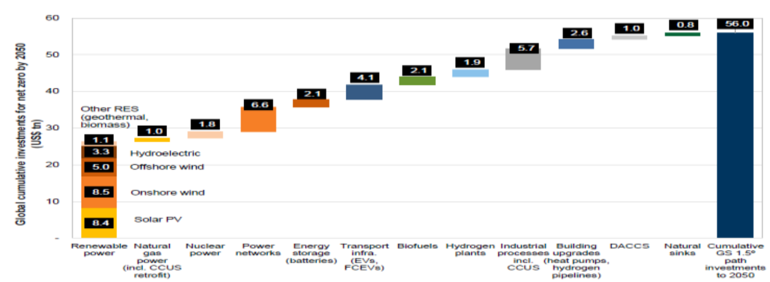
- Investments are likely to pick pace steadily and expected to peak between 2035-40



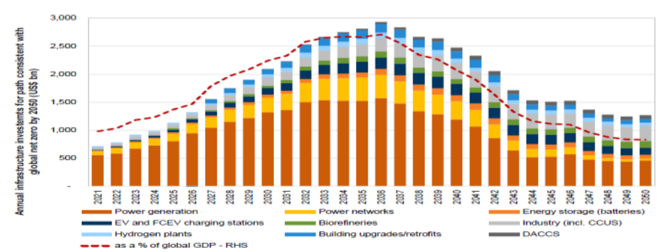
Modelled emission reduction pathway



Cumulative investment opportunity for global net zero by 2050



Annual investment profile to achieve net zero by 2050 (GDP USD 2010 PPP)

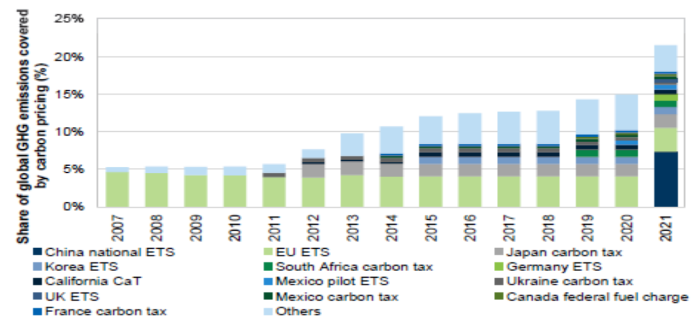


Source: Goldman Sachs (Introducing the GS net zero carbon models and sector frameworks – June 2021), climateactiontracker.org

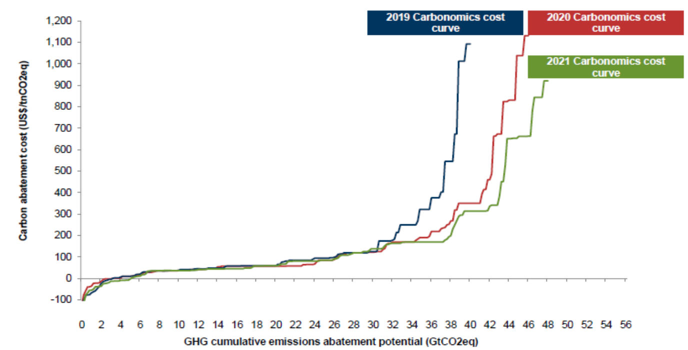
Carbon tax – A nudge towards going Green

- Carbon tax is an additional cost on firms that emit carbon dioxide (CO_2) in their operations. Globally, in most countries, it is generally levied through following ways
  - Mandating purchase of carbon credits / licenses from secondary market
  - Charging additional tax on per unit of carbon generated
- Countries are also considering imposing a tax on imported carbon in form of import duties (also called carbon border adjustment tax) to aid competitiveness of their manufacturing sector
- This approach nudges companies towards innovation / efficiency / reducing investments in carbon emitting businesses and is increasingly used as a policy tool by many countries, especially in Europe
- While carbon abatement costs are declining due to innovation and scale, they are still at high levels compared to levels required to achieve a smooth transition to a net zero emission target
- Implementation of carbon tax has led to development of carbon trading markets
  - Amongst economies, EU has the most liquid carbon trading markets and carbon prices have increased sharply over past two years
- **Where does India stand?** India does not have a carbon trading scheme like EU. It, however, imposes a cess of INR 400/t on use of coal resulting in additional cost of ~INR 0.2/kWh on coal-based power. If India had carbon prices similar to the EU, it would have resulted in an additional cost of ~INR 5-6/kWh [Coal/gas based generation is ~80% of India's electricity generation vs. ~35% for Europe]

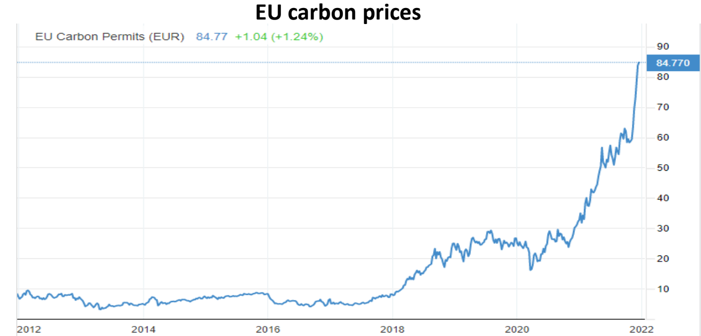
Carbon pricing initiatives' share of global GHG emissions covered (%)



Carbon abatement cost curves for anthropogenic GHG emissions



EU carbon prices

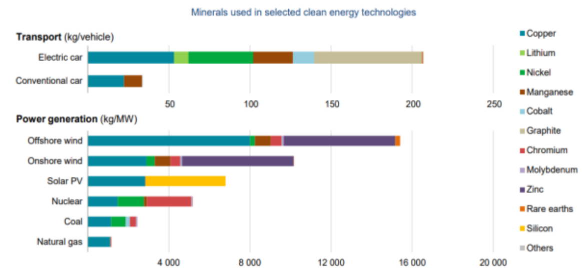


Source: GS (The dual action of Capital Markets transforms the Net Zero cost curve, Nov 2021)

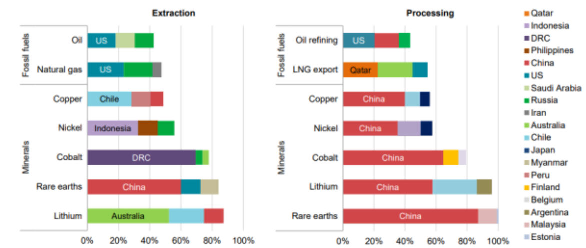
Demand for Minerals and Power is set to increase in Net Zero world

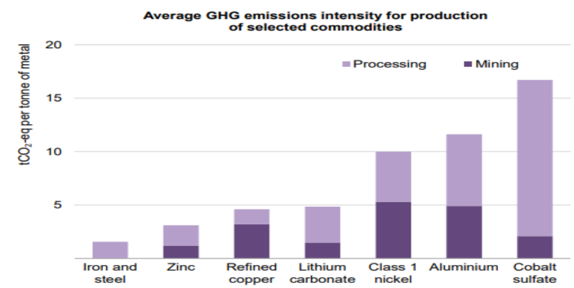
- Minerals are key input in EVs and renewable power generation
  - Excluding steel and aluminium, a typical electric car requires **6 times the mineral inputs** vis-à-vis a conventional car
  - Renewable power sources like wind, solar, etc. require significantly higher proportion of minerals relative to conventional sources
- **Possible challenges because of this increasing dependence on Minerals**
  - Geographically concentrated supplies increases price volatility along with security and reliability risks; Supply side challenges, historically, are met through additional investments and technological innovations but this happens with a lag
  - China is a key source / owner of these minerals, thus increasing reliance on it
  - Some of these materials have high emission intensity in mining and processing. Thus, from a lifecycle emission consideration, low emission technologies in mining / processing these minerals will be required to achieve the objective of emissions reduction
- The demand for power generation by 2050 is likely to increase three-fold (vs. that of 2019) or ~3-4% CAGR and surpass 70,000 TWh as the de-carbonization process unfolds
  - >15,000 GW of solar (vs. ~600 GW in 2019) and > 10,000 GW of wind (vs. ~650 GW in 2019) net capacity addition would be required by 2050
- Risk of rise in interest rates poses a risk to energy costs. Every ~100bps increase in cost of debt increases tariffs by ~5% *(Source: ICICI Securities)* and thus, is a risk to monitor.

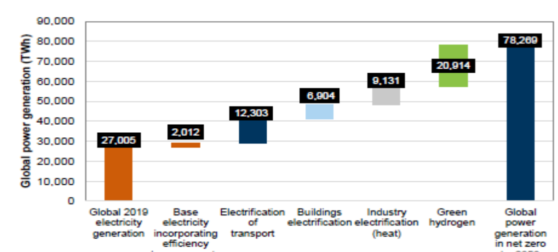
Minerals used in selected clean energy technologies



Share of top3 producing countries in production, 2019s







Source: IEA; Goldman sachs; LCOE - Levelized cost of Energy

Electric Vehicles

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Electric

Autonomous

PaaS* as the new Revenue Model
(*product as a service)

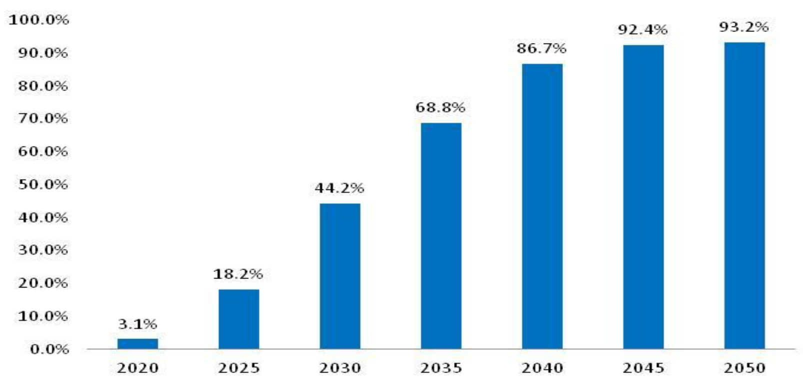
Tops* are the new horsepower
(*Terra operation per second)

As BEVs penetration debate settles, AVs are the new global battle frontier

BEV market share + Autonomous penetration = Revenue model of the future

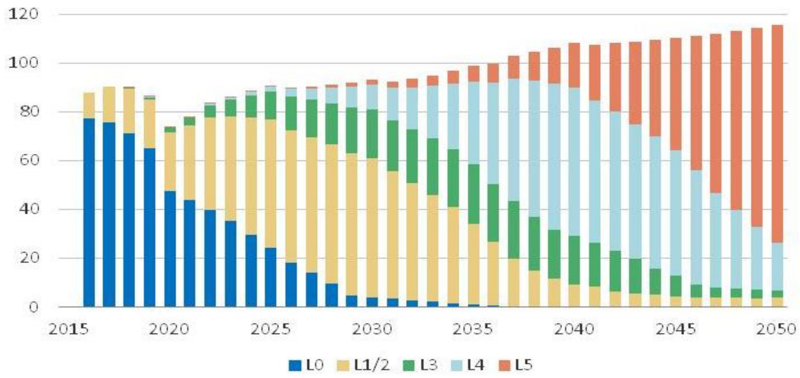
- As BEV adoption debate settles since most of the naysayer OEMs are changing their stance in favour of BEVs, the debate has shifted towards level of autonomous and vehicle software as the key brand differentiating factors
  - *"Software will be THE differentiator to decide how successful VW will be in the #NEWAUTO world!"*; VW CEO, Diess
- Subscription and services revenue from vehicle as services (Robotaxi), payable vehicle features, software upgrade and cloud services etc will be the key revenue pool (various forecasts pointing to 25-30% Tesla revenue from this as Tesla vehicle population increases) for auto OEMs compared to >90% revenue from product sales currently
  - Though not comparable, revenue contribution from Apple subscription/services reached 19% in FY21 from 9% in FY15 as cumulative user volume of iPhone/iPad/wearable watch increased
  - Majority of demand of E-2W start-ups in India is for OTA subscription enabled models that have Rs20-30k higher upfront price

Global BEV Sales penetration forecast



Source: Morgan Stanley Research

Global autonomous penetration forecast by level of autonomy



Source: Morgan Stanley Research

AV – Autonomous vehicles, OTA: Over the Air software updates, BEV – Battery Electric Vehicle, OEM – Original Equipment Manufacturer, E-2W – Electric Two Wheeler,

L0 : No driving automation; L1/L2: Driver assistance and partial driving automation, L3: Conditional driving automation; L4: Advanced driving automation; L5: Full driving automation

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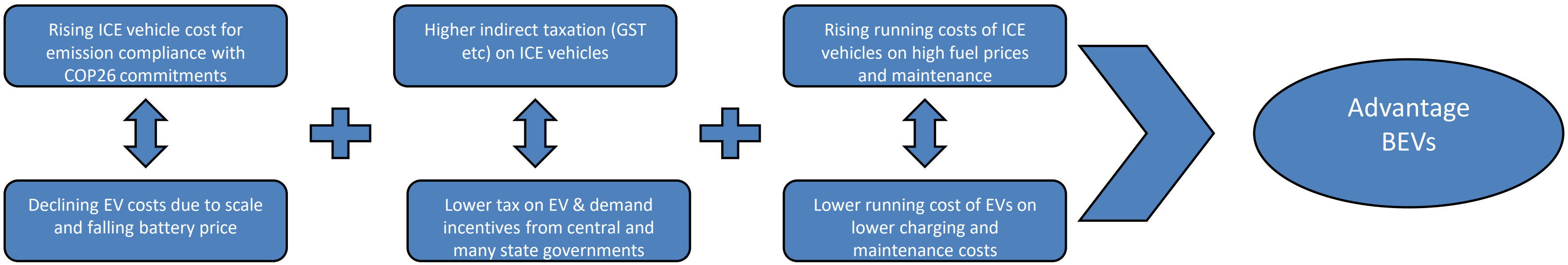
.. BEVs penetration in India is following global trends and is at an inflection point…



Trends in 2W electrification

- **2W EVs are no longer just an automobile, but also a gadget:** Early adopters and digital generation is ready to experiment and likes digital functionalities
- A section of motorcycle customers can also switch to EV scooters - 1) Family bikes where usage is not very high but operational cost savings are enticing; 2) EVs have moved past the speed and performance of ICE scooters; 3) Pride of trend-setting ownership and 4) Adoption of low-speed E-2Ws is driven by lower costs of operation
- Despite supply constraints, E-2Ws penetration has reached 2.2% in Dec-21

Trends in 4W electrification

- Reservations over EV penetration potential in Indian PV segment are also gradually getting addressed as EV penetration in retail registration has crossed 1% level in Dec-21 despite long delivery time, limited choice of models and low subsidy
- Total cost of ownership parity or superiority has been broadly achieved in key growth segments of the domestic PV industry and initial price parity is also likely to be achieved in the next 2 – 3 years with higher localization and scale
- Government is addressing charging infrastructure issue with ~100k+ public charging stations in the next 3-4years period across India which includes at least 50k EV charging station at the OMC's 75k+fuel pumps along with additional new charging points at highways or public parking places

CoP 26 -COP26 is the most recent annual UN climate change conference. COP stands for Conference of the Parties
ICE – Internal Combustion Engine, OMC – Oil Marketing Companies, 2W – Two Wheeler, 4W – Four Wheeler, PV – Passenger Vehicle

…..Government policies are acting as catalysts and driving adoption of BEVs

Catalysts for both OEM and consumers

- Relentless push by Governments through demand incentives, tightening of emission regulations, low GST, no road tax on BEVs for 5 years, etc.
- Auto PLI on only new energy vehicles (EV or Fuel cell) and ACC battery manufacturing PLI incentive (combined incentive of INR 441bn) scheme to bridge upfront cost gap in the initial years
- Rising pollution compliance cost of ICE vehicles with stringent CAFÉ and Real-drive emission norms with COP26 commitment of 45% reduction in CO2 from 2005 level
- Higher indirect taxation on vehicle fuels (Diesel/Petrol) will continue to widen total cost of ownership in favour of BEVs vis-à-vis ICE

Auto PLI scheme

OEMs - Determined Sales Value (INR bn)	Incentives (%)
Min Determined Sales Value in Year 1	**INR 1,250 mn**
<= 20	13%
20 - 30	14%
30 - 40	15%
> 40	16%
100bn for OEMs in 5 years	Additional 2%
Components - Determined Sales Value (INR bn)	**Incentives (%)**
Min Determined Sales Value in Year 1	**250mn**
<= 2.5	8%*
2.5 - 5	9%*
5 - 7.5	10%*
> 7.5	11%*
12.5bn for components in 5 years	Additional 2%
EV & HFCV	Additional 5%
*Multiplied by a factor of 0.9 in 5th year for sales relating to ICE components.	
Year	**Incentive Payout (INR bn)**
1	6.0
2	31.5
3	59.3
4	72.0
5	90.6
Total payout	**259.4**

Source: PIB. Government of India

FAME II and state demand incentive schemes

State/Central	Subsidy per kWh	Subsidy per vehicle (upper limit)	Vehicle subsidy for no of vehicles #
Central Govt	INR 15,000 / kWh for 2W 3W/4W: 10,000/kWh	E-2W: INR 45,000 E-3W: INR 50,000 E-4W EV: INR 1,50,000 E-4W Hybrid: INR 13,000 E-Buses: INR 50,00,000	2W: 10,00,000 3W: 5,00,000 4W: 55,000 (20K strong hybrid) Buses: 7,090
Gujarat	INR 10,000/kWh	INR 20,000 for E-2W INR 50,000 for E-3W INR 1,50,000 for E-4W	2W: 1,10,000 4W: 20000 3W: 70000
	INR 5,000/kWh 10% of the vehicle costs for Buses	INR 10,000 for E-2W INR 30,000 for E-3W INR 150,000 for E-4W cars INR 1,00,000 for E-4W goods INR 20,00,000 for e-buses	2W: 1,00,000 3W: 15,000 Passenger 3W + 10,000 Goods 3W 4W Car: 10,000 4W Goods: 10,000 Buses: 1,000
Delhi	INR 5,000/kWh for E-2W INR 10,000/kWh for E-4W	INR 5,000/kWh for E-2W subject to INR 10,000 INR 30,000 for E-3W INR 10,000/kWh for E-4W subject to INR 150,000	2W: Unlimited 3W: Unlimited 4W Car: 1,000 4W Goods: 10,000
Assam	INR10,000/kWh	INR 20,000 for E-2W INR 50,000 for E-3W INR 1,50,000 for E-4W	2W: 1,00,000 3W: 75,000 4W: 25,000
Rajasthan	E-2W with battery capacity of 2kWh, 2-4kWh and >5kWh subsidy of INR5k, 7K and INR10K	INR 7,000-10,000 for E-2W INR 10,000-20,000 for E-3W	
Meghalaya	INR 10,000/kWh for E-2Ws INR 4,000/kWh for E-3Ws/E-4Ws/eBus	INR 20,000 for E-2W INR 20,000 for E-3W INR 60,000 for E-4W INR 5,200 for hybrid E-4W INR 1mn for E-Buses	2W: 100,000 3W: 75,000 4W: 25,000
Goa	Subsidy starting from FY22 for 2W, 3W and 4W and ending FY26 with reduction of INR2000/kWh every year henceforth	INR10,000/kWh for E-2W INR10,000/kWh for E-3W INR10,000/kWh for E-4W	2W: 3,000 3W: 50 4W: 300

Source: Government of India and State governments schemes
ACC: Advanced Cell Chemistry, PLI: Performance Linked Incentives, CAFÉ – Corporate Average Fuel Economy

Blockchain and Crypto

Crypto – Is it an Commodity or Currency or Investment Instrument?

What is a Crypto Asset ?

- While a number of Crypto assets have risen sharply over last 5 years, there is still lack of consensus amongst intellectuals about its true nature – is it a currency or a commodity or an investment class or something else. Characteristics of crypto have some overlap with both commodity and currency

Rising importance of Crypto assets

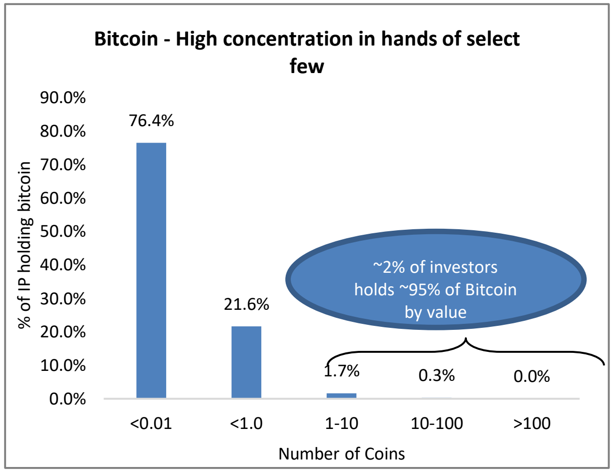
- There are now over 8,500 cryptocurrencies and increasing with market capitalisation of over USD 2 trillion; this is equal to ~18% of total gold holding globally
- Increasing popularity, rising market cap, large trading, etc. have resulted in it receiving attention globally including from regulators

Interesting facts about Crypto

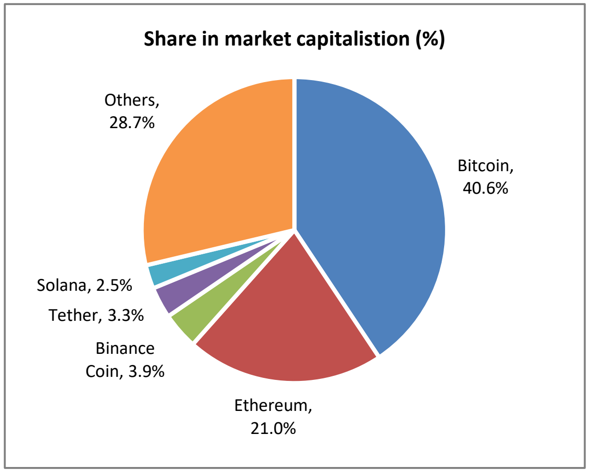
- Market cap of top 5 crypto assets accounts for ~70% of outstanding market capitalisation
- Ownership of Bitcoin and other major coins like Litecoin, Ethereum, etc. is concentrated as ~2-3% of investors holding ~90-95% of outstanding coins by value
  - Hence, systemic risk is low, at least as of now, and any strict government action against crypto is likely to have limited impact

Did you know?
The first commercial bitcoin transaction was to buy 2 pizza for 10,000 bitcoin in 2010. Today the same is worth ~USD 400 million

	Currency	Gold	Security	Crypto
Store of value	✓	✓	✓	?
Standardised	✓	✓	✓	✓
Medium of Exchange	✓			Nascent
Acceptability	✓	✓	✓	
Transferable	✓	✓	✓	✓
Divisibility	✓	✓	✓	✓
Limited supply	✓	✓	✓	
Regulated	✓	✓	✓	
Durability	✓	✓	✓	✓
Generate cashflows	✓		✓	
Volatility in Value	Low	Medium	Medium	Very high



Source: https://bitinfocharts.com/



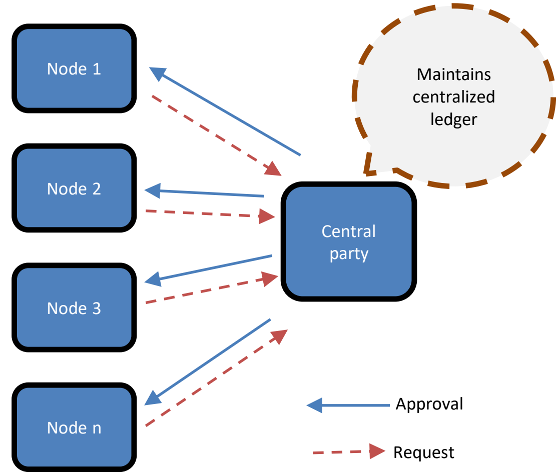
Source: https://bitinfocharts.com/

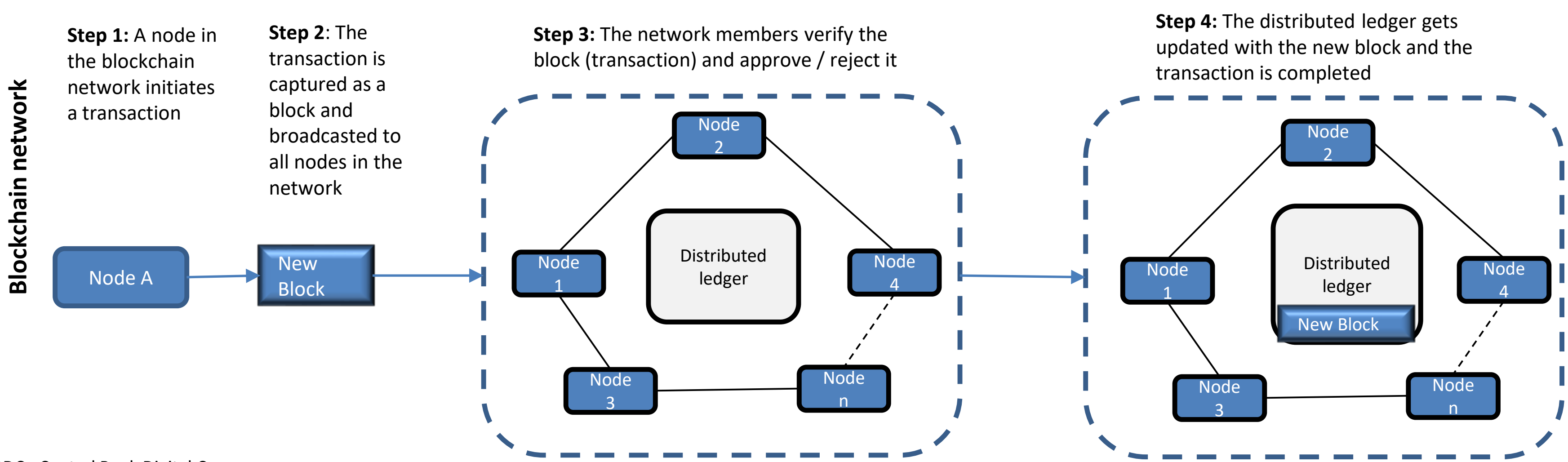
Blockchain - The technology behind Crypto

- In a traditional system, transactions are usually verified by a central party. For e.g., in a NEFT payment transfer, the transaction needs to be cleared by NEFT Clearing Center
  - Pros: Trusted and regulated entity control
  - Issues: Time associated with processing can be high
- In a blockchain network, the ledger – collection of transaction records - is distributed
  - On initiation of transfer request (e.g.: transfer of a bitcoin), a new block with the transaction details (e.g.: payer and payee details, transaction amount, account balance etc.) is created and broadcast to all the network participants
  - Participants, by majority, verify the block against the ledger and approve or reject it
  - Distributed ledgers are then updated with the new transaction and the transaction is completed
- Positives: Increased transparency, possibly lower costs/time associated with processing
- Cons: Collusion by participating members can result in fraudulent transactions getting approved; Technology adoption is still at nascent stages

Usage: Payments (Cryptocurrencies, CBDC), Cross Border Payments, Smart supply chain contracts, records, etc.

Traditional network





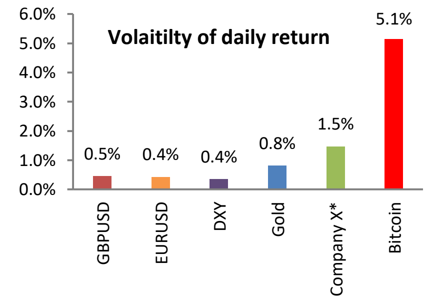
CBDC - Central Bank Digital Currency

Crypto – Usage, Valuation and Challenges

- **Usage**
  - Crypto Assets are sparingly used as “medium of exchange”. The higher volatility in prices compared to a traditional currency makes it less likely to be used as a “store of value”. Bitcoin is 10X more volatile compared to major currencies.
  - Becoming a speculative asset class with increasing interest from people
- **Where do Crypto assets derives their value from ?**
  - Crypto assets, just like Gold, have value because “people believe they do” and there is no scientific or logical valuation model / method to determine fair value of any crypto asset
  - While Gold has a long history of acceptance on its side and is also used for making jewellery, Crypto assets lack these
- **Why are government and Central Banks apprehensive ?**
  - Risks to relevance of monetary policy and its impact on economy if unregulated monetary instruments gain scale in adoption
  - Increasing popularity and participation in crypto assets poses risk to financial stability, if prices of such assets collapses
  - Lack of strong regulations around KYC, make crypto assets a preferred payment instrument for illegal and criminal activities
- **Risks / Challenges**
  - Significant fluctuation in prices can happen as seen in the past
  - Susceptible to hacking / cyber theft and retrieving the same is nearly impossible
  - High consumption of electricity and carbon footprint

Did you know?
Estimates suggest one bitcoin transfer has a carbon footprint equivalent to 2.02m Visa transactions or 152,000 hours of watching YouTube

Source: Digiconomist



Source: Bloomberg

“It is not possible to, I think, destroy crypto, but it is possible for governments to slow down its advancement”

– Elon Musk, Tesla CEO

Future?
Jury is still out

“It's not a convenient medium of exchange; it's not a stable store of value; it's definitely not a unit of account,.” -
“Bitcoin Is Evil”
- Paul Krugman, Nobel Prize winning Economist

* Company X is a globally renowned technology company

Warrior Queens: Rani Durgavati, Madhya Pradesh

Picture courtesy: Publicly available information, www.facebook.com

Picture courtesy: www.esamskrit.com; , esamskriti.com is a treasure-house of all things Indic and contains over 2,000 articles and 17,000 pictures. Above is a picture of Palace of Rani Durgavati

- Rani Durgavati, belonged to the Chandel Rajput Royal family and ruled over Gondwana, in Madhya Pradesh during 16th century
- Belonging to a Rajput family, she learned horse riding, archery, sword fighting and was trained to be a fighter at a young age
- After the demise of her husband Dalpat Shah, she took control of the Gondwana Kingdom in 1550
- As a queen, she fought 51 gallant wars against many invaders including Mughals and showed enormous courage and heroism in her battles
  - In one of her battles, she so convincingly defeated Baz Bahadur, Sultan of Malwa, that he forswore fighting and gave himself up to music
- On 24th June 1564, in her last battle with the Mughals, despite her army chief being killed, she fearlessly fought to drive away the Mughals. Injured and outnumbered by warriors Rani Durgavati killed herself to avoid getting captured. This day is celebrated as ‘Balidan Divas” in India

Source: Publicly available information

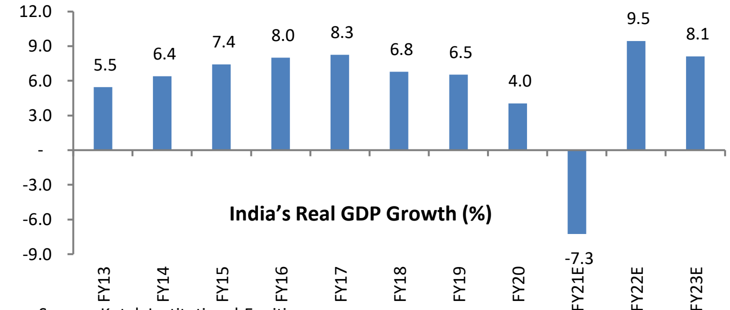
Indian Economy

India's potential for growth is unmatched ------ Lawrence Summers^

^Ex-Treasury Secretary of US and leading US Economist in December 2021

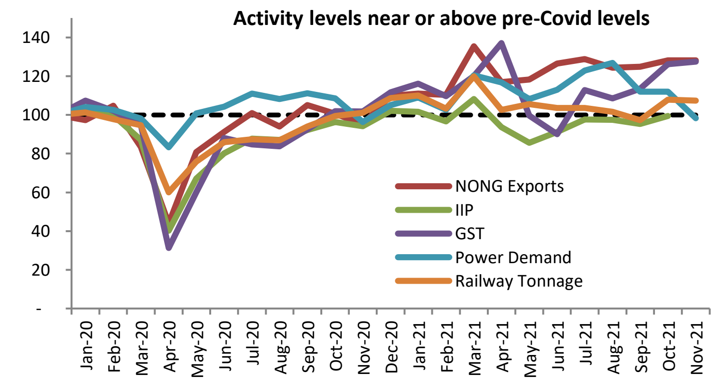
Indian economy : Recovery was swift, robust growth ahead

- Indian economy is set to witness a V-shaped recovery in FY22 after a sharp fall in FY21 driven by base effect, pent up demand, favourable external environment, fast pace normalisation and supportive fiscal and monetary policies



Source: Kotak Institutional Equities

- Leading indicators like Power demand, railway goods movement, GST collections, NONG exports, etc. are signaling a strengthening and broadening of economic recovery



Source: CMIE,POSOCO

- India's growth outlook is one of the best in a long time and driven by multiple factors as highlighted in the adjoining table

Future growth drivers		
Steady growth in Consumption	Rising employment and wages	Robust Exports
Acceleration in Infrastructure Investments	Robust foreign capital inflows	Increasing competitiveness and PLI schemes
Divestments and Fiscal deficit under control	Favorable Regulatory reforms across industries	Ample liquidity and benign interest rates

India is emerging as a land of opportunities - *PM Narendra Modi**

PLI - Production Linked Incentives, NONG – Non Oil Non Gold, GST – Goods & Services Tax

*At India Ideas Summit which was hosted by US-India Business Council (USIBC) in 2020

Indian Economy Outlook: Firing on multiple cylinders

Macro economic environment	• Robust growth with broad based improvement in consumption and investments • Comfortable external sector with large forex reserves, capital flows and favourable external environment • Gradual fiscal consolidation and range bound inflation
Reforms	• In the period of Covid-19, Government has carried out several important reforms like Aatmnirbhar Bharat program, National monetization pipeline (NMP), creation of "bad bank", sector specific measures, etc. creating a favourable environment for business and growth
Manufacturing, External Sector and China plus one	• Rise in competitiveness of India's manufacturing as wages in China are ~2x of India's • Covid-19 led disruption likely to accelerate the shift of global supply chain to other EMs including India • PLI and measures like tax incentives, increase in import duties, etc.
Startups	• Startup ecosystem set to expand driven by availability of risk capital, technical skills and supportive policies • Startups can help in employment generation, improving efficiency, creating wealth and driving innovation
Infrastructure, Capex and Housing	• Government's focus to boost infrastructure spend with National Monetisation Pipeline (NMP), National Infrastructure Pipeline (NIP), etc. • Private capex likely to pick up in medium term driven by robust demand, deleveraging and strong profitability • Real estate likely to revive driven by high affordability
Consumption	• Meaningful improvement in employment and new hiring, especially in organized segment • Digitization and improving Ecommerce acceptability has given access to a larger customer base • Near normal monsoon, higher crop sowing, pent up demand, wage inflation and higher savings

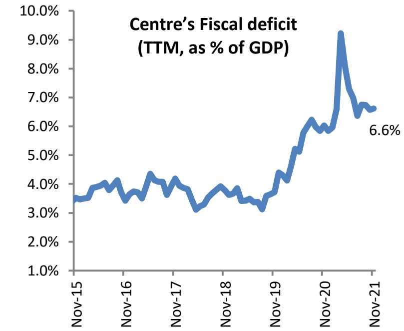
Structural growth drivers and supportive external environment bode well for India's growth story

Source: Government documents and publicly available information.
BoP – Balance of Payment; FDI – Foreign Direct Investments, NONG – Non Oil Non Gold

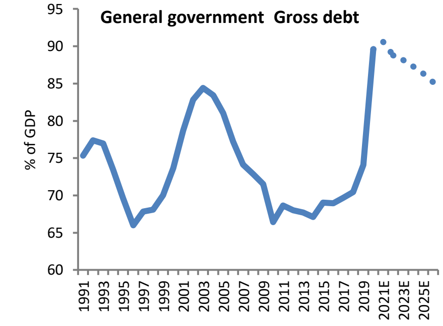
Fiscal deficit and External sector – Set to normalise to pre-pandemic levels

- Fiscal deficit is set to moderate as Government revenues increase with broad based improvement in direct and indirect taxes; Likely to offset shortfall in divestment revenues and additional spending on Covid-19 related measures

- General government debt as % of GDP rose sharply for India but is reasonable especially compared to economies like EU, US, Japan, etc.

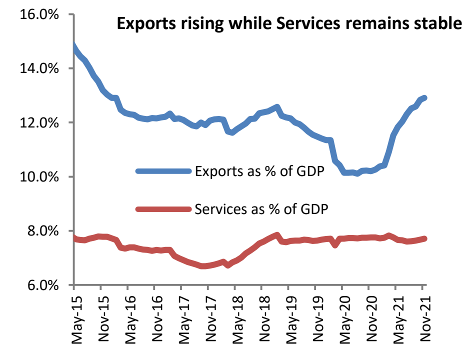


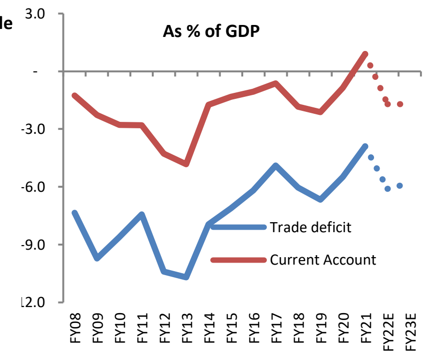
Source: CMIE, Kotak Institutional Equities



Source: IMF, General Government = Centre + State

- Current account deficit (CAD) is likely to normalize in FY22 and beyond but is expected to remain at reasonable levels
  - Merchandise exports have reverted to pre-pandemic levels (12.9% of GDP) while services exports remained resilient (7.7%)

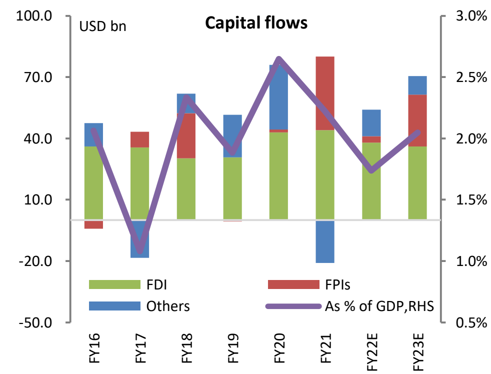


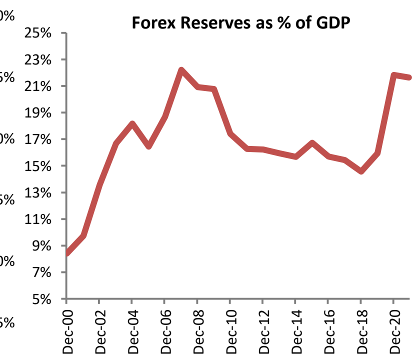


Source: CMIE, Kotak Institutional Equities

- Capital flows have been steady and generally, higher than CAD

- Foreign exchange reserves climbed up to all-time high (USD 635 bn) and are now near pre-GFC highs (in terms of % of GDP)





Source: CMIE. Kotak Institutional Equities

CAD – Current Account Deficit

CY21– Year of Reforms and speedy execution

- **Infrastructure**
  - Aim to develop infrastructure under National Infrastructure Pipeline (NIP) through projects worth INR 111 trillion; Launched the "Gati Shakti Master Plan" to integrate projects under NIP
  - NMP launched identifying CPSE assets worth INR 6 trillion to monetise to fund infrastructure spending
  - Budget spending towards capex scaled up along with nudging CPSEs and state Governments to increase capital spending

- **Manufacturing**
  - Swift roll-out of PLI schemes in 13 Sunrise and Strategic sectors to boost manufacturing; 4-6% of incremental sales provided as incentives
  - Complementary reforms in land, labour and taxations also carried out to incentivize new industries

- **Strategic Divestment**
  - Under its strategic divestment policy, barring identified strategic sectors, Government proposes to divest/consolidate/liquidate all CPSEs.
  - Separate department "DIPAM" is responsible for the divestments. Good progress happening on divestments for e.g. Air India divestment near completion, LIC IPO is progressing well, bids for Neelanchal Ispat invited, etc. Few more divestments also likely to be completed in the near term

- **Banking**
  - Announced National Asset Reconstruction Company limited (NARCL) or 'bad bank' to take over ~INR 2 trillion worth of NPAs
  - To guarantee for debt upto INR 306 billion to back Security Receipts issued by the NARCL

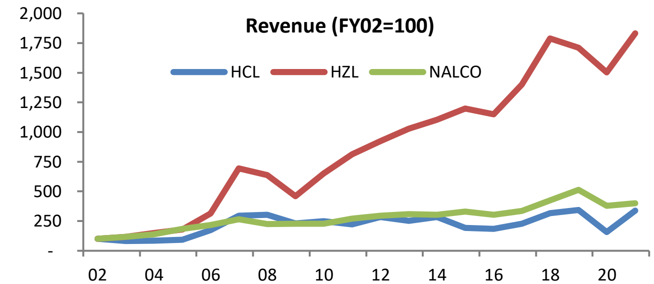
- **Others**
  - **Telecom:** Liberal regime for telecom operators introduced by deferring payment of past liabilities, easing guarantee requirements, etc.
  - **Power:** National electricity policy to ease burden on consumers, etc. privatisation of discoms in UTs, etc. Further, reforms are in offing

In the midst of every crisis, lies great opportunity – *Albert Einstein*

Source: Publicly available information; CPSE – Central Public Sector Enterprises
*American Author

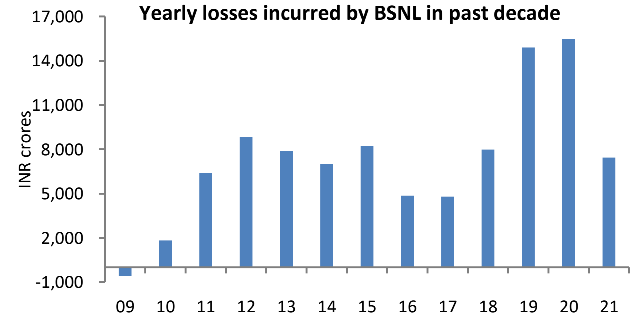
Strategic Divestment and monetisation –Value creation for All !!!

- In the past, select strategic divestments done by Government have been remarkably successful
  - After stake sale of 45% in Hindustan Zinc in 2002, the company has grown 18 times in revenue and 117 times in profits
  - On the other hand, for NALCO and Hindustan Copper Limited (both in commodity sector) growth in revenues has been far lower



Sources: Ace Equity

- Timing for Divestment has to be right as significant delay can result in significant value destruction
  - BSNL networth in FY08 was > INR 80,000 crores with debt of ~INR 3,400 crores
  - Between FY08-FY20, BSNL has incurred net loss of over INR 95,000 crores
- There were chatters^ of AT&T possibly eyeing stake in BSNL in 2008 but it did not happen; had it happened Government would have saved significant losses and may be BSNL would have done better



Sources: Ace Equity, Company Annual Reports

- Government has announced divestment policy wherein it plans to privatise / sell / shut down CPSEs in non strategic sectors; Even in strategic sectors, only limited number of CPSEs will operate
  - Strategic sale of Air India, despite heavy losses, is an important achievement and the learnings should accelerate future transactions

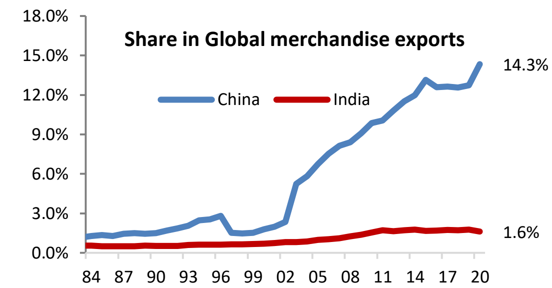
Identified strategic sectors
Atomic energy, space and defence
Transport and telecommunications
Power, petroleum, coal and other minerals
Banking, insurance and financial services

Divestments → Revenue for Government → Foreign exchange for Nation* → Improved productivity and competitiveness → Wealth creation

Source: ^https://economictimes.indiatimes.com/industry/telecom/att-eyes-bsnl-stake-to-re-enter-india/articleshow/4953086.cms?from=mdr
*if the buyer is a foreign investor

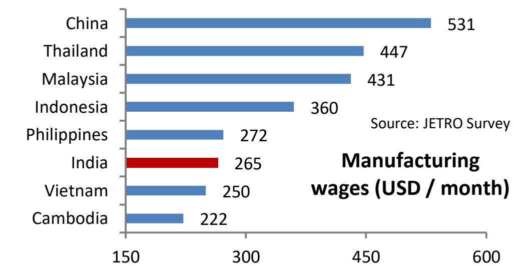
Manufacturing beckons

- India lost to China in scaling up manufacturing in last two decades
  – India's manufacturing sector share in Gross Value added (GVA) reduced despite its consumption spending rising, implying India's dependence on imports increased over the period



Source: World Bank

- Disruption due to Covid-19 has triggered an urgency to diversify global supply chain and many global MNCs are implementing China+1 strategy; further, wages and compliance costs in China have also risen
- This trend has come at an opportune time as India's competitiveness has improved due to lower wages, PLI schemes, tax incentives, etc. along with other favourable government policies



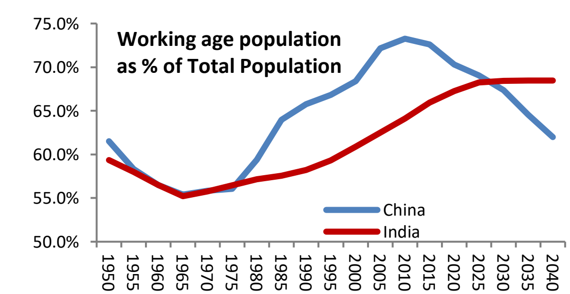
Is India Ready ?

- India is a likely beneficiary of this shift in manufacturing due to the following reasons
  – a large domestic market & improving ease of doing business
  – skilled human resources at competitive costs
  – Tariff and non-tariff measures to aggressively support manufacturing in India
  – Production linked incentive scheme (PLI) improves competitiveness
  – Focus on self reliance in defence, chemicals, pharmaceuticals, etc.

Steps taken to boost domestic manufacturing
PLI Schemes for select industries to promote import substitutions and increase exports
Raising duties under Phased Manufacturing Programme
Rationalization of Labour Laws and land reforms
Reducing tax rates for manufacturing units set up before Mar-23
Opening up defence sector and banning imports of select items
Revision of MSME definition to incentivise scaling of operations

Source: Morgan Stanley; Publicly available information

- **Structural advantage**
  – India's share of working age population will overtake China by 2030



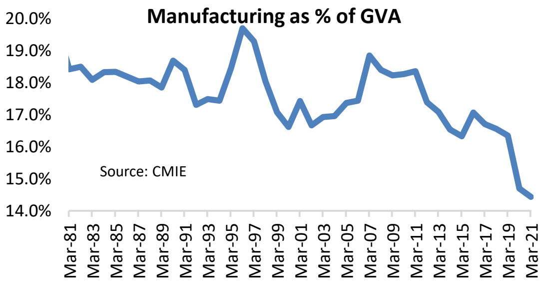
Source: UN Population database

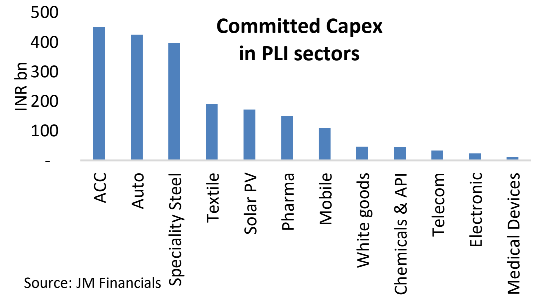
PLI Schemes - Well planned and executed

- India's manufacturing sector share in Gross Value Added (GVA) has been trending down despite strong growth in domestic consumption, thus translating into higher import dependence and a larger trade deficit
- To stem this trend, Government has been actively taking steps the most important of which is PLI schemes for Sunrise and Strategic sectors
- Schemes are well targeted with intention to incentivise domestic manufacturing
  - Government targets to boost India's manufacturing output by USD 520 bn in 5 years through PLI schemes
  - India has trade deficit in 5 out of the 10 PLI sectors with aggregate trade deficit of USD 40 bn and if successful, PLI schemes should help reduce this deficit

One eye on Investments:

- Direct investment commitments under PLI schemes aggregate to ~INR 2 trillion
- Given the lower corporate tax rate for manufacturing units set up before March 2023, significant portion of capex likely to happen over next one and half year
- Attract investments from MNCs looking to diversify from China



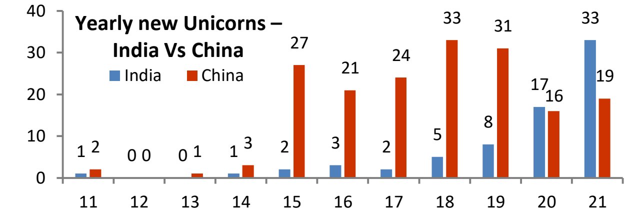


	Time period	Incentives (INR bn)	Under evaluation	Approved	Progress
Mobile manufacturing	6 yrs (FY21-26)	410		✓	16 companies approved
Medical devices	8 yrs (FY21-28)	34		✓	14 companies approved
Key APIs / bulk drugs	9 yrs (FY21-29)	69		✓	47 companies approved
Automobile & components	5 yrs (FY23-27)	570	✓		Scheme has been approved and application invited
ACC battery	5 yrs (FY22-26)	181	✓		Announced and under process
Pharmaceutical drugs	9 yrs (FY21-29)	150		✓	55 companies have qualified
Telecom & networking products	5 yrs (FY22-26)	122		✓	31 company proposals including 16 MSMEs and 15 approved
Food products	6 yrs (FY22-27)	109		✓	60 companies approved
Man-made fibre & technical textiles	5 yrs (FY22-26)	107		✓	35 companies have shown interest and under consideration
Specialty steel	5 yrs (FY22-26)	63	✓		Guidelines issued
White goods (ACs & LED)	5 yrs (FY22-26)	62		✓	42 companies approved
Electronic/ technology products	4 yrs (FY22-25)	50		✓	14 companies approved
High efficiency solar panel modules	5 yrs (FY22-26)	45	✓		Announced and under process
Total		**1,973**			

Source: UBS Research

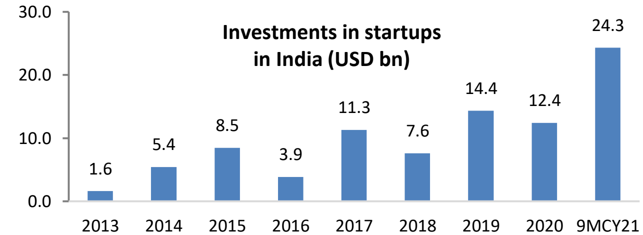
Startup India - Primed for sustained growth

- Indian startup ecosystem has seen significant progress over the past few years and has become a critical growth driver for India
  - India has overtaken China in number of new unicorns* in 2021
  - Crackdown on China tech sector has possibly impacted start-up funding in China



Source: Article by Hindu business line published on 20 Oct 2021

- Investments in startups have been increasing despite pandemic on back of rising digital penetration and availability of risk capital



Source: DAM Capital

- Journey of becoming a Unicorn has become shorter

Name of Startups	Period to become Unicorn
Naukri, Makemytrip	20 years
Zomato, Flipkart and Policy bazaar	8 to 10 years
Nykaa and Oyo	5-6 years
Udaan and Ola Electric	3 years

Source: An article published in Feb 2021 on Yahoo.com

- Estimates suggest that number of Indian startups is set to nearly double to 1 lakh over next 4 years and start ups could employ over 3.25 million people

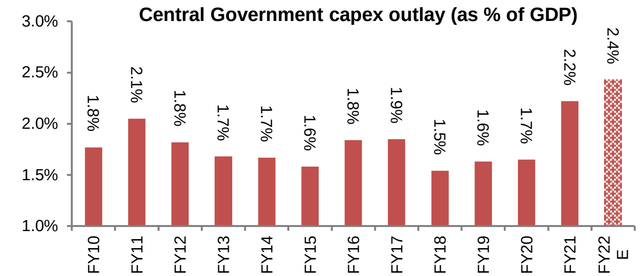
Source: 3one4 Capital report

Availability of big talent pool, large market and risk capital bode well for startup ecosystem

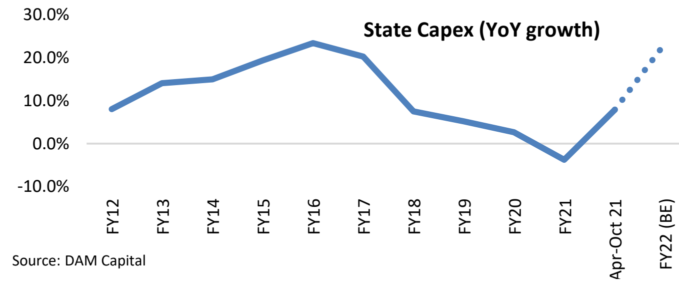
*Unicorns are referred to private firms valued at USD 1 billion or more

Infrastructure push - Government leading the way

- Sharp increase in capex outlay in Central budget in FY21 and FY22
  - Quality of Fiscal deficit has improved with share of capex rising

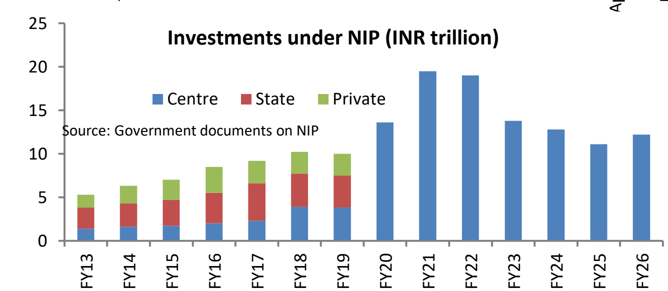


- Parallelly, state governments have also stepped up capex spending
  - Central Government has front ended transfer of shortfall on account of compensation cess for FY22 to States to encourage spending
  - Incentivizing states to monetize assets/divest / strategic sale to push capex by providing matching contribution from Centre

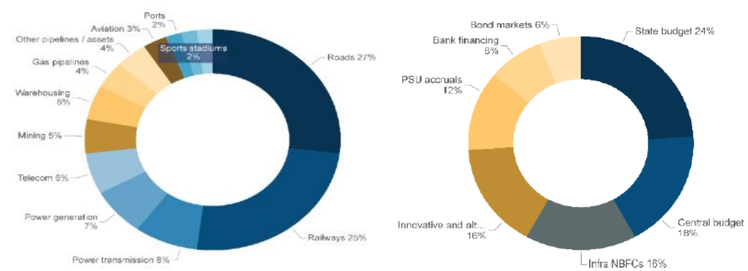


Source: DAM Capital

- National Infrastructure pipeline (NIP) envisages investment of INR 111 trillion over FY20-FY25 i.e. 2x of investments done in prior 7 years



- ~54% of funding likely to come from government budgets and PSUs
  - Government actively trying to develop alternate source of funding such as launch of NMP of ~INR 6 trillion

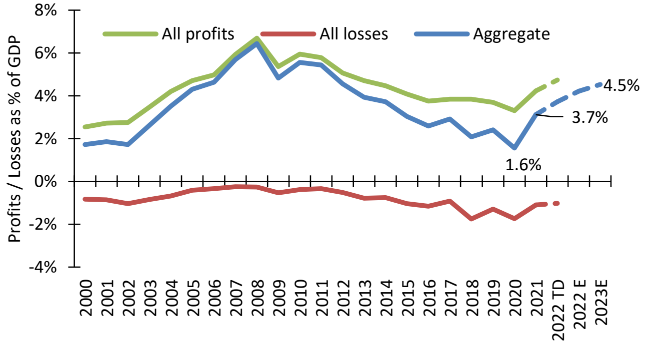


Source: NMP – National Monetisation Pipeline

Source: Government documents on NMP

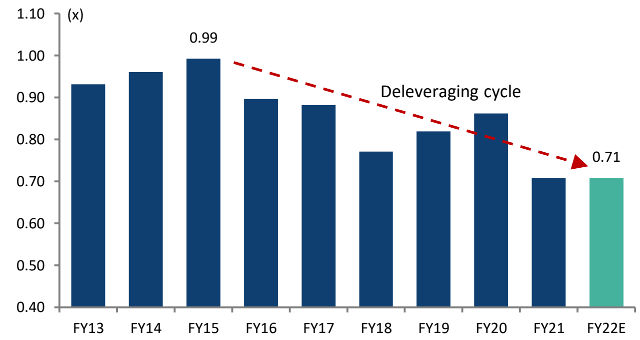
Private capex – Improving Outlook

- Profitability of listed companies has improved significantly and is expected to sustain driven by normalizing banks profitability, higher commodity prices, strong recovery in demand, etc.
  - – Broad based improvement in profitability visible across major manufacturing sectors like metals, cement, sugar, textile, chemicals, paper, etc.



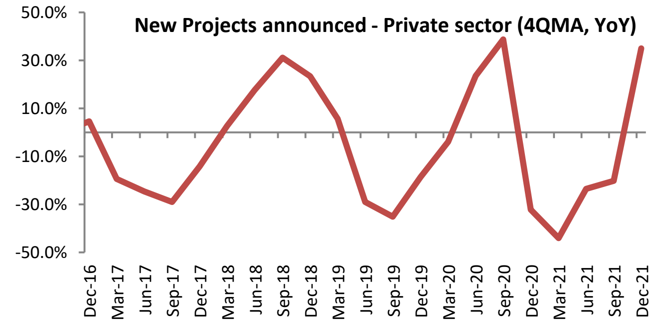
Sources: Jefferies

- Conducive environment for private capex
  - – Corporate leverage is near 10 year low
  - – Improved competitiveness vis –a – vis China
  - – Rising interest of global MNCs to set up manufacturing driven by China plus one policy
  - – Supportive government policies and thrust on “Aatmnirbhar Bharat”
  - – Ample liquidity and benign interest rates



Sources: Jefferies

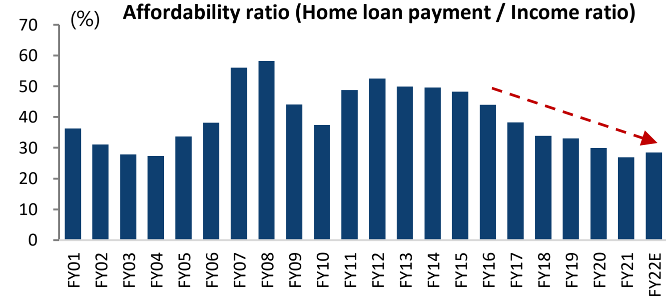
- New projects announced by private sector have increased in recent quarters, possibly indicating early signs of improvement in capex



Sources: CMIE

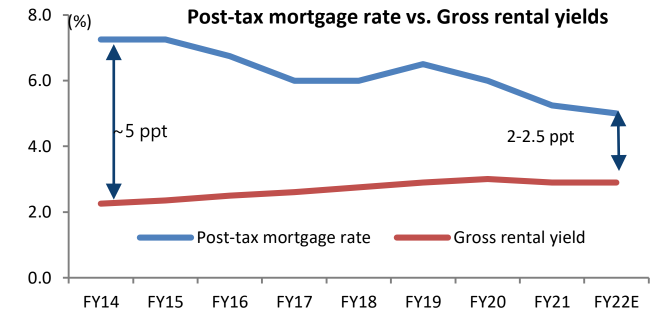
Stars are aligned for revival of private capex in India

- Over the past two decades, house affordability has improved and is close to decadal best
  - With India Inc. moving towards a hybrid work model (Office + WFH), demand for home improvement sector is likely to get a boost
  - Improving affordability, rising employment, and rise in wealth due to the rise in stock markets, etc. is positive for real estate demand



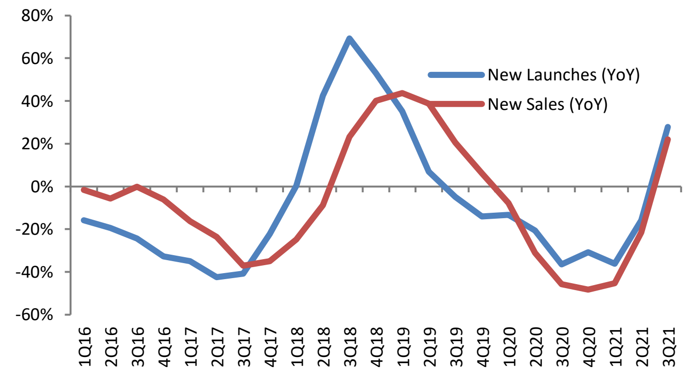
Source: Jefferies

- Attractive trade off between rental yields and Mortgage rates



Source: Jefferies

- Real estate volumes have picked up and the trend is likely to sustain in the near term

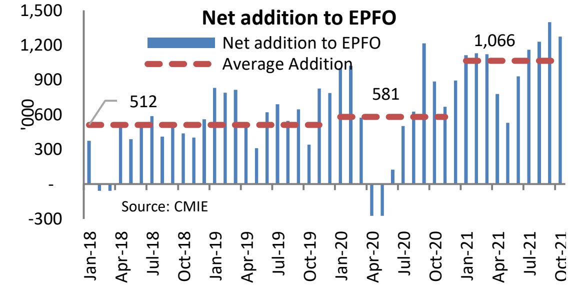


Source: Morgan Stanley

Housing is an important part of Gross capital formation and its revival should support faster growth

Consumption: Tailwinds of improving employment and Digitalization

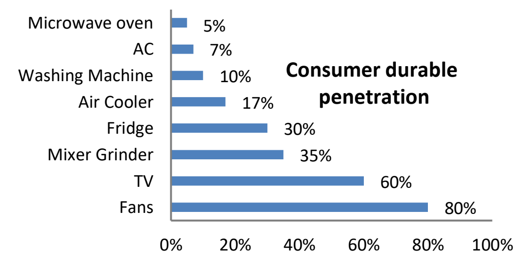
- Post Covid-19, hiring has improved meaningfully especially in organized sectors with net addition to EPFO (proxy of organized employment) ~2x of Pre-Covid-19 levels



- Rising jobs and higher wages to support growth in consumption

Source: Motilal Oswal Financial Services; Universe of ~2800 listed companies

- Low penetration of consumer durables provides headroom for growth

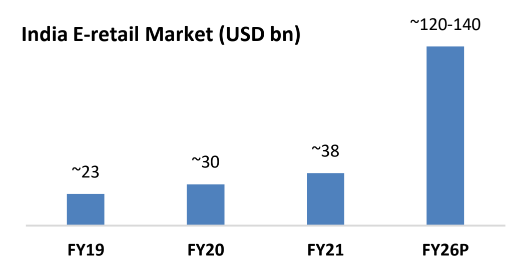


Source: Statista.com

- E-Commerce is supportive of consumption as choices for consumers increases in Tier II and III cities/ towns

E-Commerce Penetration of Indian Retail market	FY19	FY20	FY21	FY26E
Overall	~2.8%	~3.5%	~4.6%	10-11%
Ex-Grocery	~9%	11-12%	19%-20%	26-28%

Source: Bain & Company



Source: DRHP of FSN E-Commerce Ventures (Nykaa)

Warrior Queens: Rani Mallamma, Karnataka and Rani Kittur Chenamma, Karnataka

Picture courtesy: https://navrangindia.blogspot.com/2015/04/one-of-earliest-indian-queens-tohave.html . Location: Belgavi District

Picture courtesy: https://en.wikipedia.org/wiki/Kittur_Chennamma; Location: Bengaluru

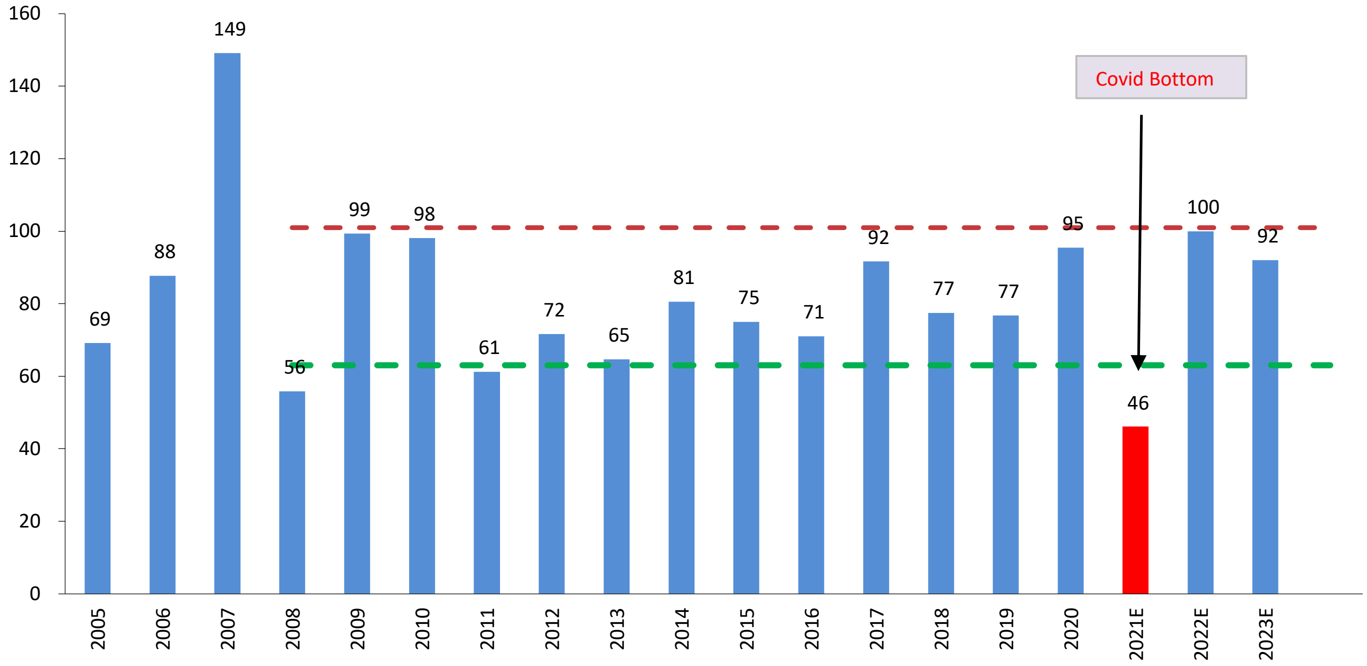
- Belawadi Mallamma, also known as Savitribai was the warrior queen of Belawadi in Belagavi District of Karnataka, India.
- Given the turbulent political situation of the 17th century, women were also trained to fight and Young Mallamma proved her mettle and excelled in horse riding, fencing and archery.
- By the time she made it to the Belawadi royal household, she was well versed in both matters of administration and military skill.
- She is credited with being the first queen in the history the Indian subcontinent who built and trained a women's army in the 17th century to wage wars against the Marathas and the British forces

- Kittur Chenamma was the Queen of Kittur, a princely state in Karnataka during early 19th Century
- Born in 1778 in Kakati, a small village in the present Belagavi District of Karnataka, she belonged to the Lingayat community and received training in horse riding, sword fighting and archery from a young age
- In defiance of the doctrine of lapse, she led an armed resistance against the British East India Company in 1824.
- She defeated the British in the first battle, but was ultimately imprisoned in Bailhongal fort, where she eventually died
- One of the first female rulers to rebel against British rule, she became a folk hero in Karnataka and symbol of the independence movement in India

Source: Article in Bhavan's Journal published by Bharatiya Vidya Bhawan, Mumbai and publicly available information

Equity Markets and Sector Overview

Indian Equity Outlook – a picture is worth a thousand words !



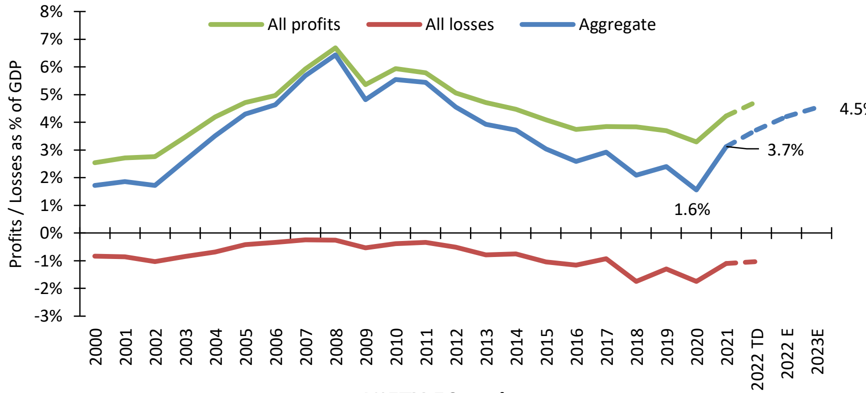
- Despite the sharp rally in 2020 and 2021, NIFTY 50 returns over the past 10 years and 15 years are 15.4% and 11.6% CAGR^ respectively, largely in line with nominal GDP growth. Market cap / GDP is also in line with the past range
- Markets are thus fairly valued and the long term returns should be in line with the nominal GDP growth

Source: Kotak Institutional Equities, Bloomberg. ^ as on 29th Dec, 2021, Covid bottom: Market valuations as on 23rd March, 2020 when it reached its low during the correction

Refer disclaimers on slide 85

Corporate Profits have improved sharply

- India's corporate profitability has lagged GDP growth since 2008. Between 2008 to 2020, the nominal GDP growth was 13% CAGR while corporate PAT growth was 6% CAGR.

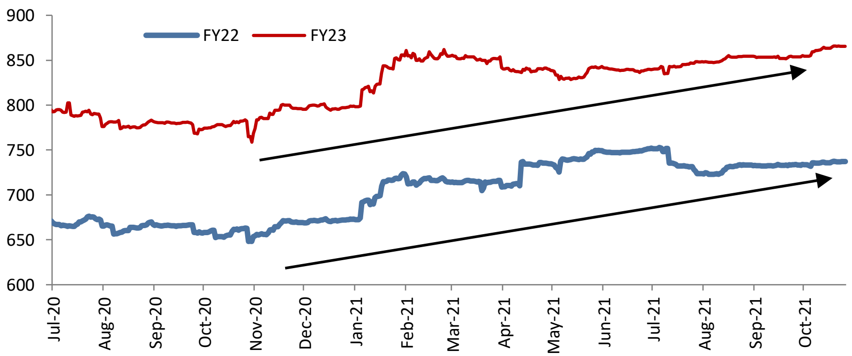


NIFTY 50 estimates

	FY15	FY16	FY17	FY18	FY19	FY20	FY21
Estimate	453	437	447	478	510	542	*
Actual	398	384	439	449	480	453	536
Change	-12%	-12%	-2%	-6%	-6%	-16%	*

Estimates in October are considered for the financial year's estimate
*FY21 being a year with severe covid restrictions, estimates changed sharply

- Over FY15-21, actual earnings consistently fell short of estimates. This trend has now reversed and earnings estimates are now witnessing upgrades.

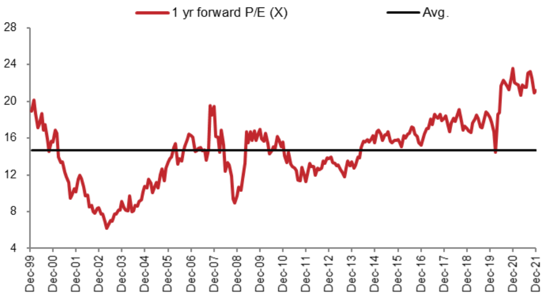


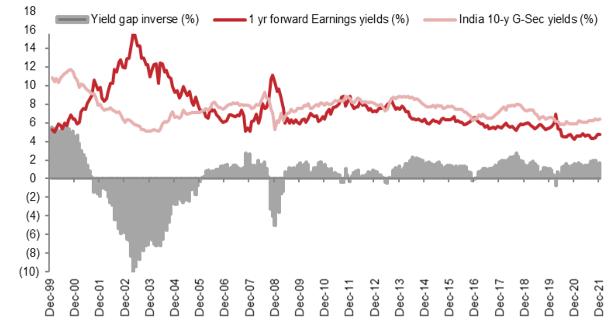
FY23E Corporate profits / GDP ratio is ~4.5% and earnings growth, thereafter, is likely to be in line with the nominal GDP Growth.

Source: Kotak Institutional Equities., ICICI Securities, Jefferies

Equity Markets - Positive outlook but time to moderate expectations

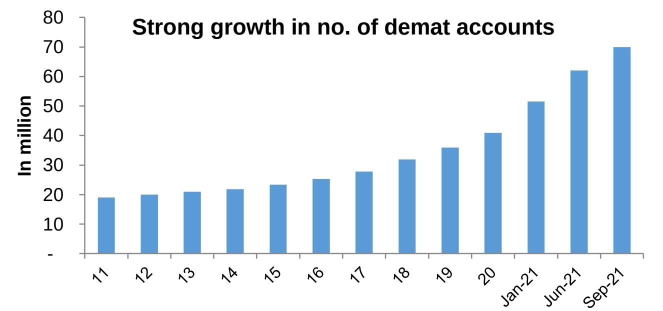
- Markets have played the catchup with post-covid normalization and are trading at above average multiples. Yield Gap (Earnings yield – Bond yield) is, however, in line with the past due to fall in bond yields.

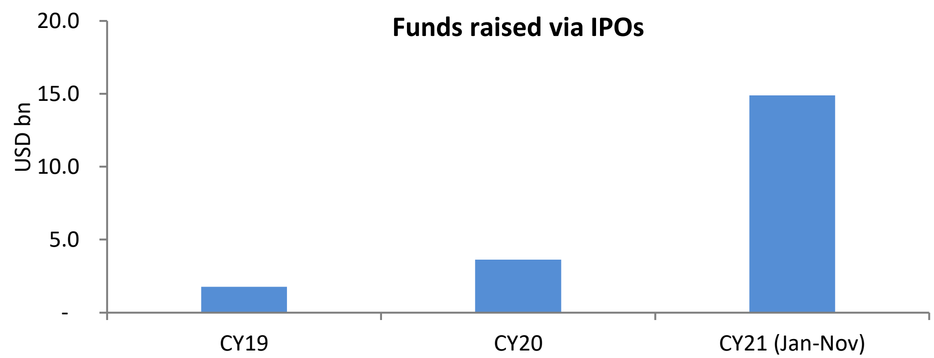




- Flows into equity markets through Mutual Funds and direct investments have sharply improved, but so has the supply of equities.

DII Flows in $ bn		
CY19	CY20	CY21
6.0	-4.8	8.4





Improved economic and profit growth outlook is positive for markets but it is prudent to moderate return expectations

Source: Kotak Institutional Equities., NSDL, CDSL

Active Management – A case of Recency Bias ?

HDFC MUTUAL FUND
BHAROSA APNO KA

- NIFTY has generated positive returns in 17 of last 20 years
- In 6 of these 17 years, top 5 stocks contributed to more than 70% of the returns (i.e. rally was narrow).
  - In 5 of these 6 years, active funds generated <1% alpha
  - Of the remaining 11 years (i.e. when rally was broad based), diversified mutual funds have generated more than 1% alpha in 9 years
- CY18-20 were 3 consecutive years of narrow market rally and probably impacted alpha generation.
- Has this created a Recency bias in the minds of few?

CY	NIFTY50 Returns (%)	Top 5 contributors (%)	Average Alpha of Diversified Mutual Schemes^
2002	5.3	137.7^	15.0
2003	76.6	34.9	35.9
2004	13.0	65.6	15.4
2005	38.7	48.9	9.8
2006	42.0	45.8	-7.5
2007	56.5	47.7	3.8
2008	-51.2	n.a.	-2.4
2009	77.6	38.1	6.3
2010	19.2	53.5	0.0
2011	-23.9	n.a.	0.2
2012	29.3	49.8	3.3
2013	8.1	102.3	-3.0
2014	32.9	38.8	17.3
2015	-3.0	n.a.	5.4
2016	4.4	72.8	0.5
2017	30.3	48.4	5.5
2018	5.6	152.2	-11.7
2019	13.5	81.3	-5.2
2020	16.1	81.7	0.3
2021	25.6	43.6	9.0
Average	**20.8**	**67.2**	**4.9**

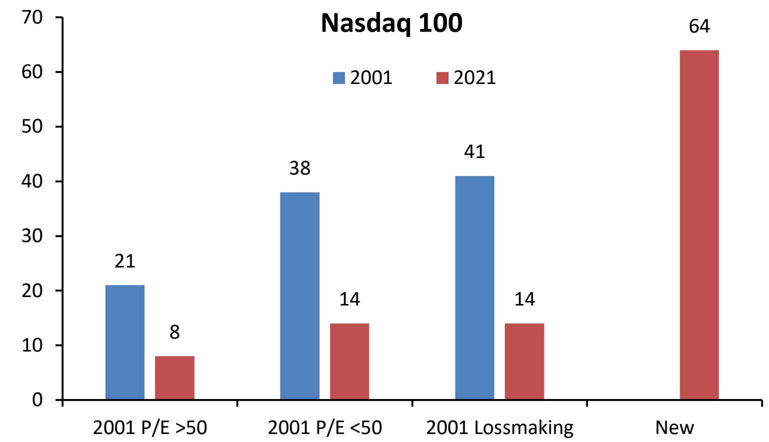
Recency bias is a cognitive bias that favors recent events over historic ones.

Next few years should settle this debate

Source: Bloomberg, MFI Explorer. ^Categories included - Dividend Yield, ELSS, Flexicap, Focused, Large & Mid, Large, Multicap, Value, Contra, NIFTY 50 TRI has been used as benchmark to compute alpha. ^Top 5 contributors data available since Feb 2002

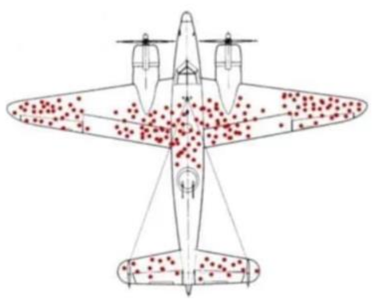
Lessons from the Tech bubble

- Of the companies that were part of Nasdaq 100 in 2001, only 36 have survived and rest have either delisted / merged / wound up
- Interestingly, there were 41 loss making companies, of which only 14 have survived
  - Of these 14 companies, only 3 companies – Amazon (~33%), Intuit (~15%) and Apple (11%) have delivered CAGR of more than 10%
- Of the 59 profit making companies, 21 companies that were trading at a P/E of > 50, only 8 have survived and none have delivered CAGR of more than 10%



Source: Bloomberg, Internal Calculations. Methodology - we have considered Net Income for Nasdaq companies as on 31st Dec, 01 and identified loss making companies. For calculation of P/E as on 31st Dec, 2001 as provided by Bloomberg, of the profit making companies was considered. CAGR data is from 31 Dec 2001 to 31 Dec 2021.

Survivorship bias



Source: www.workcompwire.com

This is a picture tracking bullet holes on Allied planes that encountered Nazi anti-aircraft fire in WW2. At first, the military wanted to reinforce those areas because obviously that's where the ground crews observed the most damage on returning planes.
Until Hungarian-born mathematician Abraham Wald pointed out that this was the damage on the planes that made it home. The Allies should armor the areas where there are no dots at all because those are the places where the planes won't survive when hit. This phenomenon is called survivorship (selection) bias, a logic error where you focus on things that survived when you should really be looking at things that didn't."

It would be interesting to observe how the recently listed companies fare after 10 years

Stock names referred above are for illustration purpose only. HDFC MF Schemes may or may not have position in these stocks presently or in future. This is not a research report. This is not a view on future prospects of these companies.

Equity Markets Summary

- Robust economic outlook driven by multiple factors *(refer slide 41).* Optimistic outlook on corporate earnings with broad based upgrades seen over the past few quarters *(refer slide 55)*

- Corporate NPA cycle is largely behind, adequate provisioning and strong capital adequacy of banks

- Benign Interest rates and good liquidity both domestically and globally.

- Healthy inflows in Mutual funds and rapid increase in retail participation in equity markets on one hand and sharp increase in supply of equities on the other.

- Currently, Indian market capitalization is ~92%^ of GDP (based on CY 2023 GDP) & NIFTY 50 is trading at 18x^ FY24E. These are above average multiples. However, Yield Gap (earnings yield – bond yield) is in line with the past.

- Sharp rise in interest rates and adverse global events are key risks for markets.

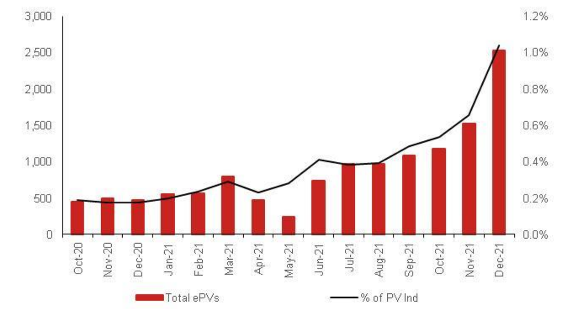
- In view of the above, markets hold promise over the long term but returns expectations should be moderated

^Source: Kotak Institutional Equities as of 31 December 2021

Sector Overview

Background / Characteristics	• Auto consists of varied sub-segments like 2W, 4W, CVs, tractors and suppliers to these sub-segment OEMs. Industry is capital intensive with significant barriers to scale-up. • Sector is on the cusp of technology disruption with global focus on sustainable mobility with eventual goal of zero tail-pipe emission.
Recent Business performance / developments	• Industry has faced severe production disruption in CY21 with global semiconductor chips shortage and related components due to supply chain disruption and reoccurrence of Covid waves across geographies • Although CY21 4W/2W/CV sales volume improved by 36%/8%/54% on a low base of CY20 (Covid lockdown), 2W/CV is still 23%/27% down from CY19 • Tractor which was growing sharply in 2020 is witnessing demand compression now as cyclical pent-up demand got over despite favourable demand variables like good crop yield and remunerative prices
What's changing ?	• Major push towards EV by both central and various state governments in India through aggressive demand support incentives led to steady consumer preference towards EV in 2W/4W segment in 2H'21 • Announcement of PLI schemes only for EV manufacturing and advanced battery chemistry along with sharp increase in fuel prices is a clear indication of the government thinking • UV share in PV volumes continues to rise and reached ~47% in 2021
Prospects / Key Drivers / Risks	• Global shift towards EV is playing out in India too with 2W/3W/PV likely to see rapid shift towards EV in the next 1-3yrs once supply is able to fulfil demand • Aggressive start-ups in E-2W and new multiple players in 3W/4Ws space might result in churns market shares over medium to long term • Infrastructure push to support economy augurs well for MHCV segment and the segment could witness steepest growth in 2022
Valuation	• Sharp valuation divergence between EV focused players and perceived laggards in both OEMs and ancillary space except CV/tractor segments where disruption is not yet visible • Sector valuation is still above +1 standard deviation despite recent correction

EV 4W sales and penetration



EV 2W sales and penetration

Sector Valuation

Sources – SIAM, Vahan, Kotak Institutional Equities

2W – 2 Wheelers; 3W – 3 wheelers 4W – 4 wheelers; CV – Commercial Vehicle: PV – Passenger vehicles; UV – Utility vehicles; BS – Bharat Stage emission standards; OEM – Original Equipment Manufacturer: NEVs – New Energy Vehicle; MHCV – Medium and Heavy Commercial Vehicles, E-2W – Electric 2 wheelers

Sector Overview : Banking & NBFCs

Background / Characteristics	• Over the last decade, regulatory capital requirement has increased from 4.5% to 9.0% (Banking system Tier 1 at 14.2%) • Liability franchise, asset quality, operating costs & technology are key drivers for profitability • Asset quality is cyclical & industry growth is linked to GDP growth • Banks NIMs over cycles have largely moved within a range (Chart 2)
Recent Business performance / developments	• Corporate NPA cycle is largely behind and Banks are entering the cycle with strong balance sheet – High capital adequacy, lower Credit to Deposit ratio 72%, robust floating provision and declining net NPA (Chart 1). • Banks technology platform & cost structure are key differentiators
What's changing ?	• Credit growth to improve in FY23 on the back of economic recovery • Sector is consolidating with larger bank gaining market share • Digitization of processes and payments is the new theme and is driving a paradigm shift in Retail & MSME underwriting and collections • Digital payments as a % of PFCE increased from 4.5% to 22% over the last 7 years • Entry of Big Tech companies into payment space could disrupt incumbents
Prospects / Key Drivers	• India's Banking credit to GDP at 57% (Chart 3) is low compared to developed markets such as US at 161% • Retail credit growth has been high, however the experience during Covid for major banks has been stable • Several new listings of Fintech has increased the investment universe for BFSI
Valuation / Risks	• Sector valuations are largely in line with long term average • Outcome on restructured advances under COVID, need to be monitored

Chart 1

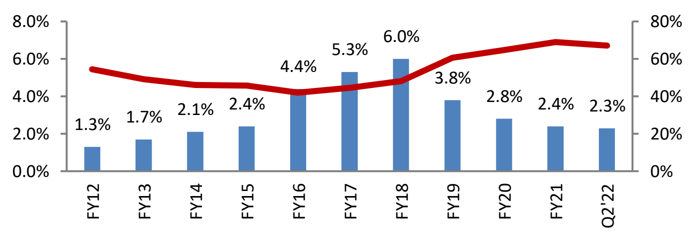


Chart 2

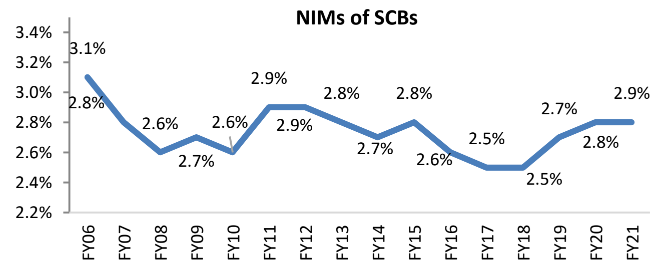
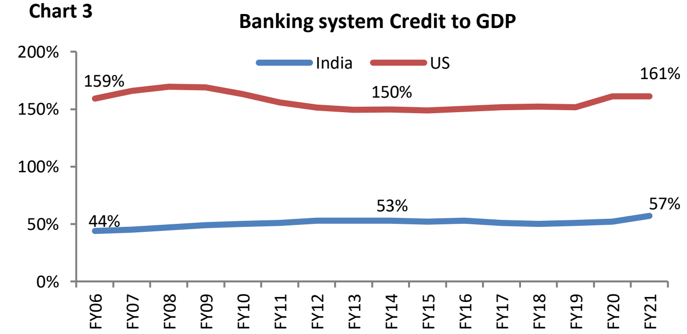
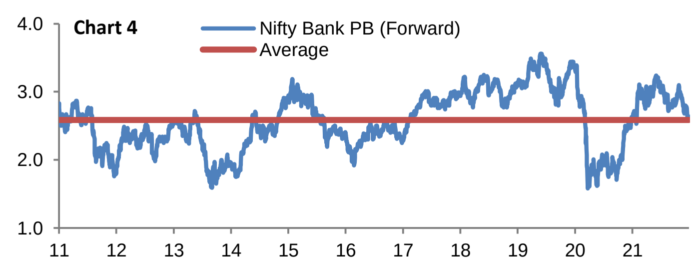


Chart 3





NIM – Net interest margin; SCBs – Scheduled commercial banks, PFCE – Private Final Consumption Expenditure, MSME- Micro, Small and Medium enterprises

Sources: Investec, RBI, IBBI

Sector Overview : Capital Goods

Background/ Characteristics	• Cyclical sector dependent on capex outlook. Capacity utilization of underlying industries/balance sheet strength a key driver for capex • Companies increasingly adopting advanced solutions such as automation, robotics, digitalization and rely on data to glean efficiencies. MNCs with access to technology have competitive advantage
Recent Business performance / developments	• Private capex cycle has been muted over last decade due to leveraged balance sheets of core sector companies, but seeing revival after consolidation, deleveraging and improved capacity utilizations • Order inflows, enquiry pipeline showing improvement (Chart 3) and are now over pre-pandemic levels
What's changing?	• Green energy transition changing nature of capex—renewable/green technologies like solar, wind, hydrogen gaining wider acceptance • Government reforms in Procurement and Project management should go a long away in improving execution timelines for infrastructure projects which in turn will aid volumes of projects being pursued
Prospects / Key Drivers / Risks	• Private capex cycle in India can see improvement led by revival from core industries/new age manufacturing after a muted decade • Public capex has remained strong over last few years but can see further improvement led by National Infrastructure pipeline • Key risks include weak implementation of PLI, NIIP scheme and lower investments in core industries resulting in weak capex cycle
Valuations	• Current valuations are higher than long term average

Chart 1

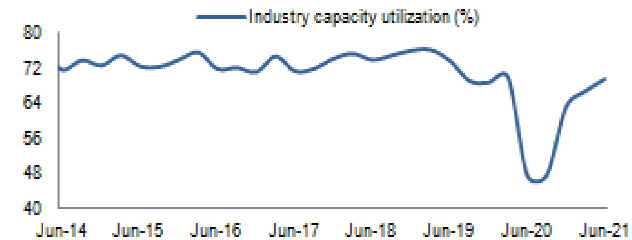


Chart 2

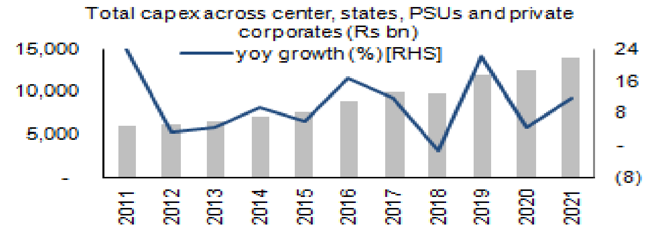


Chart 3

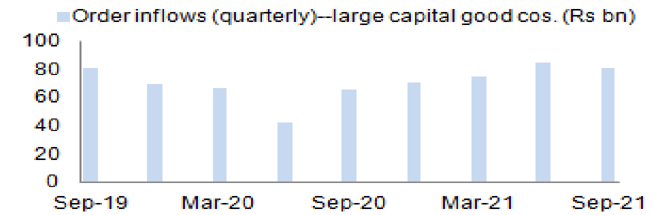
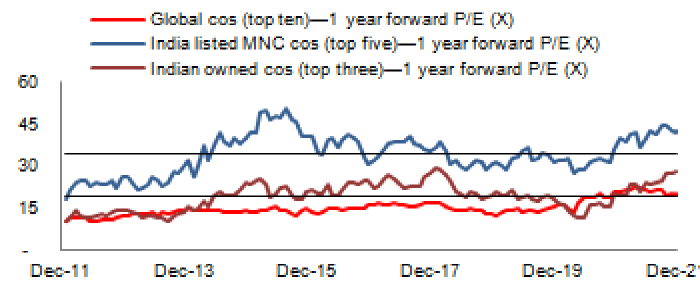


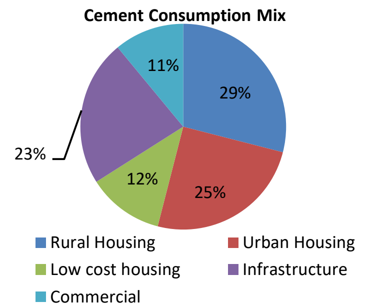
Chart 4

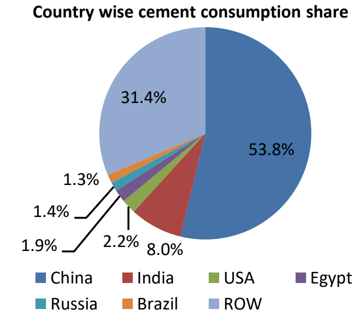


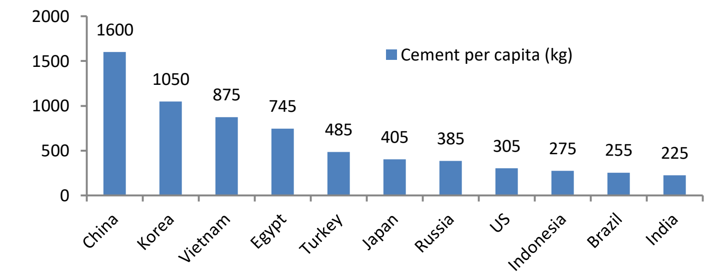
Sources: RBI, Bloomberg, BSE-500 companies, Universe – Companies have been selected based on latest market cap
NIIP: National Infrastructure Investment Pipeline

Sector Overview : Cement

Background / Characteristics	• Cement demand is both cyclical and seasonal as it is largely driven by Housing and Infrastructure sectors (chart 1) • India is 2nd largest cement producer globally (Chart 2) yet remains a highly under penetrated market (chart 3) • High entry barrier owing to requirement of captive limestone, land and high capital investment coupled with low ROCE for new investment. • Overall industry capacity utilisation has remained under pressure although there is sharp divergence at regional level. • Last 2 years sharp improvement in profitability has been led by benign costs and improved realisation • Indian cement industry is one of the most efficient and environmental friendly globally (Refer table)
Recent Business performance	• COVID pandemic has significantly impacted demand in last 2 years • Historically a weak year of demand has been followed by 2 strong years but FY22 could be aberration. • Energy prices rose sharply till Oct-21 but has moderated since then, but cost inflation remains high necessitating cement price hikes
What's changing ?	• Pricing will be tested amid large clinker capacity additions over next 3 years • Incremental focus on WHRS, alternate fuel and blended cement mix to drive further efficiency and keep Indian Industry at forefront of ESG matrix among global peers
Prospects / Key Drivers / Risks	• Infrastructure investment plan of USD 2 trillion in next 5 years across sectors viz. roads, railways, metro, airports, irrigation, ports, etc. • Increasing cement intensity led by use of paver blocks and concrete tiles and construction of flyovers • High affordability, rapid Urbanisation (33% in 2011 to 40% in 2030), expected increase in number of Cities (population of 1Mn.+) from 53 cities (2011) to 87 cities (2030) are expected to be drivers for Housing
Valuation	• Industry valuations are above historical average. • Sharp divergence between small and mid caps (@ 20-40% discount to replacement cost) compared to large cap (@100-250% of replacement cost)

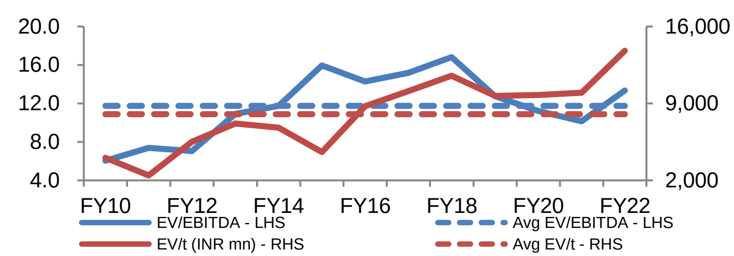






	Units	India	US	EU	C+K+J	World
Thermal energy consumption	MJ/t of clinker	3041	3816	3739	3202	3503
Net CO2 emission	kg CO2 / t	575	724	556	653	610
Clinker ratio	% used in /ton of cement	70%	86%	78%	84%	75%
AFR		3%	12%	31%	11%	12%

C+K+J = China+ Kora+ Japan



Sources – DIPP, IEA, GNR reporting, Investec research, Company presentations, WJRS – Waste Heat Recvoey System, Data for CY2020

Sector Overview : Consumer Durables

Background/ Characteristics	• India is one of largest growing consumer durables market globally. This sector constitutes of (a) consumer electronics such as television, PCs, cameras, audio systems, (b) consumer appliances such as ACs, refrigerators, washing machines, fans, microwaves, etc. • Indian households have low penetration of durables versus other developed/developing nations and offers large growth potential • MNCs with superior technology and focused R&D have captured large market share in most segments. However, an Indian company is a market leader in the Air conditioner category.
Recent Business performance / developments	• Organized companies are gaining market share at the expense of unorganized companies who are facing supply chain issues • E-commerce sales seeing strong growth trends • Impact of commodity inflation on margins is a near-term headwind ; companies are trying to minimize impact of higher ASPs on growth
What's changing?	• Government policy support to increase manufacturing / value addition in India through Production Linked Incentive schemes, etc
Prospects / Key Drivers / Risks	• Strong demand growth led by rising disposable incomes, easy consumer credit, growing working population and urbanization • Key risks include slowdown in the economy, weakness in job and real estate market, tighter consumer credit by banks / NBFC
Valuations	• Current valuations are significantly higher than 10 year average

Chart 1

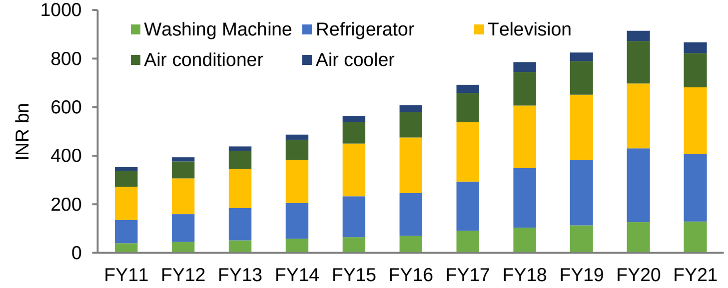


Chart 2

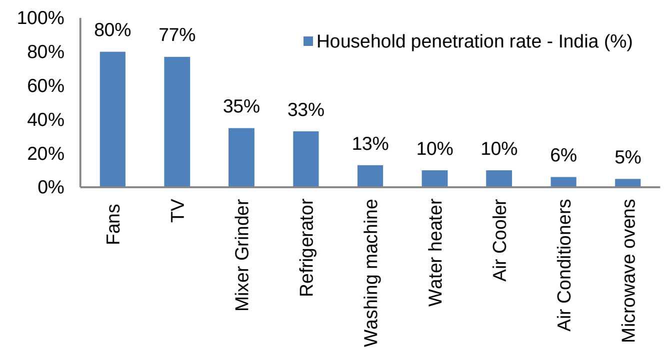
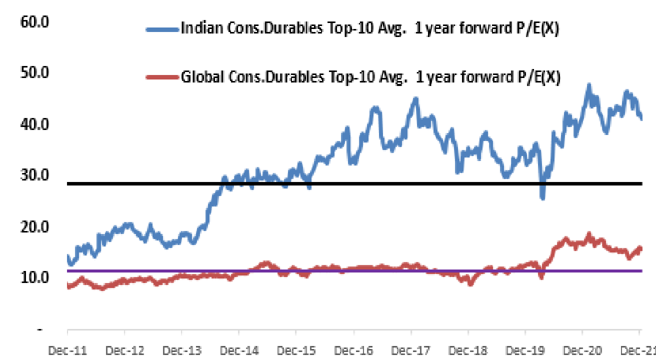


Chart 3



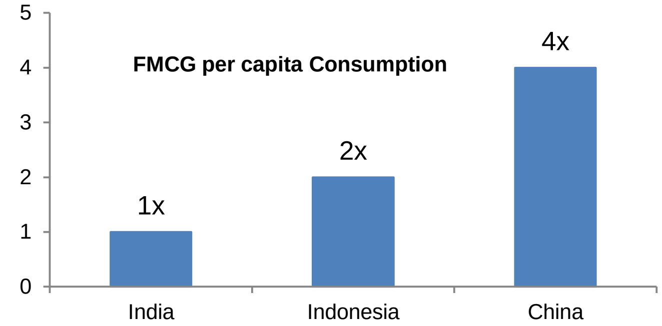
Sources: Bloomberg, Emkay Research, Statista, ASP – Average Selling Price, Chart 1 & 2 Data is for CY 2020

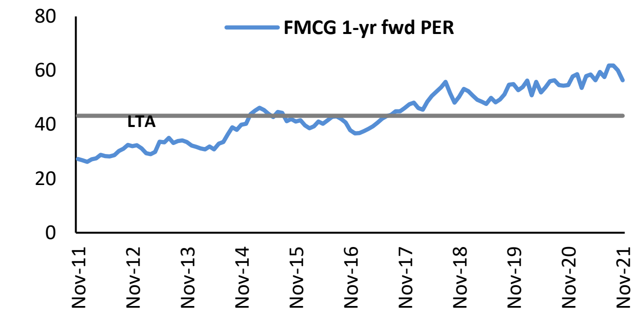
Sector Overview : Consumer Staples (FMCG)

Background / Characteristics	• Products are goods of daily consumption. • Relatively stable, predictable and profitable businesses. Less capital intensive and high return ratios. • Barriers to entry are low, but barrier to succeed are high due to presence of established brands. • Dominant market shares of leaders in many categories.
Recent Business performance / developments	• Sharp rise in input cost inflation has led to lower profitability in the sector led by lower gross margin. • Revenue growth has remained stable and in-line with estimates. • Companies taking significant price increases to counter inflation.
What's changing?	• Margin experiencing pressure from all time high levels due to high input cost inflation. • Market shares are consolidating with leading players gaining market share from unorganized segment in the last few years. • Distribution landscape is changing with online channel contributing much higher and increasing direct to consumer products.
Prospects / Key Drivers / Risks	• FMCG per capita consumption in India is much below Asian peers. Also, premiumization opportunities remain high. • High penetration in large categories can lead to lower volume growth • Rising share of private label brands of modern trade and online channel (D2C players) are key monitorables.
Valuation	• Current valuations are at all time high levels for the sector and significantly above historical averages

FMCG Categories- High Penetration in large categories

Categories	Total Penetration levels
Hair Oil	92%
Household Insecticides	51%
Hair Color	44%
Toothpaste	97%
Utensil Cleaners	52%
Toilet Cleaners	31%
Shampoos	62%
Soaps	98%
Biscuits	90%
Detergent - washing powder	92%



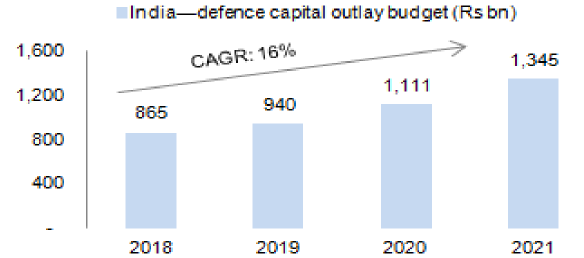


Sources: Bloomberg, Company presentations, Industry Sources, Data is for CY2020, PER – Price to Earnings Ratio

Sector Overview : Defence

Background / Characteristics	• Defence capital outlay witnessing sharp increase as GoI focuses on upgrading capabilities due to geo-political issues (Chart 1) • India traditionally had large import dependence • India maintained strong focus on R&D to develop indigenous capabilities led by Government institutions like DRDO, ADA, etc. • Industry largely led by Defence PSUs
Recent Business performance / developments	• Domestic capability building yielding results led by development of advanced platforms such as Light Combat Aircraft, Missiles, etc • Defence companies seeing strong growth in order book—large companies reported 23% order book increase in 3 years (Chart 3)
What's changing ?	• Initiatives to develop ecosystem—offset agreements, technological partnerships, negative import list (209 items). Government has set defence production target at USD 25 bn by 2025 (including exports) from USD 10-12 bn currently • Strong capability build-up in last few years—India is now on path to develop 5th generation Advanced Medium Combat Aircraft, Indian Multi Role Helicopter, etc
Prospects / Key Drivers / Risks	• Defence capex is expected to grow led by need for capability building and aided by improvement in tax collection by Government • Import substitution is likely to aid increase in domestic manufacturing as more platforms are developed, procured within country
Valuation	• Valuations are closer to long term average and lower than global peers (Chart 4)

Chart 1



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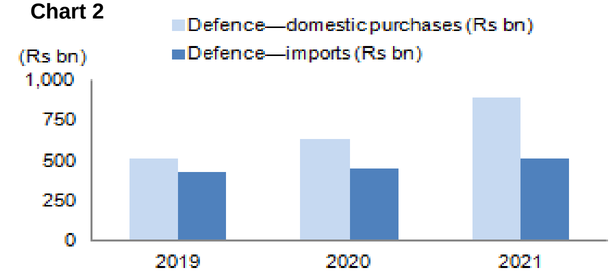


Chart 3

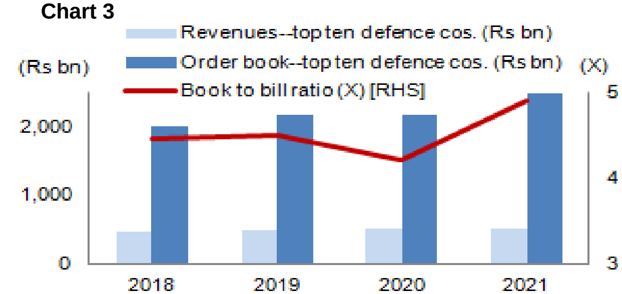
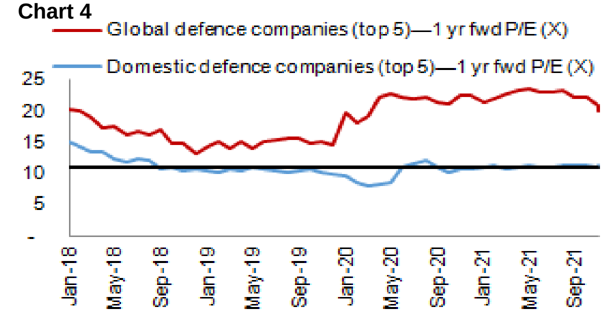


Chart 4



Sources: Bloomberg, Budget documents, Lok sabha questions, Companies

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Background / Characteristics	• Comprises of Asset owners and construction companies of roads, railways, metro, airports, irrigation, ports, affordable housing etc • High capital intensity for both owners (asset funding) and contractors (working capital requirement) • Low entry barrier leading to large number of small scale players • Execution, working capital control and strong balance sheet are key to success as many companies failed due to lack of these attributes • High dependence on Government awarding. • Rising urbanisation and vertical development leading to orders from private sector in real estate space
Recent Business performance	• Strong awarding by NHAI for road projects and large project awarding for High Speed projects leading to improvement in book to bill for most players. • NHAI pipeline for next 3 years remains strong • Margins under pressure due to rising raw material prices • NHAI relaxed the eligibility criterion for bidding during pandemic resulting in very high competitive intensity for new projects
What's changing ?	• NIP, Gati Shakti program and NMP are comprehensive schemes to drive growth. • NHAI target to achieve INR 2 trillion of private investment by FY24 • Low global interest rate environment leading to rise interest by foreign players in yield generating assets through acquisitions, InvITs etc • Monetisation of assets by developers leading to value unlocking, availability of growth capital and improvement in return ratios. • GoI has approved first river linking project. Total 30 are planned.
Prospects / Key Drivers / Risks	• Companies with strong balance sheets have advantage as mix of HAM and BOT projects award are rising. • InvITs especially of HAM projects could be attractive monetisation strategy • River linking and irrigation could become another big opportunity
Valuation	• On overall basis, based on 1Y forward PE sector valuation are closer to historical average

EPC – Engineering Procurement and Construction; HAM – Hybrid Annuity model; BOT – Build Operate Transfer; Infrastructure Investment Trust, NIIP – National Infrastructure Investment Pipeline

Chart 1 – NIP

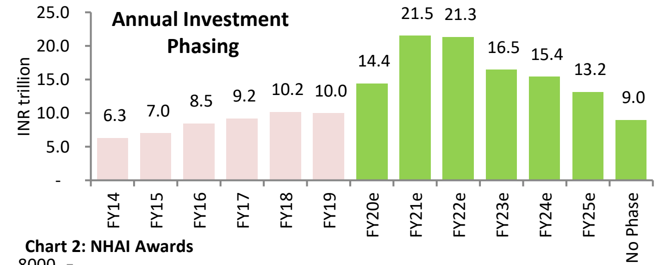


Chart 2: NHAI Awards

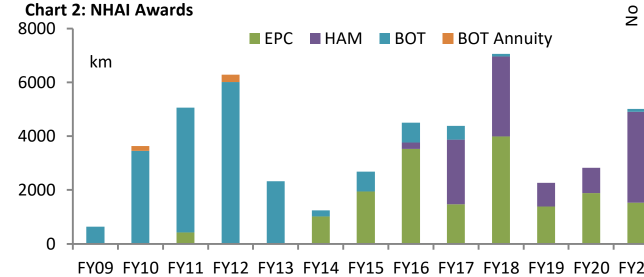
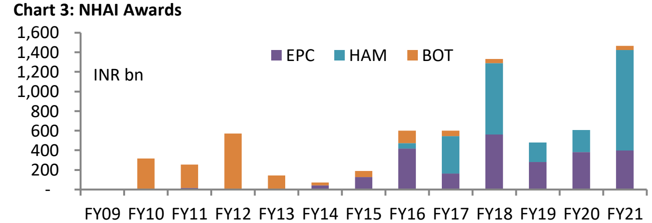
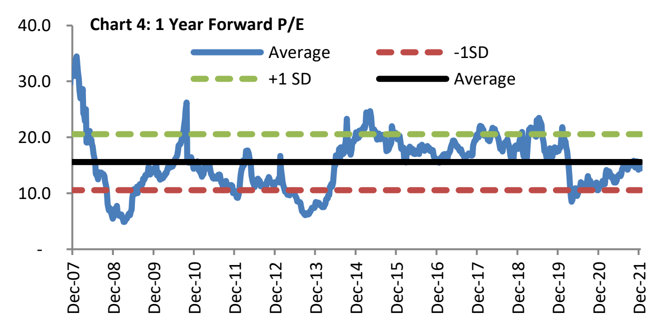


Chart 3: NHAI Awards



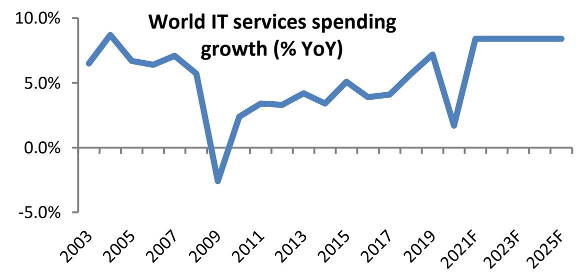


Sources – World Bank, NHAI, Ministry of Finance, Philips capital, Universe is represented by the PE of all the construction stocks (10) under Phillip Capital coverage including conglomerates

Sector Overview : Indian IT Services

Background / Characteristics	• Globally, IT Services is a fragmented industry with consulting firms, niche providers and offshore players. Top-10 companies have ~25% market share • Labor arbitrage and availability of skilled talent have historically provided an edge to India / offshore players – Y2K and pandemic provided impetus to offshoring • Expansion in offerings, verticals & geographies helps drive growth – India IT-BPM exports market share still reasonably low at 14% (Chart 2)
Recent Business performance / developments	• Revenue growth has recovered sharply since H2 2020, post the pandemic induced weakness in H1. Top tier Indian IT firms have guided for double digit growth in FY22 aided by low FY21 base and strong demand environment • Spending in short-term projects has seen an acceleration, aiding better growth for mid-tier firms. Revenue growth has outpaced growth in deal wins in recent quarters. • Operating margins improved in FY21 (chart 3) aided by higher offshoring, lower travel and facility expenses, and deferral of wage hikes.
What's changing ?	• Covid has accelerated the business case for digital investments by enterprises – Gartner forecasts IT Services spending to grow at ~8.5% YoY during 2021-25 (chart 1) vs 2010-20 average of ~4% YoY • Strong demand pickup has also led to an increase in demand for talent. Top 5 Indian IT Services firms added over 200k employees (up 17%) since Oct'20. • Remote working has improved customer comfort on offshoring. • Cloud is seeing strong traction – Cloud shifts capex to opex as well as helps reduce the Total Cost of Ownership (TCO) of managing the underlying Infrastructure for clients.
Prospects / Key Drivers / Risks	• Robust demand for technology services, Indian IT firms' digital investments in recent years, both organically and through M&A, and higher customer comfort on offshoring have led to increased confidence on near-term (3-4 quarters) revenue outlook. • The spike in demand for talent pose downside risks to fulfillment/revenues and profitability due to higher wage costs. • Reversal in travel and facility expenses, and appreciation of INR against USD are others key risks to profitability.
Valuation	• Valuation multiples have seen sharp re-rating reflecting high growth, improvement in profitability and better demand visibility (Chart 4)

Chart 1



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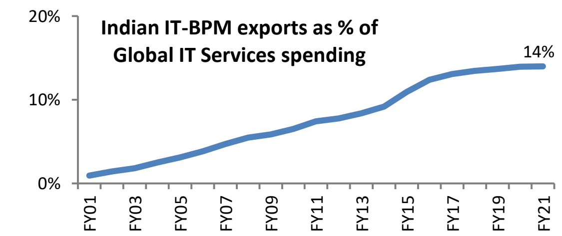

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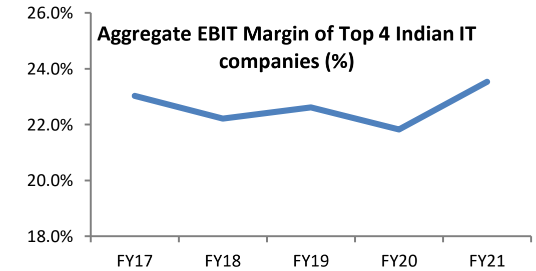
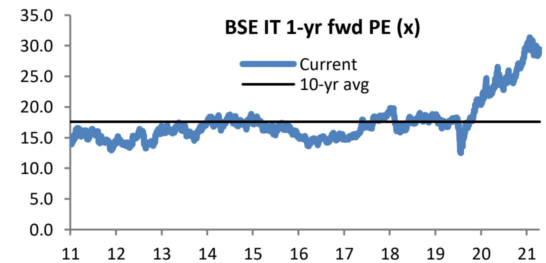


Chart 4



Sources: NASSCOM, Bloomberg, Kotak Institutional equities

Sector : Media

Background / Characteristics	• Discretionary spending for businesses; levered to economic growth. • FMCG biggest advertiser with digital commerce contribution expected to go up exponentially. • Like developed markets, advertising is shifting from print to digital • Relative price proposition of TV is still superior to OTT apps. India's OTT market remains fragmented with over 60 OTT apps.
Recent Business performance / developments	• Impact of second wave of the pandemic on advertising revenue was much lower than the first wave. Advertising revenue in 2H22 is likely to be higher than pre-pandemic levels. • TV advertisement revenue continues to show resilience despite threat from digital with CY21 revenue expected at 95% of pre COVID levels. • Digital subscription growth remain strong with the pandemic accelerating shift to digital media.
What's changing ?	• Digital advertising is expected to overtake TV advertising and is likely to account for highest share in advertising revenues in the next 1-2 years. • Video advertising remains the fastest growing segment within digital; Video and social media account for ~60% of the digital advertisement spends and is likely to remain dominant. • Rapid increase in paid digital subscribers in India that are expected to touch 40 mn in CY21 from 30 mn in CY20
Prospects / Key Drivers/ Key Risks	• Digital shift should continue at high pace but TV advertisement revenue is expected to continue to grow (mid to high single digit) in the medium term. • Higher content cost (fragmented industry) may put pressure on margin. • NTO 2.0 implementation is likely to impact subscription revenues negatively as customers move to selective viewing.
Valuation	• Consolidation in the industry and higher mobility has led valuation re-rating in the last 3 months.

Chart 1 – Industry Ad Mix

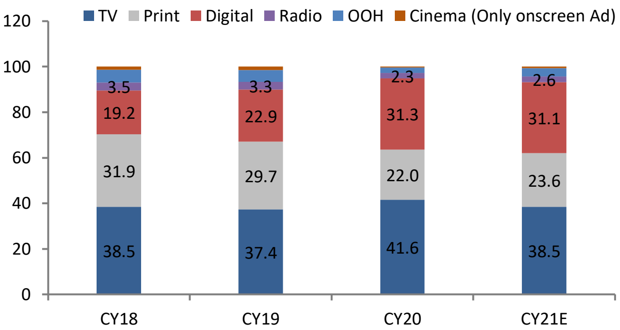


Chart 2 – Industry contribution to advertising spends

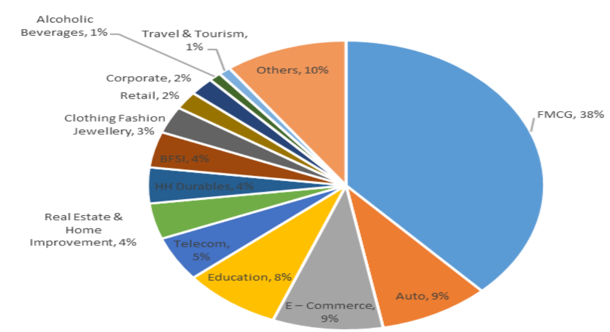
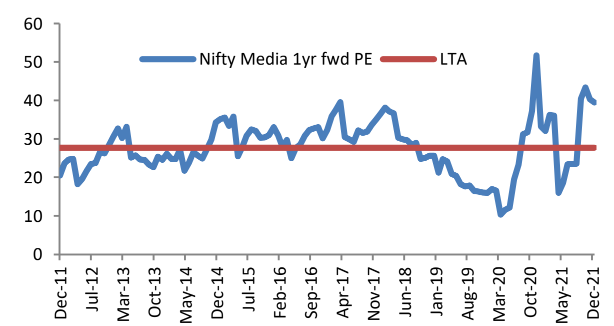


Chart 3 - Valuation



Sources– KPMG, Pitch Madison, Bloomberg

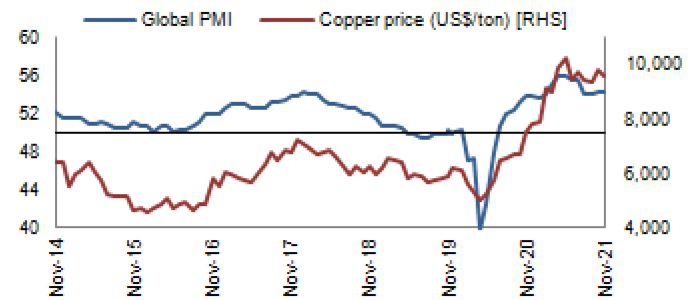
ARPU – Average Revenue per unit; NTO – New Tariff Order, OTT – Over the Top

Sector Overview : Metals and Mining

Background / Characteristics	• Products are homogenous with little differentiation. • Cyclical sector dependent on global prices • China is dominant producer/consumer and has been key influence in global demand-supply, price determination • Cost efficiencies and good balance-sheet are key to growth
Recent Business performance / developments	• Decadal high metal prices led by supply-side disruptions and strong demand from re-opening of economies and stimulus. • Certain temporary supply side issues are easing as economies re-open • High metal prices over last year aided earnings and led to sharp reduction in debt. Companies have announced large capex pipeline
What's changing ?	• After strong year of demand led by infrastructure/real-estate pick up in China/other geographies, China real-estate has weakened due to Government policies to curb speculation, control financial risks (Chart 2) • De-carbonization in the metals sector gaining strong foothold with Government policies aimed at controlling emissions, especially in China • China looking to export less of carbon intensive metals • Rise in carbon credit cost and disruption in EU natural gas market are supporting prices
Prospects / Key Drivers / Risks	• Government's push for Make in India, National Infrastructure Investment Pipeline, etc. can drive strong demand for metals in India • Key global demand drivers include (a) transition to Green Energy and investment in related technologies, (b) US Infrastructure Bill • Key risk is weakening of metal prices
Valuations	• Sector valuations lower than average on elevated earnings; on EV/ton basis, valuations are higher than historical average (Chart 3)

PMI – Purchasing Mangers' Index

Chart 1



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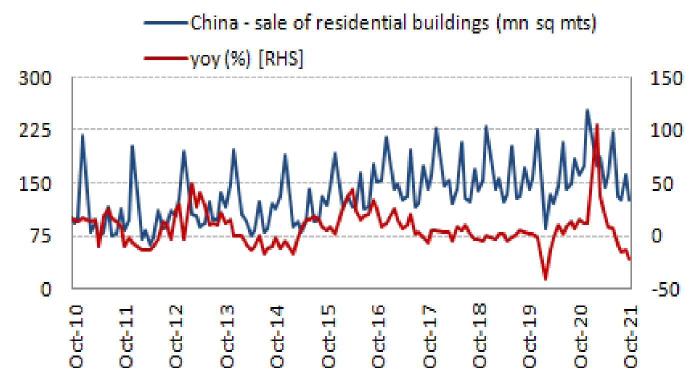

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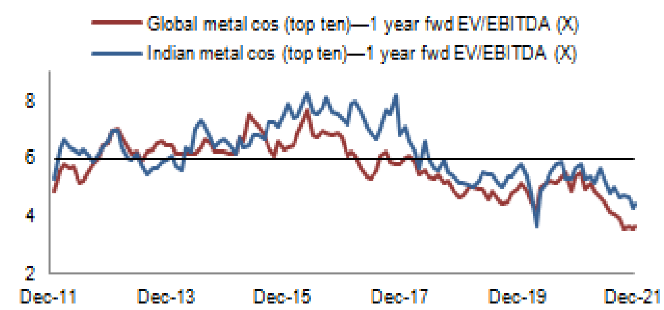


Sources: Bloomberg, Universe – Top 10 companies by market cap

Sector Overview : Oil & Gas

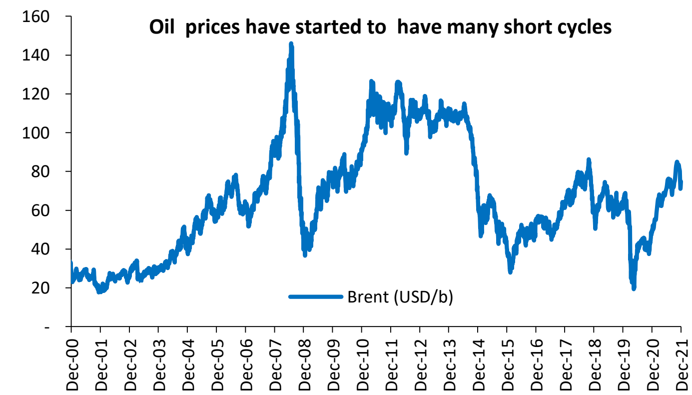
Background / Characteristics	• While Upstream is about finding oil & gas, downstream is about global refining, retailing, chemical margins and costs • Lowest cost producers and downstream processors have significant edge • Highly capital intensive nature of business with 4-7 years gestation for large projects. This act as a major barrier to entry • India is amongst the large pockets of demand growth in the current decade
Recent Business performance / developments	• Commodity price cycles have shortened (Chart 1) • Deregulation has helped downstream marketing margins • Large OMC's strategic sale process underway
What's changing ?	• Global oil demand likely to peak out in 5-10 years (Table 1) but even in 2040 demand is expected to be close to current levels • As auto fuel demand declines, oil demand is likely to get converted to chemicals • Globally oil companies are cutting their investments which is likely to affect future supplies • India putting thrust on natural gas consumption; developing infrastructure for the same
Prospects / Key Drivers / Risks	• Competitive intensity is low in auto fuel retailing – margins have headroom to expand
Valuation	• The S&P BSE Oil & Gas Index is trading at its 10 year average 1-yr forward P/E (Chart 2)

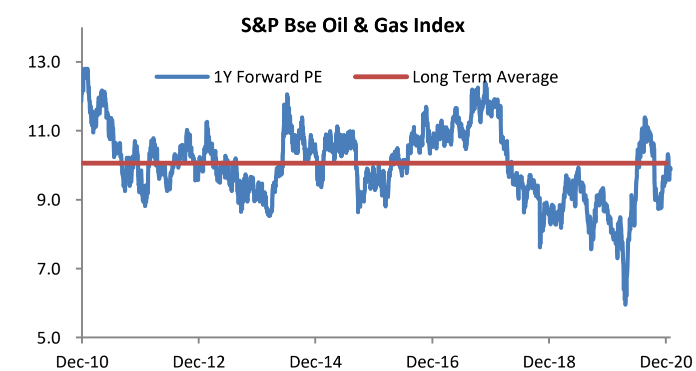
Table 1 **Oil demand by various sources (mbpd)**

	2000	2005	2010	2015	2019	2021	2025	2030	2035	2040
IEA (STEPS)	76	84	87	93	98	96	103	104	104	104
IEA (APS)	76	84	87	93	98	96	103	96	na	88
OPEC	76	84	87	93	98	96	104	107	110	111
BP (BAU)	76	84	87	93	98	na	98	98	97	94
Total SA	76	84	87	93	98	na	103	103	100	95
Exxon	76	84	87	93	98	na	102	104	105	93

STEPS = Stated Policies Scenario , APS =Announced Pledges Scenario, BAU = Business as Usual

Chart 1





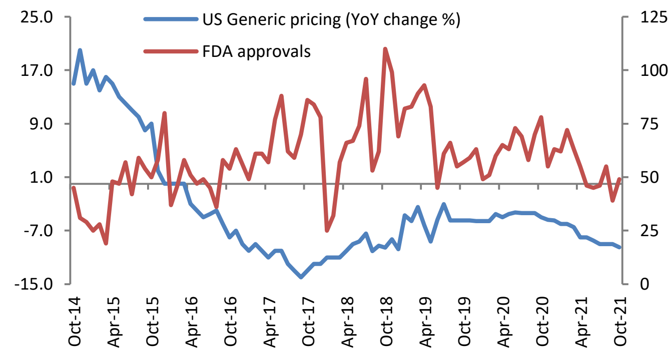
Sources – British Petroleum, IEA, Total, OPEC, Bloomberg

OMC – Oil Marketing Companies

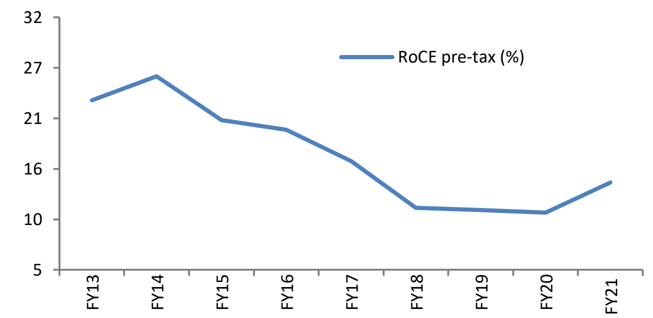
Sector Overview : Pharmaceuticals

Background / Characteristics	• Indian pharma entails limited capital need, but considerable marketing spend • US generics is the key export market with Indian companies holding 45% volume share • Markets like US are highly regulated, have long gestation with upfront investments in manufacturing & development • Biosimilars is an evolving area, but complex approval pathway and branded nature of commercialization is inhibiting scale-up
Recent Business performance / developments	• Indian domestic market growth is above trend in FY22 due to low base effect in acute and elective surgeries coming back • US generics pricing erosion is back to 7-8% levels on YoY basis in FY22 owing to ongoing de-stocking • API players are witnessing sharp margin squeeze due to commodity inflation and weak formulations demand • Costs, especially domestic field force related selling expenses are coming back, though are still lower as percentage of sales vs pre-Covid times
What's changing ?	• Companies are de-risking their business models by leveraging US R&D capabilities in other markets like Europe/China • US pricing pressure is expected to abate in FY23, as re stocking commences • Domestic market is expected to revert to trend 9-10% growth FY23 onwards • CDMO is emerging as a key high ROCE growth driver, aided by China+1 factor • Yet to be seen whether interchangeable biosimilars improve economics
Prospects / Key Drivers / Risks	• Commercialization of complex generics and certain products losing exclusivities is expected to result in a robust 2-3 year US outlook • However, investment opportunities will be selective given companies' specific growth drivers and differing investment cycles
Valuations	• Sector is trading at 28x 1-year forward P/E, higher than historical average

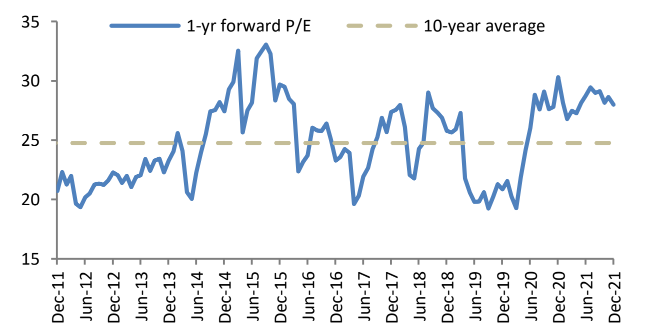
US pricing deflation accelerated in recent months



ROCE has bottomed in FY20/21 at sector-level



Sector is trading at a premium to 10-year average



Source: Bloomberg, Company Presentations; CDMO- Contract Development and Manufacturing Organization; API – Active Pharmaceutical Ingredient

Sector Overview : Telecom

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Background / Characteristics	• Wireless communication has transformed daily life; India has cheapest wireless data pricing in the world (Rs5-7/GB) • Predictable and profitable business if market shares settle • Capital intensive with high entry barriers • Indian market is an oligopoly with three major players
Recent Business performance / developments	• After pause of two years, industry took 20% price hike; ARPUs are moving higher • Government allowed industry to defer their AGR/spectrum dues by 4 years with equity conversion option ensuring 3 player industry • Spectrum prices are declining. For future auctions, governments increased spectrum life to 30 years (from 20 years) and nil usage charges
What's changing ?	• Smartphone penetration is increasing steadily • Data consumption post Covid-19 has increased by ~45% • Work from Home and acceleration of adoption of digital application in areas like education, healthcare, financial services to support 4G penetration
Prospects / Key Drivers / Risks	• Industry revenues are still below normalized levels, leaving room for substantial growth in medium term • Operators are in early stage of preparing for 5G rollout which is likely to begin in 2022/23 onwards
Valuation	• Sector is at EV/EBITDA on 7-8x FY24e estimates which is broadly in line with its historical average

Chart 1

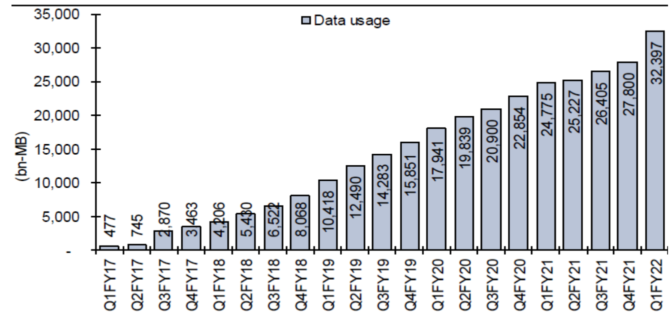


Chart 2

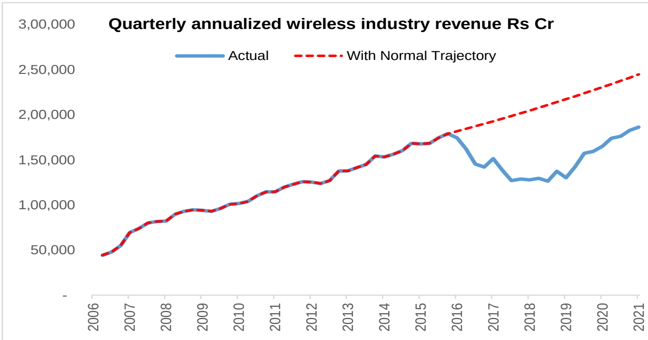
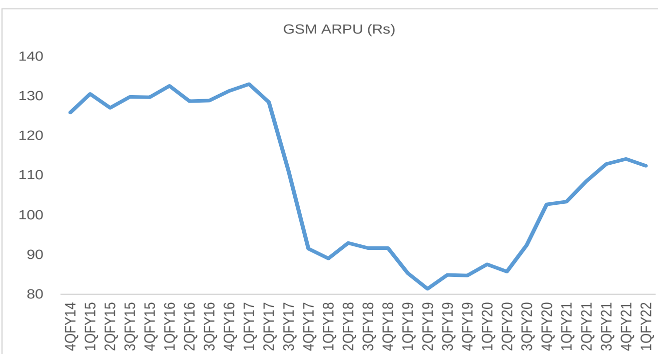


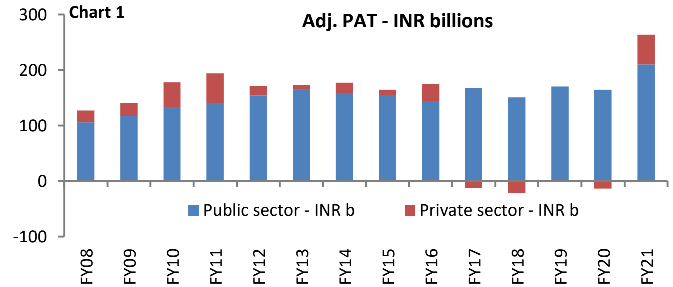
Chart 3

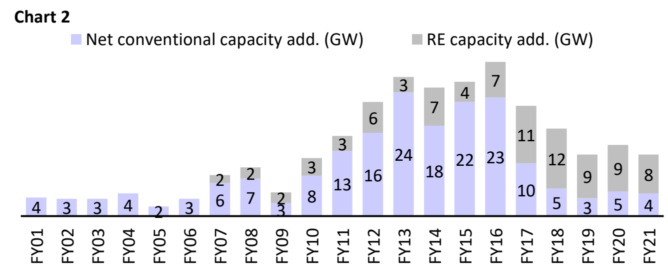


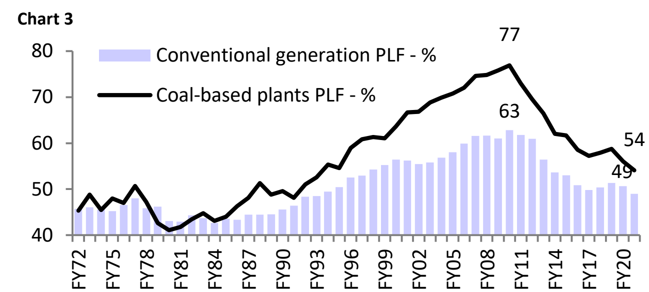
Sources: Company reports, Internal estimates, ICICI Sec research reports
AGR - Adjusted Gross Revenue; ARPU – Average Revenue per user

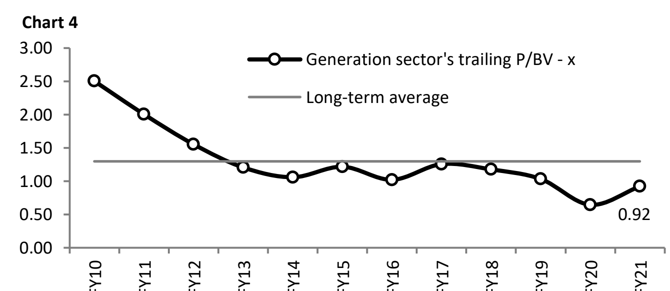
Sector Overview : Utilities

Background / Characteristics	• The utilities sector primarily operates on a cost-plus regulated return model. Earnings are fairly steady and predictable. Renewable assets are on competitive bidding model. • The sector is highly capital intensive. Capitalization and capex are the key drivers of earnings • Execution and ability to source debt at lower cost are key
Recent Business performance / developments	• Earnings have been under pressure due to over-supply of power and weak health of state electricity boards, although environment has improved from bottom (Chart 1) • PSUs have performed better than private sector • Electricity demand was weak in FY21 impacted due to Covid-19. Demand improved in FY22, however has not been consistent. • Higher demand and lack of new capacity addition is reflecting in higher short-term power prices.
What's changing ?	• New generation capacity addition has moderated while demand is expected to grow (Chart 2). PLF of coal-based plants is, thus, likely to bottom out (Chart 3) • Government is focusing on 24x7 power and Power for All. There is increasing focus on renewable energy generation. • Reforms are being proposed to improve the financial health of distribution companies
Prospects / Key Drivers / Risks	• India's per capita electricity consumption is just 1/3rd of global average. As economic activity improves, income level increases demand is likely to grow. Long-term electricity demand to GDP is ~0.9x. • Key drivers: Increase in share of manufacturing in GDP, industrial activity, sale of household appliances, EV's.
Valuation	• Current valuation metrics are low compared to past (Chart 4) as well as global peers









Source: MOFSL, Note: Universe is listed power generating companies as per MOFSL.
PLF – Plant Load Factors; Conventional generation incl. coal, gas, nuclear and hydro, RE – Renewable Energy, GW - Gigawatt

Warrior Queens: Rani Ahilyabai Holkar, Madhya Pradesh



Above is a picture of her “Samadhi” in Maheshwar, Madhya Pradesh

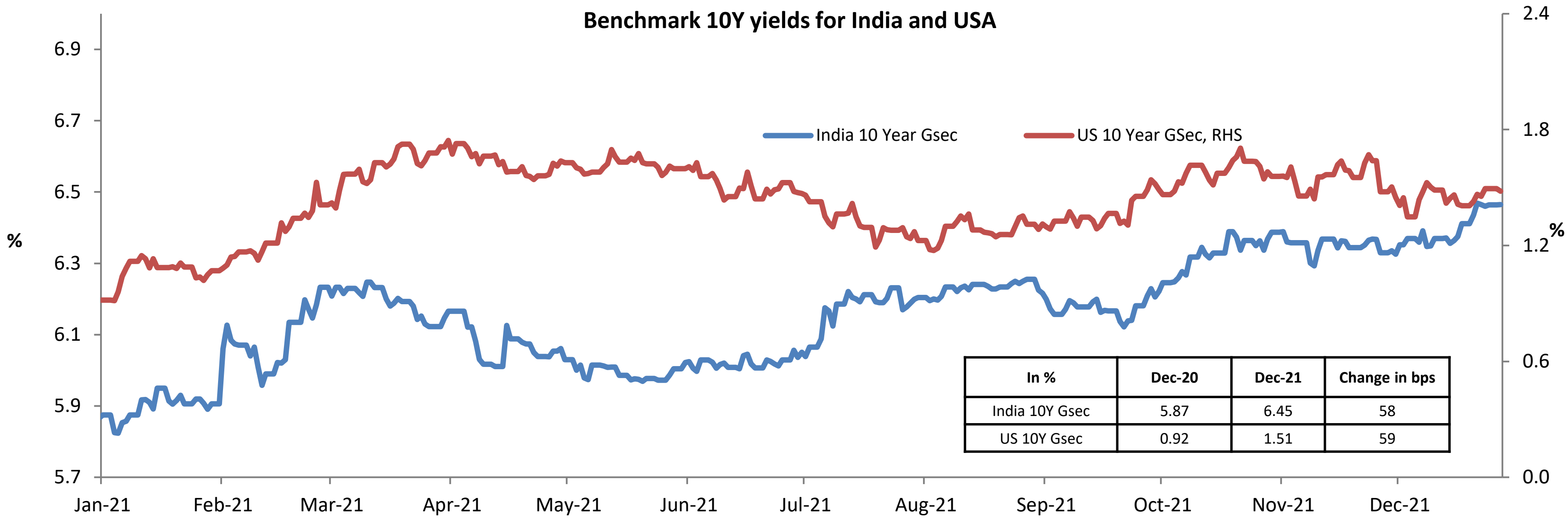
Pictures courtesy: esamskriti.com, which is a treasure-house of all things Indic and contains Over 2,000 articles and 17,000 pictures.

- Ahilyabai Holkar, also known as the Philosopher Queen, was the hereditary noble Queen of the Maratha Empire, India.
- Post the death of her husband Khanderao Holkar and father-in-law Malhar Rao, she assumed charge in December 1767.
- She dedicated the state to Lord Shiva declaring that she will manage the affairs of the state for the benefit of the people on the behalf of Lord Shiva, herself remaining only a custodian. She made Maheshwar the capital of the Holkar State.
- To her credit during her 30 years of her reign, Malwa remained stable and peaceful and the Holkar dominions remained undiminished.
- Ahilyabai was a great pioneer and builder of Hindu temples. Her greatest achievement was to rebuild the Kashi Vishwanath Temple in 1776.
- She also undertook the task of building & renovating sarais, shelters, temples, dharamshalas all over the country
- Paramhansa Yogananda, author of Autobiography of a Yogi, described Ahilyabai “as the greatest woman of modern India.”

Source: Publicly available information

Fixed Income Markets

2021 - Inflation surprise takes yields higher ; Inflation *“transitory”* no more ?

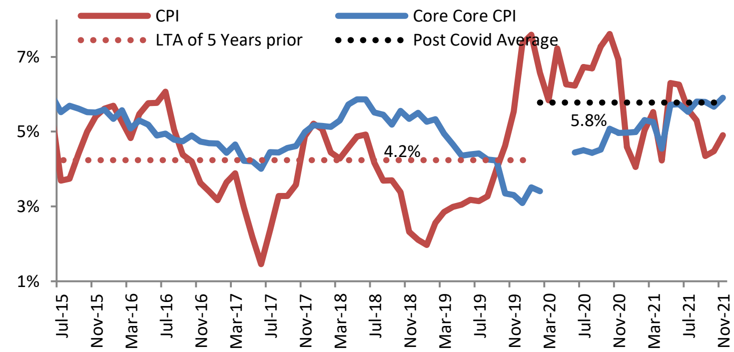


In %	Dec-20	Dec-21	Change in bps
India 10Y Gsec	5.87	6.45	58
US 10Y Gsec	0.92	1.51	59

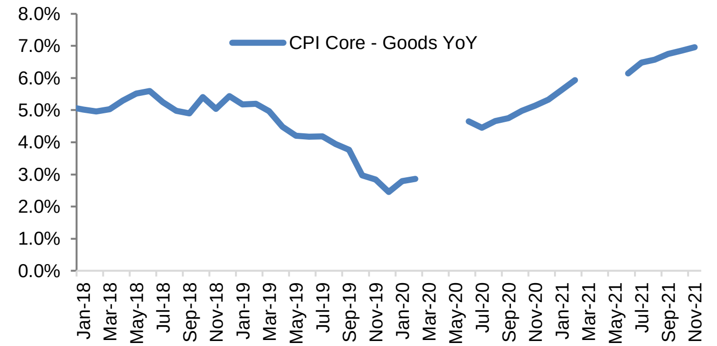
Jan-Mar 2021	Apr-Jun 2021	July-Sept 2021	Oct- Dec 2021
• Expectation of rapid recovery in global growth driven by steady pick up of vaccine rollout in advanced economies • Stimulus of USD 1.9 trillion announced by the US, further fuels expectation of higher growth • Indian benchmark yields tracked the rise in global yields based on expectation of higher growth and inflation	• Despite high commodity prices & rising US inflation, global yields largely stable • However, emergence of 2nd Covid-19 wave in India led to expectation of slowdown of growth • RBI announced further measures to support the economy (G-SAP, Special liquidity facility, On-Tap TLTRO etc), which kept the yields low	• Fear of slower global growth due to potential default by China’s Property Giant Evergrande • Rapid recovery post 2nd wave and reduction in restrictions lead to improved expectations of growth for India	• US Inflation hits 31 year high; Fed announces faster than anticipated taper schedule for bond purchases. • Rising concerns over inflation due to stronger than expected growth, supply chain disruption and higher energy prices along with expectations of accelerated tapering

Source: Bloomberg , CMIE; Gsec – Government Securities

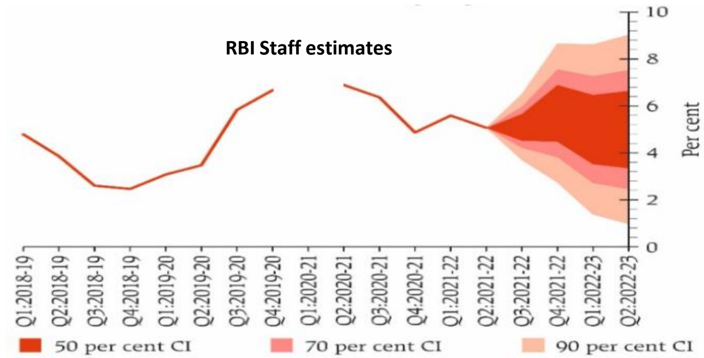
- Average CPI post pandemic has been higher (by ~160bps) due to supply side disruption, rise in crude, food and input prices
  - Core Core CPI also trending higher due to widening of retail margins, delay in supply chain recovery, etc.
- Measures taken to address supply side bottlenecks and ease inflationary pressures
  - Reduced duties on auto fuel, edible oils, import of pulses, etc.
  - Increased budget for fertilizer subsidy to reduce the impact of rise in global fertilizer prices on domestic food inflation



- YoY rise in Core CPI Goods (Weight in CPI: ~22%) is primarily driven by rise in commodities and input prices. This should moderate over time due to base effect and any correction in commodity prices



- RBI expects average inflation to trend lower in H2FY23 driven by moderation in commodity prices, normalization of monetary policy and growth
- Strong demand, weak monsoon, elevated commodity and energy prices, supply chain bottlenecks, etc. pose upside risks to inflation

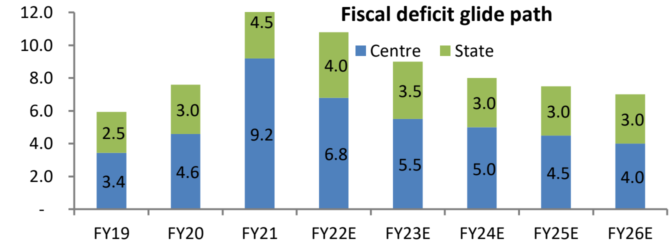


CI – Confidence Interval

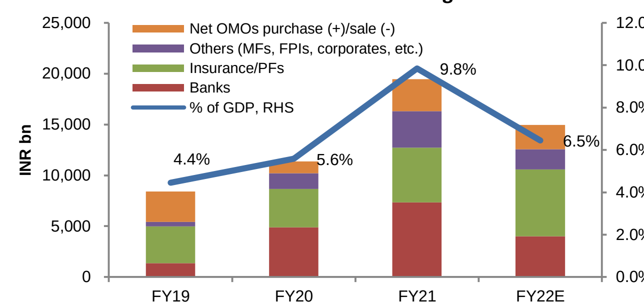
Source: CMIE, RBI; Core Core CPI = CPI ex Food, Fuel & Light, Petrol & Diesel, Gold, Silver, Housing

Fiscal Outlook Positive; Global bond Index inclusion can ease G-sec demand pressure

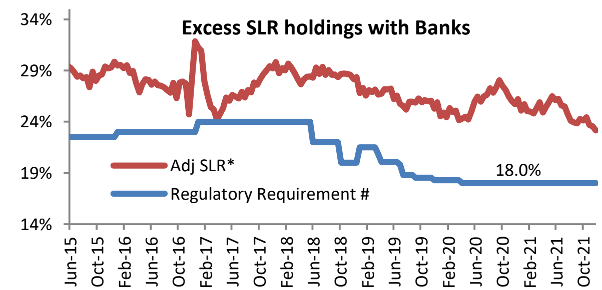
- Despite additional spending on Covid-19 measures and possible shortfall in divestment target, fiscal deficit is likely to remain within budgeted estimates due to strong revenue growth
  - Additional borrowings (INR 1.56 trillion) for shortfall in compensation cess was also subsumed within budgeted market borrowings, thus easing supply pressure in FY22
- Fiscal consolidation is likely to continue in FY23 and beyond
- RBI has been regularly conducting OMOs to support Government borrowing program. However, ample surplus liquidity and elevated inflation will limit RBI's ability to inject additional liquidity
  - During FY19-FY22E, average annual OMOs conducted by RBI amount to ~20% of annual net aggregate market borrowings (~USD 30-35 bn) of Centre and States
- Gsec demand has been dependent on Banks in the past; with Banks SLR holding significantly above regulatory requirement, any significant pickup in credit can result in demand supply mismatch
- Lack of RBI OMO purchases in FY23 and reduced appetite from Banks could be set off, to a large extent, by foreign inflows, if Indian sovereign bonds are included in global benchmark bond indices
  - One-off flow is expected to the tune of USD 30-40 bn (~1.4% of GDP) and regular inflow is likely to be ~USD 18 bn (0.6% of GDP)



Source: Kotak Institutional Equities, 15th Finance commission report



Source: Kotak Institutional Equities



Source: RBI

	JP Morgan Global Bond Index -EM	Bloomberg Global Aggregate Index
Expected weight	~9.2%	~0.5%
One off flows (USD bn)	28	10-13
Annual inflows (USD bn)	18.5	

Source: Morgan Stanley

INR – Rangebound Outlook

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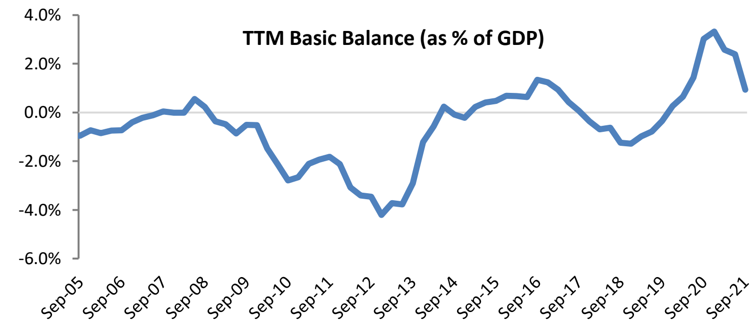
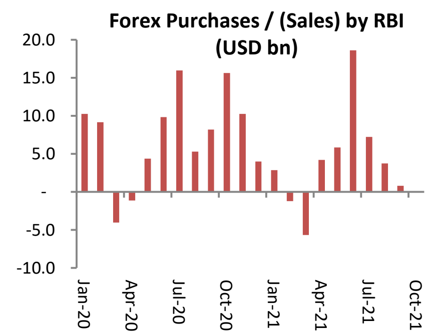
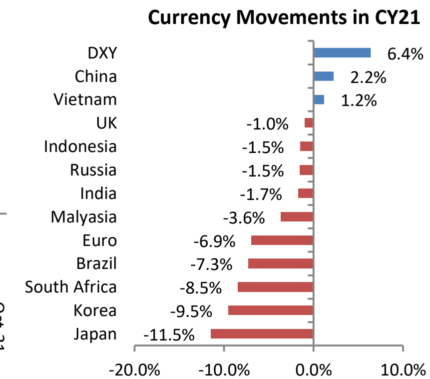
- Outlook on External sector remains comfortable with basic balance (CAD+FDI) well above the long term average



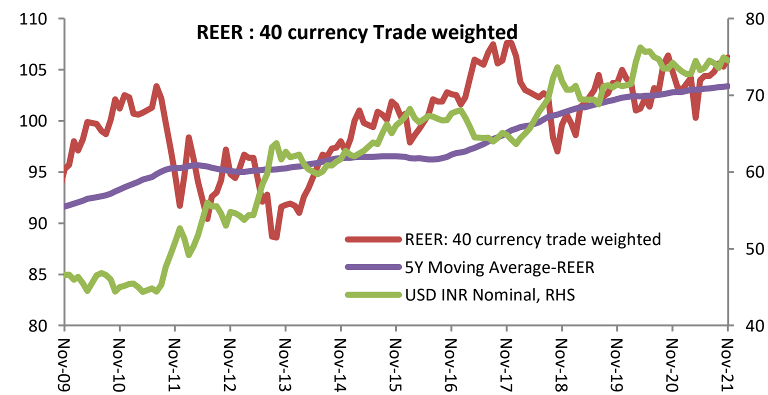
Source: CMIE, Basic Balance = CAD+FDI, TTM – Trailing 12 months

- INR has outperformed many EM currencies in CY21
  - RBI intervened aggressively in the forex market to stem any significant appreciation of INR against USD





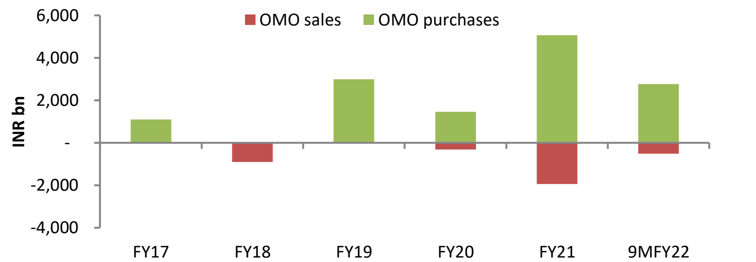
- Outlook on INR remains comfortable as
  - BoP is expected to remain in reasonable surplus, supported by positive outlook on capital flows and moderate current account deficit
  - Adequate forex reserve to mitigate significant volatility in INR
  - REER is closer to 5 year moving average
- Spike in energy prices and fall in capital flows are key risks



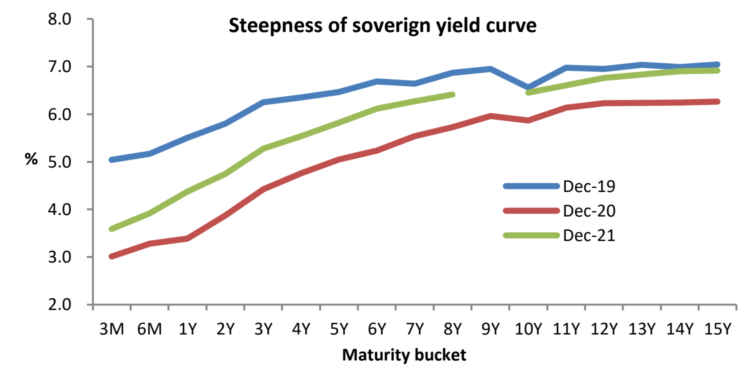
Source: CMIE, RBI, Kotak Institutional Equities, BoP – Balance of Payment, Basic Balance = CAD+FDI

Yield Curve Outlook : Gradual flattening expected in 2022

- Post pandemic, RBI aggressively reduced policy rates and consistently intervened in debt markets (through OMOs, G-SAP, Operation TWIST, etc.) leading to a downward shift in yield curve in CY20
  - Short end fell more than the long end due to sharp cut in rates and significant surplus liquidity

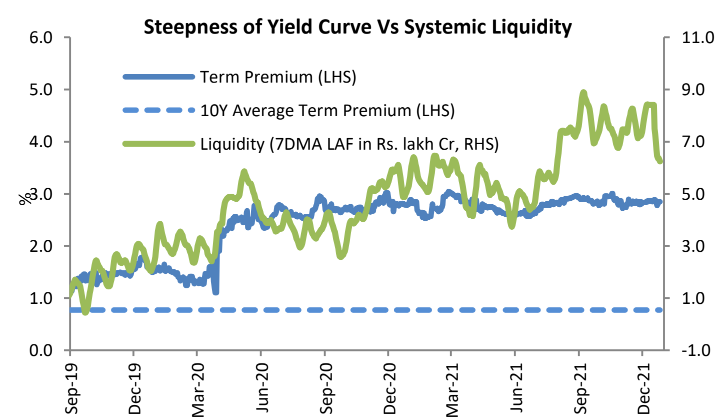


- The Yield curve shifted upward driven by improving growth outlook, lower intervention by RBI and introduction of longer tenure Variable Rate Reverse Repo towards the end of 2021



- Term premium, however, is higher than historical average

- In view of the above and the likely gradual policy normalization, we expect the elevated term premium to reduce mainly through increase in short term yields



OMOs – Open Market Operations, G-SAP – Government Securities Acquisition Program; Term premium = 10Y Gsec yield –3M Tbill yield

Source: Bloomberg, CMIE, RBI

Interest Rate Outlook - Summary

Factors supporting lower yields

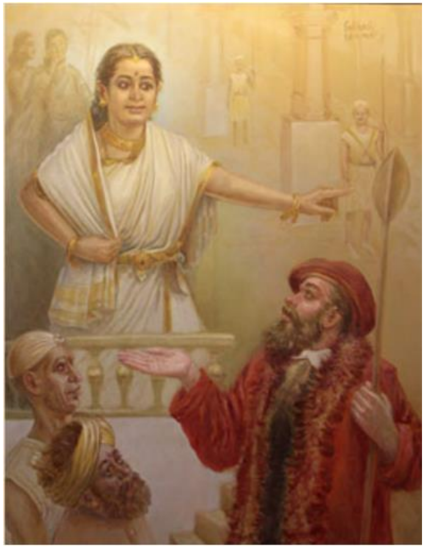
- Fiscal consolidation likely, although at gradual pace, as the growth normalizes
- Prospects of inclusion of Gsec in global bond indices high and could provide a stable source of demand for Gsec in FY23 & beyond
- Global growth is expected to peak out in 2021 and likely to normalize going forward
- RBI expected to remain supportive of growth and can intermittently intervene to ensure “orderly evolution” of yield curve
- Risk of large Covid-19 wave poses risk to growth

Factors opposing lower yields

- Upside surprise in Inflation in AEs and elevated global commodity prices could accelerate the pace of normalization of monetary policies
- India’s average CPI and Core CPI are likely to remain above RBI mid-point of target inflation range
- Substantial improvement in domestic recovery momentum
- RBI can expedite the pace of liquidity withdrawal and policy normalization if either growth or inflation surprises on the upside
- SLR holdings of banks, especially PSUs remains at elevated levels, thus reducing the incremental demand

Short end yields have bottomed out, Global yields and Inflation are key to long end yields

Warrior Queens: Rani Abakka, Karnataka



Pictures courtesy: Prof Thukaram Poojary, Founder and President, Rani Abbakka Tulu Adhyayana Kendra (1995) and published in https://www.esamskriti.com/e/History/Great-Indian-Leaders/RANI-ABBAKKA-is-the-forgotten-Warrior-Queen-of-Ullal,-Karnataka-1.aspx

- Rani Abbakka belonged to Chotwa dynasty and was crowned as the first Tuluva queen of Ullal in Karnataka in 1525
- Since childhood, she displayed extraordinary skills and excelled in archery, sword fighting, military science and warfare.
- In 1526, the Portuguese captured the Mangalore port, making Ullal the next target as it was strategically placed. The Portuguese made several attempts to capture it but Abbakka being the fearless queen, repulsed each of their attacks for over four decades. For her bravery, she came to be known as Abhaya Rani.
- Even though she eventually lost the battle, she sent a strong message to the world by rebelling against foreign invaders and colonialism. She can be, thus, regarded as 'first woman freedom fighter of India.
- It was her spirit and actions that inspired her daughter, Abbakka II,who defeated the Portuguese during her reign
- Her legacy now lives on through memory in Dakshin Karnataka in the form of folk songs, stories and performances of Yakshagana – a form of local theatre

Source: esamskriti.com, Publicly available information

Disclaimer

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This is the fourth edition of yearbook by HDFC Mutual Fund

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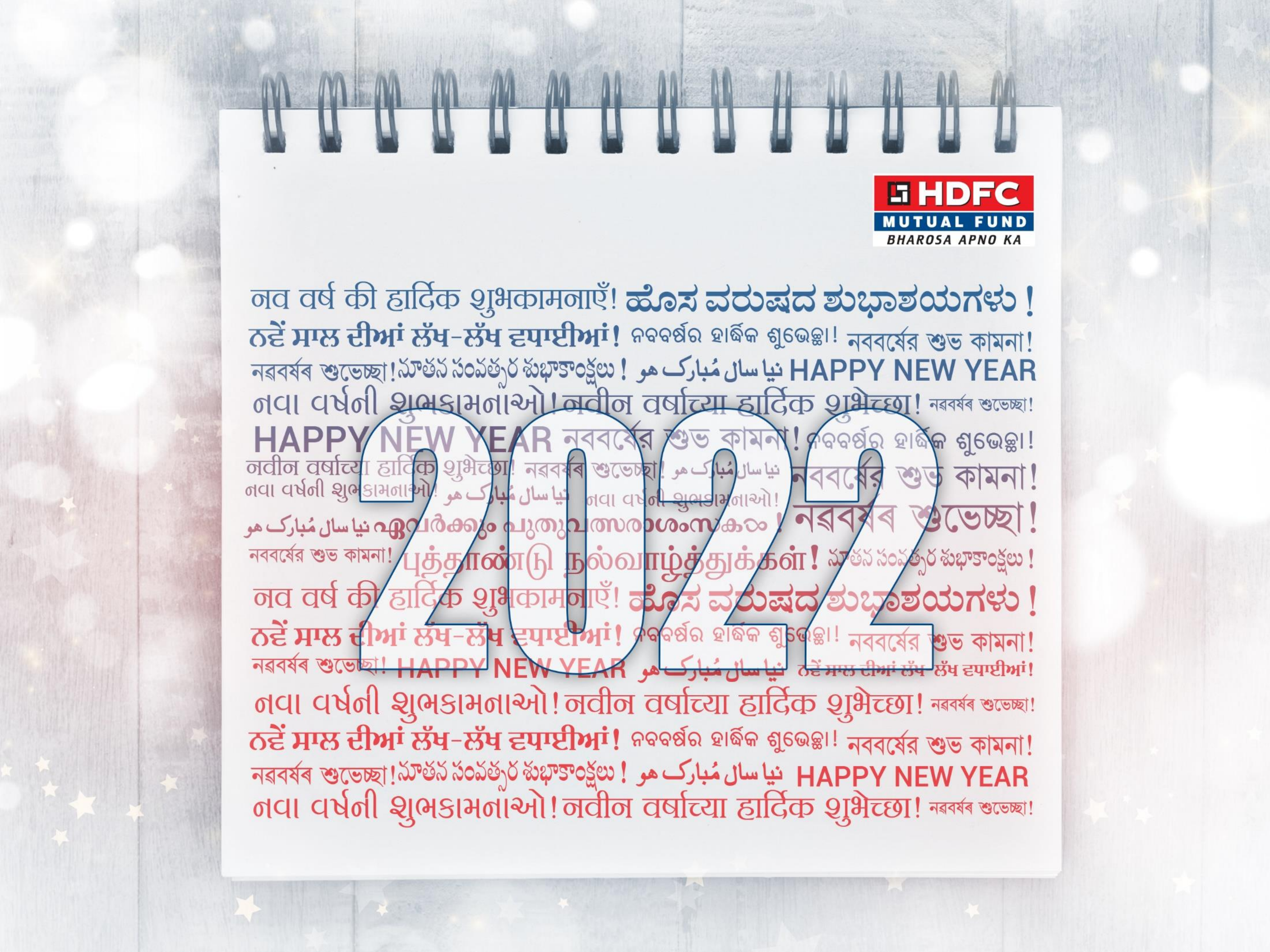
While we have taken considerable care in compiling this yearbook, there can be some inadvertent errors, for which we would like to apologize.

We would love to have your feedback on our yearbook. Please send your feedback at yearbook@hdfcfund.com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नव वर्ष की हार्दिक शुभकामनाएँ! ಹೊಸ ವರುಷದ ಶುಭಾಶಯಗಳು !
ਨਵੇਂ ਸਾਲ ਦੀਆਂ ਲੱਖ-ਲੱਖ ਵਧਾਈਆਂ ! ନବବର୍ଷର ହାର୍ଦ୍ଦିକ ଶୁଭେଚ୍ଛା ! নববর্ষের শুভ কামনা!
নৱবৰ্ষৰ শুভেচ্ছা! నూతన సంవత్సర శుభాకాంక్షలు ! نیا سال مُبارک ہو HAPPY NEW YEAR
નવા વર્ષની શુભકામનાઓ! नवीन वर्षाच्या हार्दिक शुभेच्छा! নৱবৰ্ষৰ শুভেচ্ছা!
HAPPY NEW YEAR নববর্ষের শুভ কামনা! ନବବର୍ଷର ହାର୍ଦ୍ଦିକ ଶୁଭେଚ୍ଛା!
नवीन वर्षाच्या हार्दिक शुभेच्छा! নৱবৰ্ষৰ শুভেচ্ছা! نیا سال مُبارک ہو নববর্ষের শুভ কামনা!
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نیا سال مُبارک ہو ഏവർക്കും പുതുവത്സരാശംസകൾ ! নৱবৰ্ষৰ শুভেচ্ছা!
নববর্ষের শুভ কামনা! புத்தாண்டு நல்வாழ்த்துக்கள்! నూతన సంవత్సర శుభాకాంక్షలు !
नव वर्ष की हार्दिक शुभकामनाएँ! ಹೊಸ ವರುಷದ ಶುಭಾಶಯಗಳು !
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2022

Thank You