



VITTA

2020-21

Annual Finance Journal

FINANCE AND INVESTMENT CELL
SHRI RAM COLLEGE OF COMMERCE

VITTA

2020-21

Launched by:

MS. ZARIN DARUWALA

**Cluster Chief Executive Officer
India and South Asia Markets
Standard Chartered Bank**

Message From The Principal



Since its inception in 2009, the Finance and Investment Cell (FIC) has done phenomenal work in disseminating knowledge in the domain of Finance. Over the years, students of the Cell have come up with many innovative and inspiring ideas. The Cell provides various opportunities to its members for shaping

their thoughts - through publications such as the annual journal 'VITTA', newsletters and website blogs. With the able support and assistance of Ms. Saroj Joshi, the Cell's convenor, FIC has conducted several events such as the popular annual finance fest 'Episteme', the research festival 'Finergy', and online speaker sessions even during these unprecedented and difficult times.

Each year, FIC publishes 'VITTA', the annual finance journal, which not only presents FIC's research, but also summarises the Cell's journey in the last year. A range of sections covering behavioural finance, fintech, climate and sustainability, geopolitics, and developments in the pandemic have been included in the journal this year.

I wholeheartedly congratulate the team for the successful release of this new edition of 'VITTA'. I hope that the Finance and Investment Cell keeps up this wonderful initiative of developing financial instincts among young minds through their regular sessions, events and continued collaborations with the industry, to bridge the gap between pedagogy and practice.

PROF. SIMRIT KAUR

Message From The Faculty Advisor

During these tough times, I would firstly like to applaud the efforts of the members of the Finance and Investment Cell and appreciate their undying passion towards the field of finance. They have bolstered the legacy of excellence in research. Aristotle had rightly said, “We are what we repeatedly do. Excellence, then, is not an act, but a habit.” In this commendable journey of more than 10 years, FIC has undertaken diverse educational initiatives beyond the classroom, which has helped in widening the knowledge horizons of young minds, the outcome of which is the annual journal ‘VITTA’. Even the 11th edition of ‘VITTA’ is the representation of the vision of the young intellectuals, encompassing in-depth analysis of factual as well as behavioural aspects of the finance and geopolitical domain and their future therein, with the help of articles and well-developed research reports.

I congratulate FIC for the publication of the 11th edition of ‘VITTA’ and wish the cell great success in all their future endeavours.



MS. SAROJ JOSHI

Message From The Editor-In-Chief



When we released the previous edition of VITTA last September, many of us in the Finance and Investment Cell were optimistic about the release of VITTA 2020-21. Maybe, we thought, just maybe – things would go back to how they were once, and we would be holding up copies of the new journal in

the Seminar Room, with a flex banner saying ‘Launch of VITTA’ pinned to the red board behind us. It has been a challenging journal to compile, because of two tedious tasks – firstly, there was a lot to cover, and much could have been missed out. Secondly, everything, from preliminary research and basic organisation to editing and design, has been done online. Most of last year’s edition was completed online, but we were able to discuss the structure of the journal, and the various themes that it would cover, on campus, in the months of February and March 2020. The call for articles was also made in a year with a more properly defined timeline or academic calendar. That was not possible this year, for various reasons. All the same, it was a new experience - time-bound and online, and even though it was far from ideal, there were lots of opportunities to learn from.

We have tried to make sure that this edition can fit in well with the long line of FIC journals that have come before it. Like all of them, VITTA 2020-21 uses some new and many old ways of presenting our research, and is divided into various sections that consist of both opinion pieces and explanatory articles. The section on Behavioural Economics examines several interesting aspects of the relationship between individual behaviour and macro-movements, while Environment

and Sustainability looks at the problems of climate change and global warming through a business lens. Jigsaw Jargon seeks to explain more simply what complex financial theories and concepts are about, FinTech covers latest technological advancements in banking and financial services, and Geopolitics summarises and talks about political and socio-economic changes around the world. The Pandemic section is dedicated to assessing the impact of COVID-19 and its control measures, and the way forward.

FIC Times is our year-in-review, and presents the highlights of our initiatives and achievements over the last twelve months. This edition of VITTA also features an infographic section that attempts to make business statistics associated with leading IPOs, market capitalisation, and FDI easy to understand. The Experts Speak contains exclusive interviews with leading thinkers and personalities, and the Newsletter is a long research piece that evaluates a few new enterprises that have grown rapidly to achieve the unicorn status.

FIC steps into its 12th year in 2021 – and the celebrations are understandably subdued. We hope that the ‘new normal’ is not a prolonged one, and that we can be back on campus soon, debating, discussing, and learning. Even if that is not to be, FIC is committed to its objectives, and we will continue to facilitate knowledge sharing on any platform – through publications, speaker sessions, competitive events, and research sessions.

We are living through great changes in unhappy times. The future looks uncertain, often bleak. But one thing is clear: the more curious we are about the world, the more questions we ask, the more information we dig up - the more prepared we are for what the future holds. In some sense, we hope this edition of our annual journal exemplifies this spirit.

It is with great joy that I present to you VITTA for 2020-21.

PARTH KULKARNI

Messages From The Cabinet

DEVASHISH MIGLANI

Finance and Investment Cell has been one of the most challenging, testing, and uplifting things I've ever come across. If it weren't for FIC, I'd be sitting with an undifferentiated ambition, a dormant calibre. To say that it's a society, is perhaps an understatement. SRCC is a life-changing experience, and FIC its finest essence; you wriggle out of so much and you grow into so much more. Brought down through generations of novel prodigies, FIC is a breathing legacy that chooses to live on through its members. The stories of its success are unbound, and the lore of its hardwork unparalleled. To be a part of FIC, has been my greatest privilege. I hope this revolution grows in all in glory, each day, each year.



PRESIDENT

TARINI GOYAL



VICE-PRESIDENT

Magic isn't what we see in shows that create illusions or deceive us, magic is what is felt in certain moments with select people around us. FIC has given me those very magical moments in the last two years! From being a quiet first year, to managing the entire functioning of the Cell with just the 17 of us, and then finally mentoring juniors, it's truly been an enriching experience. It is amazing how work and bonds evolved from the "real world" of meetings at Nescafe or Irfan's to the virtual setup of zoom calls and google meets. I've learnt a lot through this journey of peaks and troughs, and managing this team of 80 bright minds has been fulfilling to the core! From working hours at a stretch to those endless 2 am conversations, the times with the FIC Cabinet have been my biggest takeaway from college so far! Wishing all juniors a successful year ahead, with memories to cherish and nostalgia kicking in!

RISHABH KHETAWAT

How lucky am I to have something that makes saying goodbye so hard! If I had to select 3 things to take away from the 2 years at SRCC, FIC would be 1, 2, and 3. I knew from day 1 at FIC that this is where I belong and everything else just perfectly fell in place. The society as a whole helped me grow tremendously. Be it working in fests, attending sessions, or navigating the streets of Chandni Chowk, each opportunity had something new to bring to the table. When the pandemic struck, I thought that the FIC experience would be dampened, but I am so glad to be proven wrong. For me, the F in FIC stands for family that not only comprises of my fellow members but also my wonderful seniors and juniors alike. Although my journey at FIC started in 2019, I am sure it won't end for a long time!



SECRETARY

RISHAB DIDWANIA



JOINT SECRETARY

I still remember my interview for FIC and to be honest, it feels as if it all happened a day back. The interview made me so curious about the things that happen at FIC and it delivered way more than I could even imagine. Getting in new teams and working on some really cool initiatives taught me a lot about different aspects and made me meet so many people who I can now happily call my friends. It gave me so much exposure and I got to work on completely different projects which enabled me to think differently each time and eventually learn at every single step. No doubt, FIC has been the major highlight of my college life and has given me so many memories which will stay with me for a very long time. The best thing about FIC I would say is the people at FIC and I feel lucky to have worked with amazing seniors, my batchmates and the juniors. Although my time as a senior cabinet member was in a complete lockdown, it couldn't slow anyone of us which led to FIC reaching even newer heights despite the pandemic. I wish the juniors all the very best for their future and I am sure the best days of FIC aren't here yet! Cheers!

Amazing and euphoric. Right from the induction to attending various sessions by experts and seniors to hosting Episteme and while this was all happening making lifetime worth of memories in oblivion, FIC's rollercoaster feels like a dream I want to live 42 times. From the most loving seniors to the best juniors, FIC has been the best combo college has given me. I will always be grateful to this society for giving me the platform to grow myself, for the knowledge and lifelong friends it gave me in the process.

AKSHAT DAGA



CHIEF COORDINATOR

SOMYA YADAV



CHIEF COORDINATOR

With almost 2 years in lockdown, FIC is the one happy memory of my college life I'll be carrying for the rest of my life. We have felt a plethora of emotions in the entire 2 years of our journey at FIC. The stress, the anxiety, all smiles when things fall in place, the void with Episteme 2021 concluding and what not. Most importantly, FIC has instilled in me the habit of "we" instead of "I". That's the level of belongingness I feel at FIC, that's how thick we are.

GOKULA KRISHNAN C



DEPUTY COORDINATOR

FIC is something that is nothing short of a family to me. It wouldn't be an exaggeration if I said that my college life would have been numb if it wasn't for FIC. I'd proudly say that my most precious learnings from the first two years of college came from FIC. Because, despite lack of prior financial knowledge or an experience in extra, I was able to grow as a person and the credit goes to FIC.

ABHIJAY PANDITA



RESEARCH HEAD

As my journey draws to a close at FIC, I look back onto my time here with a sense of nostalgia and fulfilment. I have been amongst the brightest and most original minds in my age cohort and have simply cherished my time here. In such trying times, to have such a team of batchmates and juniors is indeed a blessing. The two years I have spent at FIC have been integral to my development and growth. I remember writing in my first year, "FIC is the place to be." I couldn't have been more correct.

One of the best years of my life is definitely the time I spent at FIC, bonding with my friends, working online through out the pandemic, introducing initiatives, exploring new arenas, mentoring juniors and much more. I will forever cherish these memories. Today, we are no longer a team but a family. The amount of fun that I had being a part of FIC is way beyond imagination. Although the pandemic struck the world, I could have never imagined us reaching great heights and breaking boundaries together. I can say for sure that I am who I am today because FIC has helped me hone my skills, learn new ways and expand my mental horizon.

SAI LAKSHMI



RESEARCH HEAD

ARAVINDAAN N



DEPUTY RESEARCH HEAD

Being a part of FIC has been one of the most enriching experiences of my college life. Be it organising exciting competitions or conducting insightful research sessions or even curating a PR campaign, every activity that I have undertaken as a part of this esteemed society has helped me grow as a person. The fact that FIC manages to do all this without compromising on the fun part of things tops it all.

VIDHYA SRIRAM



PUBLIC RELATIONS &
MARKETING HEAD

FIC has formed the most significant and memorable part of my college life. From organising Episteme on campus, to the release of VITTA online, it's been one rollercoaster of a ride. While we obviously would have loved an in-person experience, it was not to be, and I'm elated to say that we made the most of what we could online as well! From fun brainstorming sessions in classrooms to PR campaigns made via Google form responses, I think we've seen it all. It's saddening to say goodbye to a society that became such an enjoyable part of my everyday life, however I'll always hold dear to my heart the learning, growth and friendships I've formed the past two years. Here's to FIC and the best team ever!

PARTH KULKARNI



EDITOR-IN-CHIEF

Two years with FIC can't be summarized in one message - but what a wonderful experience it has been! Amazing fun, lots to learn, and so many friends. FIC is an awesome, close-knit society that has been the best part of college.

VISHAL AGARWAL



ORGANISING & CORPORATE
COMMUNICATIONS HEAD

It seems like yesterday when I filled out the application form for FIC after the orientation and here we have organised major fests as a cabinet member. Indeed, tempus fugit! A major role that FIC played is getting through the pandemic or we would have spent the lockdown scratching our heads! FIC has given me a lot- seniors, knowledge, experience, peers and juniors- and it will always remain in my heart (and my CV too!).

IMAN BHATTI



ORGANISING & CORPORATE
COMMUNICATIONS HEAD

The past 2 years at FIC have been nothing but a treat for me. FIC, didn't only help me broaden my knowledge about basic finance and economic topics but also helped enhance my organisation and communication skills. It became an integral part of my college life and will certainly leave me with innumerable memories to cherish.

RAGHAV LADDHA



CREATIVE & TECHNICAL HEAD

I still remember the day I got into FIC, unknown of what a rollercoaster ride it was going to be. The canvas of knowledge with a perfect blend of fun and responsibilities is how I describe my experience at FIC. FIC has helped me to grow as an individual and always motivated me to improve myself. From enriching research sessions, organizing fests, hosting great speakers to designing VITTA and making lifelong friendships, the society has given me a bucket full of unforgettable memories. Wishing the new team all the luck and hoping that their efforts would bring fruitful results.

GAURAV AGRAWAL



CREATIVE & TECHNICAL HEAD

I still remember the day I was interviewed for FIC. When the results were out, I was shocked when my friend casually mentioned my selection, though I didn't expect it. From that day onwards, my learning hasn't stopped. This platform has allowed me to fully explore myself and into the high tides of financial knowledge enriched with fun. Amidst all the pros, the worst part of FIC remains not having something to quote as bad. Then, second year was especially more interesting, longing to meet our beloved juniors and those friends whom we could only connect with digitally. From working with the tech team to working as the tech team, I always enjoyed every bit of it. If it were not for FIC, I think my college experience would never have been so memorable. After these two years, if someone asks me if I would miss FIC, I would say, "everyday of my life". Hope the society achieves more and more milestones in years to come...

VATSAL SHARMA

My FIC journey has been rewarding, tiring and fun. FIC gives you the option to explore anything and everything. Would not change anything of how things went.



FEST COORDINATOR

Messages From The Members

SANYA MADAN

FIC has been a great blend of knowledge and fun in my first year of college. In these weird times of a pandemic, FIC never failed to provide us with the exposure to the world of finance. From research sessions to the informal ones, from brainstorming and organising the Intra-FIC event to Episteme, from attending enriching speaker sessions to publishing my own articles, from countless WhatsApp groups to late night meetings, FIC has seen me grow and make memories here.

ANIRUDH GUPTA

The opportunity to be a part of the FIC Family has been my greatest privilege at SRCC. Not only has it provided me an amazing platform to interact with young finance enthusiasts like me but also expanded my knowledge in the field and opened up many new avenues to explore. Be it attending those long but fruitful research sessions or tapping sponsors and speakers for Episteme, I have created some beautiful memories at FIC that I shall cherish forever.

FIC has been an indispensable part of my first year and I really look forward to continuing this marvellous journey in the coming year too.

MANAVI KUMAR

Someone once said, "The most beautiful thing about learning is that nobody can ever take it away from you." FIC has given me invaluable learnings for the rest of my life. These learnings do not restrict to academic, finance and research but extend to true meaning of friendship and mentors. Intriguing research sessions, noteworthy speakers, thought provoking articles and exhilarating events are just a few things that make FIC as special as it is. My journey has been nothing but exceptional and the memories I have made are one to hold on to for a lifetime and more.

YASH VERMA

To be honest, it's an honour for me to be a part of this esteemed society and work for it. Be it research sessions, speakers sessions or the events of Episteme, there was always something in it for me to learn. The seniors were very supportive whenever I needed them and helped me sail through difficult moments. Overall, it's been an enriching experience and it is something I would always cherish in my life.

NIKITA RAJAGOPAL

During the period when the world was grappling with COVID-19 and all schools and colleges closed, online college became the norm. Obviously it wasn't what I expected, but what got me through it was FIC. The experience here has been absolutely amazing. From research sessions to working in Episteme, FIC has helped me gain knowledge but also have fun at the same time. Today, college to me is FIC.

MANASVI MATHUR

FIC has been instrumental in giving direction to my passion for finance and geopolitics. The working environment has always been professional and my growth here has been comprehensive and multidimensional. From giving proper guidance to approach a situation to the autonomy to take decisions, FIC has truly nurtured my personality while also helping me imbibe qualities such as team work and commitment.

KHUSHI KAPOOR

FIC, SRCC has been one of the most prominent parts of my first year in college. Along with gaining immense knowledge and learning experience covering all aspects, from research to event management, close mentorship and guidance was also provided, which encouraged me to put my best foot forward. Most importantly, I was able to create strong bonds with fellow members and memories I will cherish forever.

NEHAL KAUL

To say that batch of 2020 is cursed wouldn't be an exaggeration. "Attending" college in the midst of a pandemic is anything but ideal, it's all the work but no fun. However, looking back at the past few months makes me realise that FIC has been a silver lining in it all. From the research session to event ideation for Episteme, to the long informal meets, FIC has given me great memories and friends and a big bundle of knowledge in such a short time.

ANUJA GUGLANI

The beginning of my 'virtual' college year left me skeptical as to whether I shall be able to enjoy it. However, the sessions and events at FIC not only gave me financial knowledge, but also the fun I desired in my college life. I would gladly look forward to keep working with the FIC.

AARUSHI DOOMRA

FIC is the best thing that happened to me in my first year and I will always cherish the learnings and the experience I have had till now in FIC. From obtaining knowledge and insights in various research sessions, participating in intra FIC event, designing posters, to organising the flagship event, Menace, the journey has not been less than a roller coaster ride. I have gained a lot here and will always proudly say that I am a member of FIC.

ARJIT SINGLA

Finance and Investment Cell is a body which has helped me integrate academic knowledge with practical exposure in areas such as finance, economics and geopolitics through various initiatives. The structure of the cell encouraged an individual to participate in organising, editorial, corporate communications and other activities which played a key role in holistic development. It is not just a society but a family that learns and grows together!

SALAV NIRLAULA

From witnessing some of the most inspirational moments to being part of the most fun activities, my time with FIC had it all. It was here I developed meaningful relationships in an environment perfectly suited for all of us to learn, grow and achieve our goals both personally and professionally. It would only be a mistake to not take away everything one learns here.

VANSHIKA ANAND

If I ever had to describe how learning, fun and friendship could sustain together, FIC would be the name defining it. From being shortlisted to research sessions, articles and organizing events for Episteme, everything has poured learnings into my ocean of knowledge and the support that I have gotten from my peers is what I will cherish forever. While political debates and geopolitics open various horizons, a touch of finance to it makes the experience even more holistic. Words would fall short for what FIC means to me!

THEJAS GUPTA BS

Starting college life in the virtual mode made me worry about my career and the insights which I expected to imbibe in college, fortunately FIC helped me to settle down this problem and even more than my expectation. I won't be hyperbolizing if I say that I have enhanced my knowledge more through FIC than through B.Com Honours Course. Even the memories which I made in FIC are the most memorable moments in the first year. And I am happy that I have got a year more to travel with FIC.

MAHIKA BHATNAGAR

One of the most amazing things that happened to me was getting into FIC. The experience in this society has been extremely rewarding. From learning about the world of finance in research sessions to gaining practical experience in ideating and organising large scale events from the ground up, FIC has taught me a lot. I'm honoured to be part of this terrific society.

BHAVIKA GOYAL

Being a part of FIC was the best thing that happened to me after getting into SRCC. From writing articles and newsletters to ideating a whole event from scratch this place has taught me all. Attending online classes became too intimidating and the only place that served me fun and learning on the same platter was FIC. If one wants a place to learn and grow together FIC is second to none.

ANUSHKA JAIN

One of the best experiences of my first year of college was being a part of FIC. From insightful research sessions to speaker sessions to the grand event - Episteme, I've experienced a truckload of amazing stuff here. The Cell enables us to unleash our potential. Not to forget the guidance and support of the best seniors, indeed. All in all, it's truly a wholesome experience!!

HARSH DIWAN

My journey in FIC has been really beautiful from the beginning. Right from the interview, the Cell was very friendly and has been the perfect place to learn and socialize. At FIC, I've learned that learning never stops and that you learn a great deal from people around you. Working day and night for Episteme and making strong bonds doing it will be the memories I'll cherish forever. FIC has been the highlight of my college life.

HARRITA SANJESH

Learning amongst and with brilliant minds is an exhilarating experience in itself and FIC has immensely contributed to this. In spite of the pandemic, the vigour with which the flagship fests were conducted acts as proof for the professionalism FIC exhibits. The exposure I've received has enriched my growing process and changed my perspective positively. The late night zoom calls and online pizza parties are memories among others I'll always cherish.

DEVANSH JAJORIA

Being a part of FIC has been the highlight of my 1st year in college. It always made me push my limits, whether it was the world of finance and geopolitics or it was designing, it always made me realise my maximum potential. FIC gave me memories I'd never forget with friends I'd bond with while working. I look forward to work with this society next year as well.



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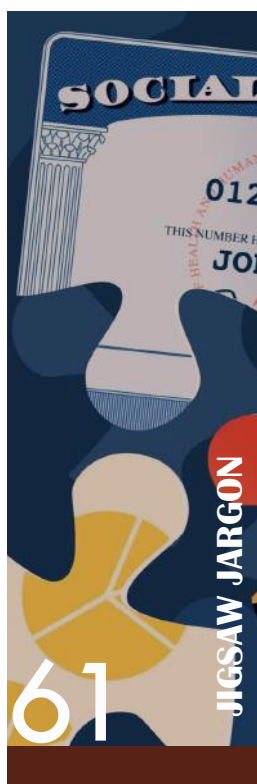
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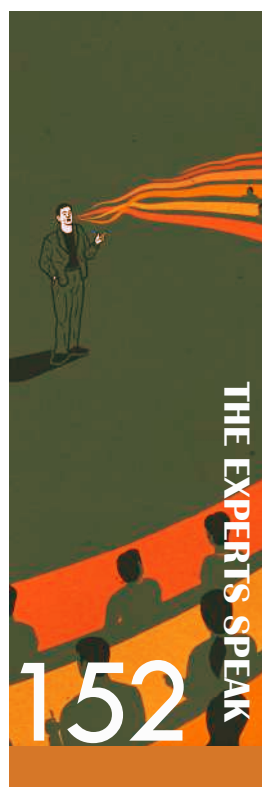
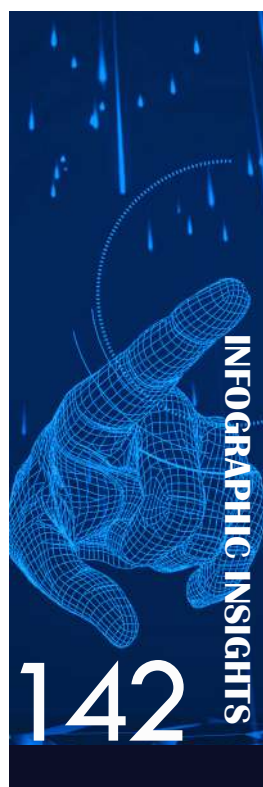
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FINTECH: REVOLUTIONISING FINANCE

Nelly Bakshi



The New Digital Normal

-Khushi Kapoor

Decrypting cryptocurrency as a potential form of currency and investments

The financial and economic world is ever-changing, its dynamic nature encourages revolutionary inventions and advancements. Humans have witnessed various shifts in the monetary system; barter got replaced by metal currencies, then came the gold standard and then finally the dominance of paper currency. Many believe it is now time for the next revision, the adoption of cryptocurrency. At present, there are mainly two forms of valuable assets in the economy. Firstly, financial assets in the form of fiat money, and secondly, gold which is a commodity, which over the years, has been accepted as money and investments after passing the test of time. Cryptocurrency is said to be in the first stage of this very path. This article aims to compare this advanced technology with the conventional components of the financial world, i.e. can it replace existing currencies as money, gold as an investment, and be a constituent of countries' reserves?

Cryptocurrency as Money

Money is a unit with three basic functions in the economy i.e. being a medium of exchange, store of value, and a unit of account. As a medium of exchange, money intermediates transactions and makes exchanges

between economic agents efficient and smooth. This function is the toughest to fulfill out of the three and cryptocurrency would thrive in it. Since cryptocurrency is mined from blockchain which is a decentralised system of ledgers, transportation would be quick and easy on the internet without any physical transfer. The transaction costs are merely a small flat charge or a percentage of the transaction amount which decreases with an increase in amount. Moreover, converting one digital coin into another is free. This makes large transactions convenient, even internationally since one would not have to convert currencies or pay huge sums for inter-country transfers.

Divisibility is another feature that cryptocurrency is well equipped with as it is divisible into smaller incremental units effortlessly. For example, the total estimated money supply in terms of the medium of exchange and store of value is \$52.1 trillion. If this entire money supply was to be replaced with bitcoins, limited to 21 million to be exact, then 1 BTC would be worth \$2.5 million approximately which would have made it impossible for people to use it as a medium of exchange for daily use. However, to curb this drawback, 1 BTC has been made divisible up to 8 decimal points, the smallest unit being 0.00000001 BTC which is called "Satoshi" making \$1 be equal to 4 Satoshis in the hypothetical situation discussed earlier, which is fairly manageable. Moreover, being intangible and in purely digital form, cryptocurrencies are highly durable and non-perishable, unlike paper currency.

One of the very first uses of bitcoin was to buy pizza,

and till very recently, one could have purchased Tesla cars with it. It is evident that anyone with a smart device and internet connection can exploit the utility of cryptocurrency with respect to ease of transactions, instant settlements, and accessibility. Lastly, the feature which makes cryptocurrency a compelling medium of exchange is its resistance to counterfeiting, even more so than gold. The decentralised blockchain makes it impossible for anyone to counterfeit it or forge transactions. Even though it is theoretically possible to “double-spend” or use the same coin twice, its practical applicability is extremely difficult and would require a lot of resources that cannot be accessible by any individual or organisation.

Cryptocurrency might fulfill the first function of money, but it being a suitable store of value is still debatable. Since it is merely in the first stage of adoption as a legitimate currency by all and is being highly speculated upon, all cryptocurrencies have extremely volatile prices. If the price continues to fluctuate, they would not be able to retain their value over time. Without being a store of value, no currency can be used as a medium of exchange as there would be no guarantee of future use. Since cryptocurrencies are finite and can only be mined by deploying a great deal of energy and resources, the price is bound to be volatile. This prevents businesses from investing in and accepting cryptocurrency, so as to avoid uncertainty and speculation, and this makes it an unstable unit of account.

Unfortunately, cryptocurrency further has some unique disadvantages over fiat currency. The most common one being the lack of governmental control over its supply, which would obstruct the authorities from exercising monetary policies in case of economic emergencies, the way they could control paper money.

The central banks would not be able to issue or withdraw any cryptocurrency from the internet. This inability of their value being influenced might sometimes be good for the economy and thwarting inflation, yet other times disastrous. Adding on to that, cryptocurrency cannot be tracked by anyone, not even the government, making it an easy means to evade taxes or for other criminal activities, something that has already been evident and is the main reason behind their ban in many countries.

Cryptocurrency as Investment

Cryptocurrency is more similar to gold than currency by its very basics. All cryptos including Bitcoin, Ethereum, etc have a limited supply which is laid down in the protocol given by the creator. Just like gold is finite in nature and needs to be mined in order to increase supply, cryptocurrencies also have to go through the mining process which uses abundant energy and resources. While investing in gold has often been considered a hedge against inflation where the purchasing power of a currency falls, the same can be the case with cryptocurrencies, in the long run, owing to the bounded supply, if or when people lose their trust in the sovereign-backed currencies.

Although cryptocurrency has an edge over gold vis-à-vis transportation and storage, the former being completely digital, it is just as susceptible to being lost or stolen. Once a digital coin is lost, there is no means to recover it. A study by Chainalysis concluded that about 20% of the total 18.5 million bitcoins have been stranded and lost in wallets. Due to the absence of intermediaries, there exists no backup for the same.

The negative beta of gold ensures it performs better



when the stock market declines and vice versa. This is because investors turn to the stable yellow metal as a protective asset when they suffer losses in the market. On the other hand, the volatile prices of cryptocurrencies make them strikingly risky. This coupled with the fact that it's close to impossible to forecast the performance of crypto due to absence of a correlation with other financial assets, makes it an unattractive investment opportunity for investors looking to diversify their portfolios. To some extent, this is because till now, only retail investors have been riding the prices and investing in digital coins. As proven by many studies, any market which has low institutional participation is bound to be unstable and prone to financial bubbles. Slowly but surely, as more institutions start putting their trust in this new advancement, as corporations like Morgan Stanley and Tesla already have, its prices are predicted to become less volatile.

On the other hand, as investors become more socially responsible and environmentally conscious about where their money is being invested in, cryptocurrencies can place them at a huge disadvantage. Having crypto in their portfolio can make it less green or sustainable as its mining and exchanging process is extremely energy-intensive and consumes a diabolical amount of electricity leaving huge carbon footprints, making it no better than the metal commodity.

Cryptocurrency Reserves

Even though cryptocurrency is in its very early stages of adoption and acceptance, it is forecasted to have exponential growth in the near future. Having talked about crypto as a replacement to both currency and gold, the next step in its trajectory should be countries' reserves. As of now, most countries keep gold as well as Foreign Exchange Reserves as backup funds in case their own currency rapidly devalues, or to cover deficits as well as fund imports in cases of acute emergencies and economic disasters. Fiat currency, being extremely liquid, can be sold off easily in the international markets, and gold, having proven to be one of the most valued and well-established commodities in the past thousands of years, attracts a multitude of buyers willing to take the yellow metal off of one's hands immediately. But as cryptocurrencies like Bitcoin gain attention, the scenario of countries holding them as

reserves in the next decade starts seeming more and more probable.

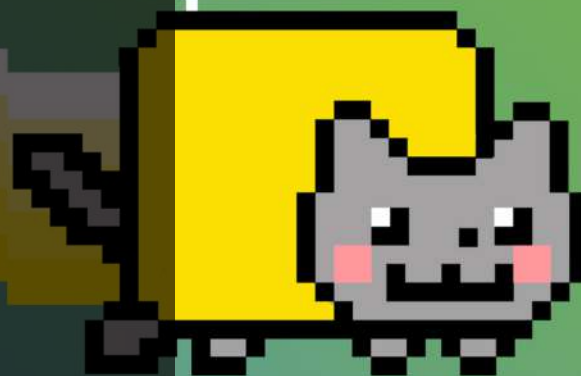
Digital coins are gradually proving to be excellent medium of exchanges and store of value. They have the potential of being universally accepted by any government, organisation, or individual. They are exceptionally easy to store and can be transmitted with ease and speed over the internet which would enable central banks of different countries to make reserve transactions and exchanges in real time without any third party involvement, as never seen before. Expensive purity verifications like the ones needed for gold would not be required owing to the decentralised ledger which prevents any counterfeiting. Moreover, all digital coins of a specific cryptocurrency are exactly the same, curbing the issue of weight, quality, and finesse. Reserve transactions using cryptocurrency could be done on a trust-less basis since no specific country could ever have complete control over any cryptocurrency which curbs all risks regarding the transfer of ownership.

At present, even though most governments do not trust cryptocurrency due to their inability to control or regulate it, few "rogue" countries have already started adopting this technological advancement in their reserves. Venezuela has established reserves in the form of their own digital currency and North Korea is rumoured to be mining Monero, as reported by Coindesk, which is relatively less energy-intensive to mine and can be converted to other cryptocurrencies easily. Hence, eventually, every country might hold crypto in their central bank reserves if few countries do so, to prevent any instability or disadvantage against political enemies. It is also likely that many governments have already started testing such scenarios confidentially.

Undoubtedly, cryptocurrency is a remarkably unconventional technology that has its own advantages as well as drawbacks in terms of replacing well-established financial assets. What seems far-fetched at present might be the new digital normal in the years to come, and it is a question of when, not if, the digital currency will replace the traditional items we consider money and investment, and eventually revolutionise the financial world once again.

A Beginner's Guide to NFTs

-Trish Gupta & Arjit Singla



Dive deep to understand the working of NFTs and how they get their value

Introduction

Non-Fungible Tokens, popularly known as NFTs, have recently garnered public attention and have been welcomed with widely contrasting opinions. While some think there is a bubble in NFT trading, others believe that NFTs are a crucial application of blockchain having the potential to revolutionize the digital art marketplace.

NFTs are defined as “one-of-a-kind” digital assets that can be bought and sold like any other piece of property, without having a tangible form of their own. NFTs are being sold in the form of digital art, games, cards, music, etc. A fungible asset can be readily interchanged. For example, 5 bills of 1\$ can be replaced with 1 bill of 5\$, hence making them fungible. A non-fungible asset is exactly the opposite and it cannot be interchanged. Thus, NFTs are said to be unique, non-interchangeable digital assets. The NFT marketplace has integrated digital art with blockchain through a tokenized system which helps to create scarcity of that digital art and earn money through it. They provide the ability to use cryptocurrency, specifically Ethereum, as mainstream. NFTs marketplaces such as OpenSea are currently accepting payments in Ethereum only.

History

The earliest traces of NFTs can be attributed to “Colored Coins” created in 2012. Colored Coins had various things in common with NFTs and were believed to become a new asset class. Trading of “Rare Pepe” memes achieved high growth during this time. A major boost came in 2017 when creative technologists John Watkinson and Matt Hall created 10,000 unique characters “Cryptopunks” on the Ethereum blockchain which became highly popular and helped inspire the NFT ERC-721 standard, establishing the current crypto art movement. Adding on to that, Cryptokitties also attracted a huge audience. During this time, there was a bullish sentiment for cryptocurrencies which assisted the growth of this marketplace. Since 2018, the NFT ecosystem has witnessed huge growth and in 2021, the buzz seems to be at an all-time high with various renowned personalities entering the NFT system.

Latest trends

In late 2020, NFTs have found popularity among various celebrities. Many internet sensations are promoting and trading NFTs. For instance, the English pop rockstar Eminem is set to sell his first NFT not long after his song was used to explain this concept on Saturday Night Live. A few weeks ago, Matthew Tkachuk became the first NHL player to have a piece of digital art of himself created and sold. Furthermore, patent market platform IPwe has partnered with IBM to launch non-fungible token patents. Mark Cuban has invested in an NFT data aggregator service.

called CryptoSlam and Justin Sun the CEO of the cryptocurrency platform Tron has recently acquired works by Picasso and Warhol worth \$22 million. Popular wrestling company WWE sold their wrestler Undertaker's NFT for \$10K during their flagship event WrestleMania. Moreover, seeing the success this token is enjoying, India's best crypto trading platform WazirX announced a new NFT platform was going to be launched for the Indian enthusiasts so that they can become familiar and trade globally.

Stakeholders

NFTs, directly or indirectly, affect people of diverse backgrounds ranging from artists to miners. The various stakeholders involved are:

1. **Artist:** Artist is the person who wants to sell his digital intellectual property (art, music, etc.) as an NFT and benefit from them. Some NFT arts are being sold for millions, and thus digital artists can earn high revenues as opposed to earlier due to an exponential increase in demand for NFTs. Furthermore, the artists get a pre-decided royalty on any subsequent sale. However, they have to pay various fees such as gas fees, transaction fees, etc to get their art listed.
2. **Buyer:** Buyers represent the demand for the NFTs. While few buyers use NFTs to support their favorite artists and share their work online, others may use them for speculative purposes.
3. **Miner:** To materialize an NFT contract, the transaction must be recorded on the blockchain. Miners are the people who are involved in this process and they charge transaction fees to do the same. Being a decentralized process, the higher the transaction fees awarded, the earlier the transaction will be recorded.
4. **Intermediaries:** Intermediaries form the marketplace through which the transaction takes place between the buyer and seller. They tend to benefit from the brokerage fees in the form of transaction charges. Some of the renowned intermediaries include Opensea, crypto.com, etc. while India's largest cryptocurrency exchange WazirX is also developing a marketplace for the sale and purchase of NFTs.

Talking about the cost and benefits that each stakeholder enjoys in the NFT marketplace, it is perhaps the miners and intermediaries who enjoy the highest benefit once they incur the initial fixed costs, as they enjoy the least amount of risk. The artists have to pay various costs and will benefit only if a buyer is willing to pay high charges for the NFT. The latter are at a potential risk of losing money if they purchase for speculative purposes. If the buyer purchases a collection thinking of it as a

luxury, then he is willing to forego the amount and is not affected by the prevailing price.

Pros and cons

NFTs have become a hot debate topic with their increasing popularity. NFTs seem to have many advantages; they are seen as an emerging revenue stream for a wide variety of sectors ranging across gaming, sports, arts, and technology. Moreover, NFTs make it possible to overcome the location barrier as a person can own a digital asset even when he is thousands of miles away and the trade can be executed very effectively as the transactions are simplified. Anyone with digital art can upload it on the given platform according to their convenience, thus helping them earn quick money while also getting their talent some recognition. They also provide increased security to the asset as it is saved in its original form, protected from damage, vandalism and theft. The transfer of ownership takes merely a few seconds and the payment gateway is also safe and trustworthy.

However, all that shines, isn't gold. No matter how many advantages a new technology has, there will still always be disadvantages associated with its use. The scholars who are not in favor of NFT claim that since the concept is relatively new, developing more platforms for their trading will be time-consuming owing to the verification and security procedures. This has created a monopoly amongst the already established platforms



that are charging higher gas fees. Moreover, currently NFTs are highly speculative in nature due to which the buyers may suffer immense losses in case of a crash. Another drawback is that it is currently only being traded using Ethereum. It is believed that only technology-minded people who are quite familiar with it are currently able to follow the process of buying and selling NFTs. The public is aware of this technology but is not able to use it because of the technical jargon.

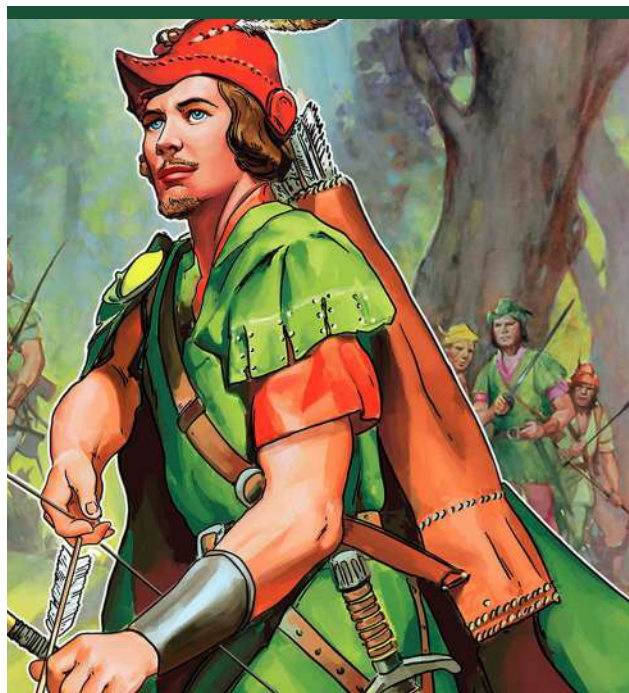
Legality

Now the question arises whether trading NFTs is legal or not. The rules in India regarding the use of cryptocurrency are uncertain as its trading is highly unregulated. The Indian Government banned cryptocurrencies in April 2018 which was struck down by the Supreme Court in March 2020. Since then, there have been several speculations about the future of cryptocurrency in India. In a report by Mint, Mathew Chacko, partner at Spice Route Legal said, "From the Indian perspective, the legal situation is unclear. In my opinion, NFTs are derivatives as per the Securities Contract Regulation Act. Therefore, you are not legally allowed to exchange, trade, sell or buy NFTs under the present Indian laws. Legally, you can only trade derivatives on authorized exchanges such as the ones for stocks or commodities. However, it may be possible to do a peer-to-peer matching decentralized exchange (DEX), because it isn't an exchange but a matching portal, where you only match buyers and sellers." Even if we consider the global scenario, NFTs do have legal issues. There are high risks of forgery and copyright infringements where a seller can pass an NFT without having a copyright. Due to the decentralized process, it may be difficult to identify a seller who is not bona fide and the buyer may lose his investment. Such issues in the legal framework may lead to a lack of stability and high volatility in the NFT marketplace.

Conclusion

To conclude, the future of this digital token, as described by many, is still hanging in the balance. Some witness it as the next big development in the sector of Arts and Craft. While others say blockchain-based assets are even more of a risk as there is a wide fluctuation in their values and hence deter from the idea of investing in these digital tokens. Nonetheless, the NBA is already using NFTs to sell highlight videos, artists are selling their art, and tech CEOs are selling their tweets. We are of the opinion ranging from neutral to positive. NFTs have recently gained attention and it may not be correct to say that there is a bubble. Some people who criticize NFTs think that digital art has no intrinsic & physical value and that makes it different from physical art. However, if we delve deeply into NFTs, they are an asset as well as an investment. American billionaire investor Mark Cuban has created an online gallery for showcasing his NFTs. The platform is known as "lazy" and it saw an audience of 2,00,000 viewers within the first 30 days. It is anticipated that more people will create online galleries and if they can reach a high audience, they can monetize the venture. Furthermore, throughout the ages, people have been paying high prices for physical art of their preferences and NFTs are no different in this regard. Thus, increased global popularity combined with the support of various personalities has showcased that NFTs can make a huge impact in the future.

It is likely that NFTs, being smart contracts, provide utility to cryptocurrencies and both of them (NFTs and cryptocurrency) can prove to be crucial to each other for providing overall price stability in the long run. The pandemic has created the realization that a digital shift is needed and now people are working along that line, looking to digitize anything they can.



Robinhood: English Folklore in Finance

-Salav Niraula

Deciphering the working of the famous financial trading platform: "Robinhood"

The divide between the rich and the poor is as old as money itself. Derived from the English Folklore, the symbol of fighting tyranny by taking from the rich and providing to the poor, came into existence a company with big shoes to fill and many promises to keep. The birth of Robinhood, an application revolutionizing the brokering world, stemmed from an endeavour to eradicate financial inequality by providing every individual with the means to access financial markets. They established themselves amidst strong competition, with a technological infrastructure to operate digitally in the cruel world of bulls and bears.

Stanford graduates Vladimir Tenev and Baiju Bhatt set up Robinhood in early 2013 intending to "democratize finance". They are currently headquartered in Menlo Park, California. The company sought to fish in the younger age bracket, the millennials, and it appealed to them by developing a gamified user experience with simplified and easy-to-use interfaces. In the early years of its journey, about 80% of its customers were millennials and the average customer age was only 26. They targeted an entire generation that wasn't investing in the market before. Their mission mantra resonated with the people and the platform gained over 13 million users by the end of 2020 and about 6 million just in the first two months of this year.

This large consumer base, however, was not attracted by the mere gamification of the investing process but also due to their serious commitments. Robinhood led the way by offering zero commission trading while every other broker was charging, a centrepiece for its business offering which also piloted many competitors to follow suit, and by October 2019, most had implemented commission-free structures. The company offered another breakthrough feature: no account minimums and this appealed to the mass consumers. It meant that the investors could fiddle in finance and markets with the minutest amounts. Although this results in considerably lower average account sizes than its competitors, around \$3500 to \$100,000 of E-trade and \$240,000 of Charles Schwab. However, this does not mean the smaller accounts don't have room to grow, with experience and time they can be just as valuable and one can get started right away provided he or she has enough funds to buy the investment they are eyeing.

Apart from amassing users, the company also amassed fundings, leading to its staggering valuation of over \$40 billion today after raising \$3.4 billion following investments from ICONIQ Capital, Sequoia, Andreessen Horowitz, Ribbit Capital, Index Ventures, and NEA. Before this, Robinhood had raised \$660 million in a Series G funding round in September and \$280 million in a Series F funding round in May led by Sequoia Capital. The company raised a total of \$5.6 billion in funding across all rounds. Robinhood was reportedly valued at \$12 billion in September, with that figure rising to about \$20 billion by the end of 2020, and valuation then doubling itself in February 2021.

What makes them stand apart?

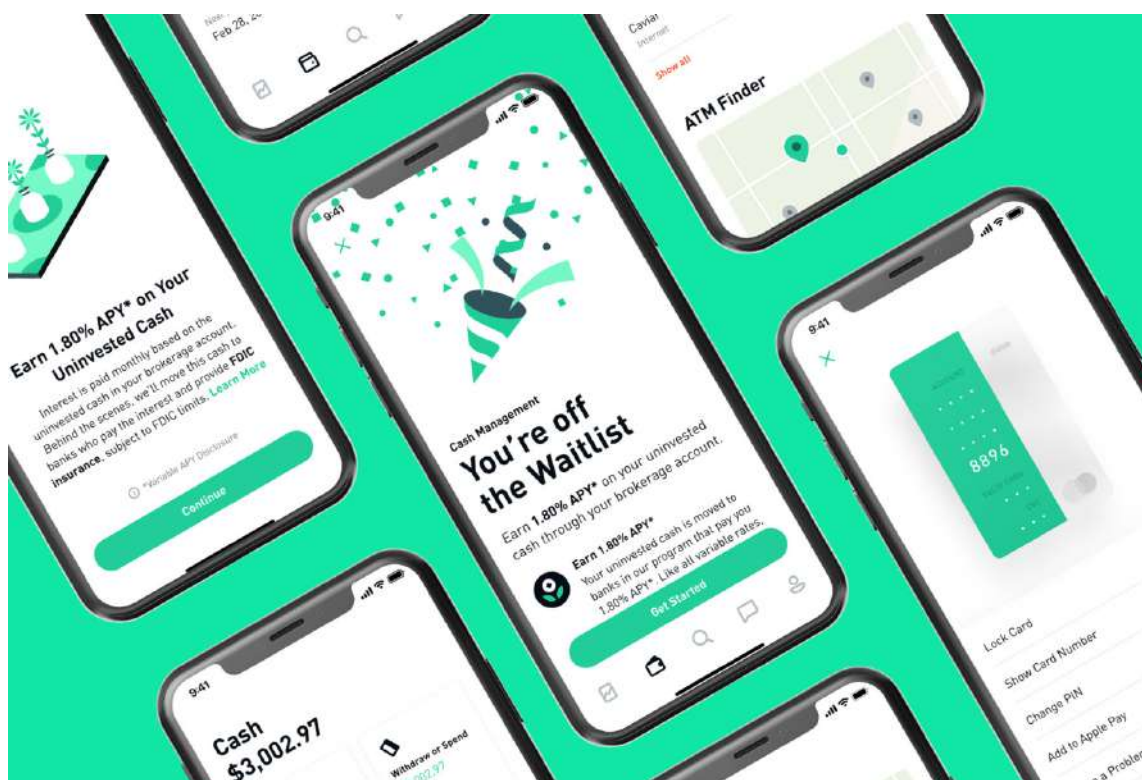
Much like a trading platform, Robinhood offers over 5,000 stocks and Exchange Traded Funds (ETFs) listed across U.S. exchanges, over 650 international companies listed on exchanges around the globe through American Depositary Receipts (ADRs). The platform does not support mutual funds and bonds generally available for diversified long-term portfolios. In December 2019, given their mission mantra, Robinhood brought fractional shares to its platform, wherein even for \$1 one could invest in a wide array of products no matter how expensive they are individually and have a truly diversified portfolio but they are non-transferable and illiquid outside the platform. This also enabled Robinhood to allow pocket-sized trades of cryptocurrency while other crypto-friendly platforms required a certain minimum to trade.

It also introduced another valuable strategy of the Dividend Reinvestment Plan (DRIP) which it did not offer previously for wealth building. DRIP was a program that allowed investors to reinvest their cash dividends into additional or fractional shares of the underlying stock on the date of dividend payment. Fractional Trade made an ideal pair with Recurring Investments, a feature wherein one has to set up a schedule (daily, weekly, etc.) and a dollar amount while the app automatically makes the investments at the time the person wants. Using this feature by itself does not bring out its strategic mastery but using it alongside fractional shares where investments are not made by the-share and one does not end up with unused cash.

On the 25th of January 2018, Robinhood announced commission-free trading of cryptocurrency, a new age in investing. By the end of that day, the list had over 1,250,000 entries. Today, the platform offers seven cryptocurrencies including the likes of Bitcoin, Ethereum, and Dogecoin with a feature that allows the users fractional sizes or dollar amounts rather than buying full coins. Robinhood's head of crypto operations revealed that trading jumped to 9.5 million customers in the first quarter of 2021 when it was only at 1.7 million in the last quarter of 2020. Additionally, the platform witnessed six million new customers for crypto trading in the first two months of this year alone.

Talk about the Money

With no fees on trade, Robinhood still manages to earn hefty revenues from different sources. Its premium subscription, Robinhood Gold with a monthly membership fee of \$5 provides additional investing tools, research and data, larger instant deposits, and margin investing. Uninvested cash which isn't brushed to the cash management network of banks is deposited in other interest-bearing accounts and the interest income earned by the broker. Income is also earned by the platform when loaning out securities held in your account to another trader or hedge fund usually for short selling the stock and all income from this method is retained by Robinhood. The company earns significant revenue from selling its customers' orders to high-frequency trading firms or market makers through a practice called payment for order flow. Although



legal and very common among retail brokerages, it is a highly controversial practice and very unlikely for a company built on an anti-Wall Street message to follow. Robinhood refers to this income as a “rebate from market makers and trading venues” where it is receiving payments, compensation, and other benefits for directing its customer’s equity and options orders to these market makers. The orders are not routed to a public exchange but are being executed privately in a dark pool. As such the practise is banned in countries like the UK. Payments are negligible for smaller trades but for a company directing trades in billions of dollars, it can earn considerable amounts. Critics argue that this method is unfair and misleading since the broker sells its orders to a firm paying maximum rebates and keeping markets opaque. Others say that this move enables quality execution of orders and efficiency in markets due to speedy trades. The platform generated revenue of close to \$700 million through this method in 2020. Robinhood has also failed to disclose its practice of payment for order flow or its trading statistics and as such has been victim to several regulatory actions. In December 2019, the company was fined \$1.25 million for not ensuring the best prices for its orders i.e. giving in to the highest rebates offered by trading venues. In December 2020, Robinhood agreed to pay \$65 million to settle a civil fraud investigation for early failure to fully disclose its practice of payment for order flow launched by the Securities and Exchange Commission (SEC), the apex body to regulate the securities market in the US. The practise of payment for order flow is under review by the SEC after the GameStop saga and if it does face prohibition, zero-commission trading itself would be endangered.

Trouble in Paradise?

Minor trades coupled with no commission fees and ease of use proved to be an ace in the hole for the company and soon they took on expansion projects, which probably were more than they could handle. In December 2018, Robinhood introduced a checking and savings account with an annual interest rate of return at 3.0% per annum against the national average of mere 0.09% per annum and the highest offered by any licensed bank of 2.36% per annum. While their intentions were solid, their decision to bring out an eye-popping product in a tightly regulated market couldn’t be implemented. Robinhood is simply not a bank and what they deemed insured was denied by the insurer. The very next day, it was rebranded as a cash management product and by the next month, the page and waitlists were removed from the app. It was relaunched with a providing rate of 2.05% and an actual body of insurance but this rate was cut to 1.8% on launch. The rate today is a fragment of the original promise at 0.3%.

Robinhood’s mission mantra was a heroic story but it wasn’t before long that it grabbed the company by its neck during its sleep. In June 2020, a 20-year-old student took his life when he misinterpreted his account statement which showed a negative balance of \$730,000 in his Robinhood trading account which was later discovered to be temporary due to unsettled trading activity. In his note, it read “I also have no clue what I was doing” and “There was no intention to be assigned this much and take this much risk”. He was involved in trading options, a fairly complex instrument typically used by experienced traders. While the app greatly assisted the common man, it also allowed the inexperienced to trade just as easily with fewer or zero hurdles. In December 2020, the Massachusetts Securities Division filed an administrative complaint and is looking to ban the platform in its state alleging violation of state securities laws by attracting new investors aggressively and using gamified interfaces allowing individuals with little to no experience to participate in advance and risky trading techniques such as options, short selling, etc. Robinhood has also failed to maintain the necessary infrastructure to meet demands and its rapidly growing consumer base. Several outages in March last year led to class action lawsuits following some of the most active days on the market where the Dow Jones experienced the largest daily point gain in history. In the major short squeeze saga in early 2021 coordinated by investors of online forums, Robinhood restricted trade of some highly shorted stocks with GME being the primary platform of those investors. They received large criticism and even mass protests outside their headquarters deeming the action as market manipulation to protect big hedge funds. This act drew attention from Congress, Republican Senators, and even personalities such as Elon Musk. Class Action Lawsuits were also filed against the company. Robinhood later released a note indicating the reason for restricting where the short squeeze triggered the need to post additional capital as collateral to meet regulatory clearinghouse deposit demands. Robinhood also does not disclose the diversity of its board of directors, C-Suite, general management, or by race, gender, and employees overall.

While Robinhood’s gamified experience is based on fast exciting trades and even pops confetti when completing one, it certainly attracted a crowd. Warren Buffet’s longtime investing partner, Charlie Munger said “Well, it’s most egregious in the momentum trading by novice investors lured in by new types of brokerage operations like Robinhood. I think all of this activity is regrettable. I think civilization would do better without it”. It is perplexing as to whether what he said was right or did Robinhood open a door to a future we have to get used to.

Blockchain: Boon or Bane?

–Yash Verma



Exploring how blockchain can be a gamechanger in the field of consumer goods

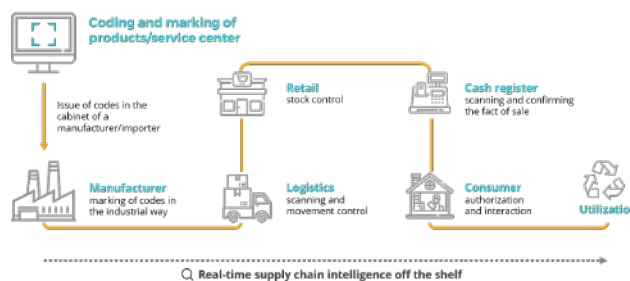
“Science is a thunder in the hands of a fool and a wonder in the hands of a genius”. With the advancement of science and technology and drastic changes taking place in the business domain, it has become imperative for business houses to do away with the traditional approach of conducting business activities.

It makes one wonder how we can have everything at our fingertips, this is the beauty of innovation. It is no secret that blockchain technology has been gaining traction since bitcoin traded at an all-time high of \$17000 per coin. Many people associate blockchain with bitcoin and other crypto-currencies but in reality, it is more.

A blockchain is formed by an incessant growing list of records, called blocks, which are linked and secured using cryptography. There are nodes across the chain which record the transactions added only when they are validated and confirmed by a consensus of nodes on the network. It is a public ledger platform that structures data and helps in iron cladding transactions. Blockchain has changed the dynamics of how supply chain management functions and provides a competitive edge to those adopting this technology.

Buying butter is an elementary and comprehensible example of how blockchain works. Blockchain ensures transparency via a digital record of where and how the milk was collected, its freshness, the process followed in the preparation of butter and its journey through the supply chain. This simplified example shows how blockchain ensures transparency and accountability, which can play a big role in stimulating consumer confidence and brand loyalty.

This article aims to decipher how the benefits of employing blockchain technology could easily outweigh their shortcomings. The key participants which will be covered are the suppliers, manufacturers and consumers in the consumer-goods industry.



Benefits

The following six benefits are provided by blockchain to the retail and manufacturing sector: product safety and originality, optimization of supply chain, finance, operational processes, promotional strategy management, and customer engagement and co-creation. The data associated with each event or

transaction is time-stamped, added to the record and it is made available to authorized participants in real-time. No individual would be able to tamper with the record and it can only be amended with the consent of all. In this way, data stored ensures trust between the market participants. Blockchain can serve as the singular source of truth that can be shared across organizations. It becomes easy for the organizations to instantaneously establish the accuracy of promises made between business partners and keep them as proof. The reliance on intermediaries can be reduced significantly and the spread of false information can be curbed. Network participants will be completely liable for their actions and contracts with each other and their consumers. This accountability will serve as the basis of robust business networks. The roles and participation in a given ecosystem will be reconfigured owing to a pervasive system of accountability. These established networks will also serve as a helping hand to young budding entrepreneurs and small business houses. On the whole, networks become more flexible and dynamic.

Lack of Supply Chain visibility costs organizations approximately USD 300 billion per annum. Ambition has consistently outpaced progress and this is consistent with respect to the developments observed in Supply Chain Management over the past few years. The modern supply chain remains replete with blind spots due to information that organizations either don't have or don't fully trust. Another function of blockchain technology is that the supply chains operate efficiently provided there is confidence in shared data. Blockchains strip uncertainty out of each step of the process by making data available. Moreover, it can detect bottlenecks such as the shipment of a partial order, goods delayed at customs or parts that don't pass certifications and quality tests. One area for blockchain application is extremely promising: the "cold chain" or temperature-controlled supply chain. Here, raw goods and products that require special storage can be distributed more safely. It can trigger actions and automatic adjustments in response to unforeseen changes in any number of conditions. This includes changing "use by" dates, rerouting goods for express delivery, pulling goods from distribution and applying penalties.

CPG and retail organizations gain trust when blockchains transform the supply chain. The authenticity and safety of goods can be verified for consumers. It becomes a lot easier for organisations to adapt well to new markets by tapping into preferences for ethically sourced goods or buying local. CPGs and retailers can promote products and brands, earn loyalty and gain insights into consumer needs in entirely new ways. Today, trade promotion remains a highly

manual endeavour, dominated by a profusion of siloed spreadsheets that are often out of sync and prone to error. Approximately 25-40% of trade promotion contracts may be incorrect or out of date. Calculating the performance of each promotion at the SKU level becomes more complex and cumbersome since no standard promotional compliance is followed by stores. Proof-of-Performance data is gathered manually from third-party point-of-sale data providers. Internal data, such as bill-of-lading and warehouse shipping details, must be manually requested from suppliers. Disputes and reconciliations are handled by email.

With blockchain, smart contracts between suppliers and retailers can automatically reconcile settlement claims against contracts and proofs of performance. This reduces human involvement in the settlement process. CPG organizations dramatically increase efficiencies and derive new insights with better access to and confidence in performance data, including data in real-time. Retailers reluctant to share data in a timely fashion could face new pressures to collaborate more closely.

Apart from providing numerous benefits to manufacturers and retailers, we cannot disregard the welfare and satisfaction blockchain technology provides to the customers at large. It modifies the global trade model to drive the security of personal data, transactions and the journey through the supply chain. There is complete transparency with respect to product details and key emphasis on its delivery from the source to the customer. It also improves customer feedback and provides easy access to the retailers or suppliers, whoever is concerned. The product replacement process becomes easier enabling the consumer to trust the brand.

Shortcomings

Every technological advancement has some shortcoming and it is no different for blockchain technology. While it may offer several benefits, it becomes necessary to address the downside and minimize its effects.

First of all, there is no industry standard for the formation of a blockchain. The blockchains are independent and there is no clear-cut idea as to how and what data should be captured. Therefore, it becomes difficult for the chain to communicate with each other and provide information. Each blockchain may have different data types and formats and accessing the same would require the corporations to develop a translation key and make the data comprehensible and compact. To address this issue, companies pertaining to a particular industry must partner and conform to a

particular standard so that the data remains consistent and integrated.

Secondly, it is necessary to identify whether the data should be kept private or public. The nodes are validated by their members, owing to the nature of being a digital ledger platform. A public chain would allow the members to see all information and transactions. Corporations reluctant to expose their strategic advantage in terms of trading partners, suppliers, etc would be highly sceptical. On the flip side, consumers want to know more about the products they want to purchase. Therefore, companies need to decide whether the information needs to be shared. The solution to this can be a Hybrid Blockchain wherein a public blockchain and a private network would be intertwined to restrict participation to only those invited. This would help companies to garner the benefits of distributed ledger technology without the associated risks.

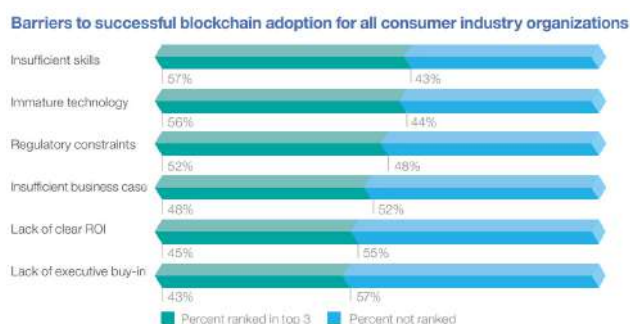
Another potential problem is the cost of implementing this new technology. Each transaction's data must be exchanged and validated to implement the blockchain. It takes place by using sensors. Some sort of technology must be installed to record the transaction to ensure that the data can be read, collated, transmitted and vouched for by the blockchain. But, who must bear this cost? Well, it is a simpler decision for vertically integrated companies. For companies that have many partners, however, it becomes difficult to divide the cost among the manufacturers, retailers and suppliers. One possible way of addressing this problem could be the establishment of a central authority that would be able to compute the cost benefits to different market participants and charge accordingly.

Future Prospects

For companies trying to implement blockchain technology, it is imperative to gain a deep understanding of

the supply chain. It is important to know the different players in the market who are going to play a key role as well as the target market. The next step should be to identify the other players in the market and establish a good relationship with them to be able to gather more information about the market and their willingness to participate in the network. Further, cost-benefit analysis and the return on investment (ROI) of implementing the technology must be derived. The best way for companies is to start using it on a single line of products and gradually diversify if it's found to be beneficial.

18% of consumer industry organizations surveyed have already started. Almost 70% of the industries expect to have a production network in three years. Organizations not investing in blockchain now should prepare to join the industry. The demand for Blockchain skills is fast outpacing supply.



Even with all the limitations mentioned, the benefits are bound to far outweigh the disadvantages. The future certainly looks bright for blockchain technology in the consumer goods industry and other industries as well. These inventions only bring all the science fiction we imagined as kids closer to reality. With that being said, there is a lot of ambiguity and hurdles to cross but it is bound to be a game-changer in the consumer goods industry.



Building Blocks of the Fintech Industry

-Trish Gupta, Anjali Tanwar & Manya Mittal

Exploring the multi-billion dollar industry that is changing the financial fabric of life

What is Fintech?

The term -FinTech was first used by a New York banker in 1972. With no particular universal definition, fintech or financial technology is usually described as an industry that uses technology to function outside the periphery of traditional financial services business models to make financial systems and the delivery of financial services automated and more efficient. FinTechs start-ups and companies use technology to provide basic financial services, influencing how consumers save, borrow, invest, lend, pay, and protect money.

Rise of fintech startups

India is transforming into a dynamic ecosystem offering fintech start-ups a platform to potentially grow into billion-dollar unicorns. The traditional Indian economy has grabbed the fintech opportunity which majorly started from e-commerce and smartphone penetration.

With the US being a leading destination in terms of the number of home-grown FinTech startups, India is no longer lagging in the game.

The period between 2015 and June 2020 has seen remarkable growth in new startups in India. Even during the pandemic, there has been a 60% increase in Fintech investments. Accounting for 42% of the fintech startups, the two technologically advanced cities of Bengaluru and Mumbai have to lead the fintech space in India. Additionally, Delhi, Gurugram, and Hyderabad have also added value to the fintech industry. The rest of India has 738 FinTech startups.

The transaction value for the fintech sector is estimated to be US\$ 33 Billion and has reached US\$ 73 Billion in 2020.

However, in recent years, India has come out of the shadows to emerge as one of the fastest-growing FinTech hubs. Tech startups are pursuing multiple aspirations.

Although certain studies by the recent launch of Goldman Sachs' new online lending platform, Marcus shows that innovation isn't coming only from the 2,000 tech startups but the existing financial institutions have also started to deliver their digital services.

FinTech investment in India has increased manifold, from USD 247 million in 2014 to more than USD 1.5 billion in 2015.

However, the main problem that India faces is the smaller number of angel investors as compared to the US. Investors are understanding that FinTech is more than just payments technology and investor interest is

beginning to manifest itself in a variety of sub-segments such as investing, lending, wealth management, credit reporting among others.

The major FinTech players in the market like Paytm account for USD 157.5 million, Mobikwik for USD 86.85 million, Policy bazaar for USD 69.6 million, and the list continues.

What are the factors leading to the rise of FinTech in India?

- Demonetization, in 2016, proved to be a blessing in disguise for tech startups who took advantage of the situation.
- Another significant pretext that led to the emergence was allowing the banks and wealth or assurance players to access platforms like UPI, GSTN & Digi Locker to innovate.
- The trust that people have started showing in the tech firms has further led to a strong rise in FinTech startups. An Economic Times survey shows that 91% of Indians prefer the firms they already use. However, in the past year or two, trust in technological firms has declined due to breaches and scandals.
- Increased blockchain security is also a factor. In these times when people have an extremely diverse and varied view on the blockchain, an EY report suggests that blockchain provides features like transparency and accountability which provides a high level of security.
- Another factor is insurance technology. It is used to detect risk and usage in real-time. It can analyze the physical environment with real-time data which saves consumers from overpaying.
- NLP-based chatbots elevate consumer experience by solving their queries. Additionally, this will create a whole new set of employment opportunities for the people.

Although the rise of FinTech startups in India might seem to be less in comparison to its competitive counterparts, it is growing at a steady pace. Moreover, an easy to hire and inexpensive workforce further provides a huge potential to this industry.

Pros and Cons

Some scholars believe that FinTech is the future of the country while others oppose this idea as they believe that the disadvantages of these companies outweigh the advantages. One of the most important benefits of these companies is that their dealings and workings are

done in a very transparent manner. So less governance would be required in these companies. Also, with the beginning of every new company comes a new sort of innovation in the entire financial ecosystem that not only gives a wider choice to the consumers but also provides them with new services at lower costs. For example, Zerodha was already in the brokerage business but many new FinTech companies like Upstox have entered the same industry to lower costs and provide new services to the customers. Another important advantage of these companies is that they are trying to give everyone a fair chance in economic activities. They are removing multiple barriers that are geographic, temporal, and economic in nature. Technologies such as crowd-sourced funding platforms, initial coin offerings, and other emerging developments let the masses participate in investment opportunities. Moreover, there is a great degree of personalization in this sector. The services these companies provide are tailor-made to suit the needs of diverse customers and not just a single set of consumers.

The FinTech industry is not free of limitations. One major disadvantage of FinTech is that these companies require the consumers to be well equipped with the latest technology as they keep updating their platforms. Since most parts of our country are not well equipped with technology a digital divide may be created and there can be issues of inequality. Another issue is that of a data breach causing huge privacy concerns. All the financial and personal data of a person is stored by these companies but a single breach can lead to the revelation of all these files. For instance, Upstox had suffered from a data breach wherein sensitive information of around 25 lakh customers was exposed. FinTech like other industries also fails to earn the trust of investors sometimes so this becomes a problem as they are not able to get the seed capital and other investments in time. This reflects negatively on the operations and functioning of the company.



New Emerging Faces

Many new FinTech startups have emerged as popular faces in today's market. A lot of them have entered unicorn clubs while the others are on the verge of entering this prestigious club. The valuations have skyrocketed and these companies have found a wide customer base.

Cred is an example of a startup that gained popularity in a short period. This startup was founded in 2018 and within a span of 3 years it has entered the unicorn club. CRED's main feature is allowing users to make credit card payments through its app for which they get rewarded. The company was able to raise \$215 million from Falcon Edge Capital (US), with participation from Coatue Management LLP. As a result, the valuation soared and reached \$2.2 billion. It also has been a principal sponsor of The Indian Premier League since 2020. The company in the fiscal year of 2020 posted losses amounting to Rs 360 crore. Another company that has been on the list of investors is MobiKwik, a company that provides a mobile phone-based payment system and digital wallet. The company was founded in 2009 and it took the company around 6-7 years to gain recognition among the consumers. The company has plans of going public and has been finding investment bankers to help them out in the IPO process. Recently, some allegations of data breach were put on the company but the company denied them. However, in March 2021 an audit was started to find out whether the breach took place or not.

PolicyBazaar is a startup that saw a small growth in its initial years but now has quickly become very popular. Founded in 2008 as a digital platform - website and app - where users compare financial services from major insurance companies, this company has escalated its operations quickly and has now expanded its area of

operations to the United Arab Emirates. Recently, the company also raised \$75 million to boost its expansion plans in the Middle East and the UAE. The company is in talks to issue its IPO in the next 12-15 months. The company claims to process nearly 25% of India's life insurance and over 7% of the country's retail health cover.

RazorPay is another name we come across every day when during digital transactions. It was founded in 2014 to provide payment solutions that allow businesses to accept, process, and disburse payments. Razorpay's valuation has tripled in less than six months after it attained unicorn status. In early April the company raised \$160 million at a valuation of \$3 billion in Series E funding. Razorpay currently powers payments for over five million businesses, including the likes of Facebook, Airtel, BookMyShow, Ola, Zomato, Swiggy, Cred, and ICICI Prudential, among others, and is all set to reach 10 million businesses by 2021. Fintech startups have massive potential. Some of them have already claimed their share of fame while others are on their way to glory. These success stories are quite inspiring.

The Future of FinTech

The rise of FinTech startups in the industry, improved digital infrastructure, internet, and smartphone penetration, and streamlining the financial processes have resulted in the exponential growth of the FinTech industry. India saw the highest FinTech adoption rate of 87% out of all the emerging markets in the world, according to recent reports. The report also stated that the FinTech market in India is growing at a compound annual growth rate (CAGR) of 22.7% approximately during the 2020-25 period. The FinTech industry has gained substantial attention from startups, venture capitalists, financial institutions, and regulators.



The future of the FinTech industry looks bright as Fintech entrepreneurs continue to disrupt the financial services industry in various ways. Below are the sectors of FinTech which will roll out the next set of innovations:

- **Alternate lending:** Small entrepreneurs had a difficult time borrowing money from traditional banking institutions as the banks found it unprofitable to lend them money. Fintech entrepreneurs saw this as an opportunity and took advantage by diving into a peer-to-peer (P2P) based lending and developing web platforms that brought together the lenders and borrowers on the same platform at desirable interest rates. Other alternative lending avenues like crowdfunding are set to emerge as this trend continues to grow.
- **Blockchains:** Originally, transactions required a third-party validation to take place. With the introduction of blockchains, the transactions were provided cryptographic protection and eradicated the need for third-party validation. Cryptocurrencies that use blockchain technology have already become a hit. Blockchain technology is set to grow rapidly and foray into various other sectors such as telecom, media, travel, and hospitality.
- **Robo advisory:** Earlier intermediaries played an essential role in bridging the gap between the stock market and the investors which led to non-traceable and inefficient transactions many times. Robo-advisors will make this process traceable, easier to access, and transparent with minimal human intervention.
- **Digital payments:** With the rise of FinTech startups, people have started using mobile wallets in place of traditional wallets in a lot of places. This has increased the speed and convenience of payments. Mobile wallets are the future as ATMs are predicted to become redundant.
- **Insurance sector:** Presently, one can find various online platforms where they can compare their insurance policies to make rational decisions. FinTech will help streamline the insurance value chains through automation leading to increased dimensions of products available in the market and reduced cost of operations.

FinTech has affected the banking and financial sector of India tremendously. Payments can now easily be made via the internet minimizing the chances of fraud. Fintech software helps in choosing the best investment by providing the users with a comparative analysis of different funds. Insurance can be availed online with all the customized plans and details available. All processes are now cashless and digital. Due to the emergence of the FinTech industry in the country, new businesses and project ventures can raise the funds from a large number of people in the form of equity. Therefore, FinTech has expanded the scope of financial services on digital platforms in the country.

The Reserve Bank has expanded the scope of priority sector lending to include start-ups and further ensures a higher degree of interoperability among startups. The exponential growth of fintech companies has contributed to accelerating financial inclusion. Latest technologies like AI and ML will further increase digital adoption in the country, facilitating the work for both the industry and the consumers in the upcoming years.

According to reports, India witnessed 3,435 crore digital payments in 2019-20. The government is working towards its vision of digital India to become a USD 1 trillion digital payments market. FinTech is the way forward for the country to accomplish its goal of becoming a 5 trillion economy by 2025.

Conclusion

The fintech industry has emerged as the new big thing in the Indian Economy after the IT sector. This sector is expected to rise in valuations as many new investors are looking to invest in this sector. The fintech sector has tremendous potential and room to grow. It has become a crucial topic in today's financial world whose stories of success will be embedded in history and will be remembered for a long time.



The More the Merrier?

–Chirag Banka

Exploring digital payments and the UPI ecosystem of India from a regulatory point of view

The last decade has undoubtedly changed the digital payment landscape of India. UPI, phone wallets and apps like Paytm and google pay are now household terms for us. The process of digitisation has been widely accepted which has benefitted the whole digital payment ecosystem enormously. This has largely been due to the incidents of the last five years, everything that has happened ranging from demonetisation to the COVID-19 pandemic. The digital payments ecosystem has been acting as the poster boy for the banking industry that is changing the overall dynamics.

UPI(Unified Payments Interface) was launched in April 2016 and it hasn't looked back ever since. The increased smartphone penetration in every household and cheap internet has made these mechanisms easily accessible to almost everyone. The major push towards digital infrastructure was done after demonetisation, making it easy to facilitate such high transactions and volumes. Just to give it a perspective, UPI crossed ₹5 lakh crore in value in March with over 2.30 billion transactions, closing the financial year 2020-21 in a big high. How are such transactions regulated? Is it the RBI? RBI is engaged in making rules and coordinating with different entities but not in the day-to-day handling of such transactions.

This is where the NPCI comes into the picture. It is the main regulator and operator of UPI. It is a non-profit entity created just for this purpose. The National Payments Corporation of India reigns as the sole operating retail payments and settlement systems regulator in India. It might be one of the 'too big to fail' entities in the retail payments sector. The problem is that there's not much competition and innovation and the concentration risk is just too high. Any default or technical glitch or fraud could cost the Indian economy dearly. In 2020, NPCI also set up the NPCI International Ltd to facilitate its ambition to venture into new international markets and co-create payment systems with other nations. However, this is not the only monopoly in the sector. Big tech giants such as Google, Facebook (Whatsapp), PhonePe, etc. are already in the race to catch a hefty market share in the retail payments sector. So, in order to tackle this monopoly, NPI has capped transactions at 30% of all UPI transactions taking place for a single third-party aggregator. This rule will come into effect from January 2023 giving such TPAs enough time to accommodate these changes. This is done so that newer entities can come up, providing a choice and efficient services to the customers.

Financial Profile Of National Payments Corporation of India

In Rs Crore

Parameters	FY2017	FY2018	FY2019
Total Income	546.7	728.7	980.2
Operating Expenses	59.9	65.2	77.6
Surplus	163.5	228.3	306.6
Total Assets	1012.7	1307.8	1892.5

Source: NPCI Financial Statements

The Reserve Bank of India wants to minimise the concentration risk, encourage competition and innovation in the fast-growing sector and is seeking to invite more players into the industry by relaxing entry and other regulations. It has set up a framework for the authorisation of pan India umbrella entities into the retail payments sector to rival NPCI. The capital norms are set such that no single company can be the owner of such an entity. A single promoter group cannot hold more than 40% of the entity making it necessary for at least 3 companies to join hands and form this entity. That is why it is known as a New Umbrella Entity (NUE). Also, a massive net worth of Rs.300 crores is required to be maintained at all times to ensure that only big-ticket players enter the markets. This NUE is to be established as a 'for-profit' entity that would help in increasing competition, innovation, and efficient service to the customers. RBI believes that the digital transformation in India is too much to handle for a single corporation and is therefore relaxing norms to allow new entrants to make the dream of a 'cashless economy' a reality.

These new NUE's could also come up with various new incentives for the people to shift towards digital payments and create awareness for the same. The scope with which these NUE's will be allowed to work is diverse and endless. If 'for-profit' entities are entering the space, a level playing field should be created for NPCI, and payments' platforms will remain a 'public good'. It will be ensured that NPCI remains relevant even after such NUE's are established.

So far, half a dozen have applied for the NUE license and the list is no short of big names. It seems like every big company with the slightest connection to finance wants to get a piece of it. It includes Facebook, Google, Reliance Industries, and Infibeam Avenue and this is just one consortium. There are also the likes of the Tata group partnering with Kotak Bank, HDFC Bank, and Flipkart. Other consortiums include names such

as Amazon, Axis bank, Pine Labs, and ICICI bank. The list goes on. This gives a perspective as to how much the Indians, as well as the foreign corporations, have welcomed the NUE norms of RBI and how lucrative it is for them. But is that the reality?

Will the much-awaited NUE deliver as much as it hoped to do? There have been arguments placed that this mechanism could lead to a potential conflict of interest. Companies are worried that there is no particular demarcation between these NUEs and the NPCI. Either of the two can have a bigger autonomy which will allow them to dictate terms in the market. These concerns are now particularly relevant after the NPCI suddenly capped the volume of UPI transactions. Also, other than the factor of 'concentration risk' there isn't really a concrete argument that supports RBI's new rules of setting up such entities. NPCI, being a non-profit entity, facilitated UPI operations to run as a Public Digital Infrastructure (PDI) rather than as a private sector monopoly as is prevalent in most parts of the world. Payments are a livelihood of the economy and allowing private entities to set up shops here is somewhat outrageous. Some of these arguments hold water while some do not. RBI is always going to act as a facilitator and in case these NUEs get more powerful, it will always be there to contain such moves. Furthermore, every NUE is a combination of lots of entities bringing its risk exposure to low levels. Ideally, RBI should come out with a detailed procedure for the system's mechanism and its execution. Moreover, some monitoring strategies should be carried out by the RBI in the initial stages and then allow it to take full steam.

The tide could shift either way. Clearly, NPCI will have to be ready for these deep-pocketed NUEs, which could also result in benefits for the ecosystem with NUEs living up to all its anticipated hopes. This would definitely lead to more options for the customers. Only time will tell whether the RBI's bet on NUEs is a big hit or miss.

BEHAVIOURAL THEORIES & RATIONALITY





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The Financial Crisis of 2007-2009

The financial crisis of 2007 to 2009 in the United States of America was followed by an unprecedented boom in home prices. A question that is borne out of curiosity is why house prices had risen and fallen. Interest rates were not low enough to become a deciding factor. It was not the building costs going up. It was not the population surge.

It was the result of a narrative that spread about home purchases, homeownership and the “American Dream”. The narrative included a belief that home prices were on an upward trend and a lot of smart people weren’t satisfied with one house - they were buying two or three houses and were making profits. But it ultimately crumbled, and it crumbled when the narrative changed—when people started talking about a housing bubble and about the foolishness of the investors in it. Suddenly, it became embarrassing to have invested in homes, and overnight, the narrative changed and so did the numbers.

Another factor adding to contagion was the development of house price indexes for existing houses. Newspapers began printing the median price of existing homes. The Case-Shiller home price index first surfaced in 1991. These indexes allowed news media to regularly announce large shifts, thereby solidifying stories about shifts in home prices.

The business of ‘narrative identification’ is also political. History shows a succession of advertising promotions for homeownership itself. In the States, these began with the ‘Own Your Own Home’ campaign. The campaign, like the savings and loan association movement in the US and the building society movement in the United Kingdom and Europe, was an endeavour to help people build up some savings.

Bitcoin

Bitcoin’s remarkable popularity can be explained through its relation with a variety of narratives, including an anarchy narrative - tied up with freedom and the “hacker ethic”, the wish for economic liberty, the fear of economic inequality, and the sense of helplessness.

There is another powerful narrative around Bitcoin: a cosmopolitan class narrative — the desire of many to identify with the advancing world and be a part of the future. We want to be with the ‘in’ crowd, and so here is an easy way to do it. We don’t have to understand it, but now we’re a part of it.



Thrift Culture

In the 18th and 19th centuries, most people had no notion of retirement or sending their children to college, so they had no incentive to save. Over the 19th century, the narrative of the ‘Savings Bank Movement,’ stating that the poor should be taught to save, gained momentum. No one thought that a depression might be caused by ordinary people heeding to the propaganda and trying to save too much because one might argue how everyday Americans could knock the economy into depression by not spending their unsubstantial money. In any case, the dangerous narratives infecting society were thrift and self-reliance.

While considering recent events, two very prominent narratives come into the spotlight.

The COVID-19 Pandemic

Some argue that COVID-19 is a narrative pandemic. Like all pandemics, the new coronavirus demonstrated a narrative epidemic curve, one that rose to a peak as contagion exceeded recovery or death, and then began to fall gradually as recovery rates outpaced new cases. The long-run forecasts of the Center for Infectious Disease Research and Policy show three possible circumstances – a “peaks and valleys” scenario that comprehends the increase and decrease in new cases and new deaths over a protracted period, a “fall peak” scenario that identifies a surging outbreak that dwarfs what has already been seen in the USA, or a “slow burn” scenario that shows cases moving at approximately the current rate until 2022. Epidemiologists warn that the slope will only maintain its downward trajectory as long as people take precautions like staying indoors, practising social distancing, and using masks in all public places. The narrative they hear will decide whether they follow these precautions or not.

George Floyd and the Black Lives Matter Movement

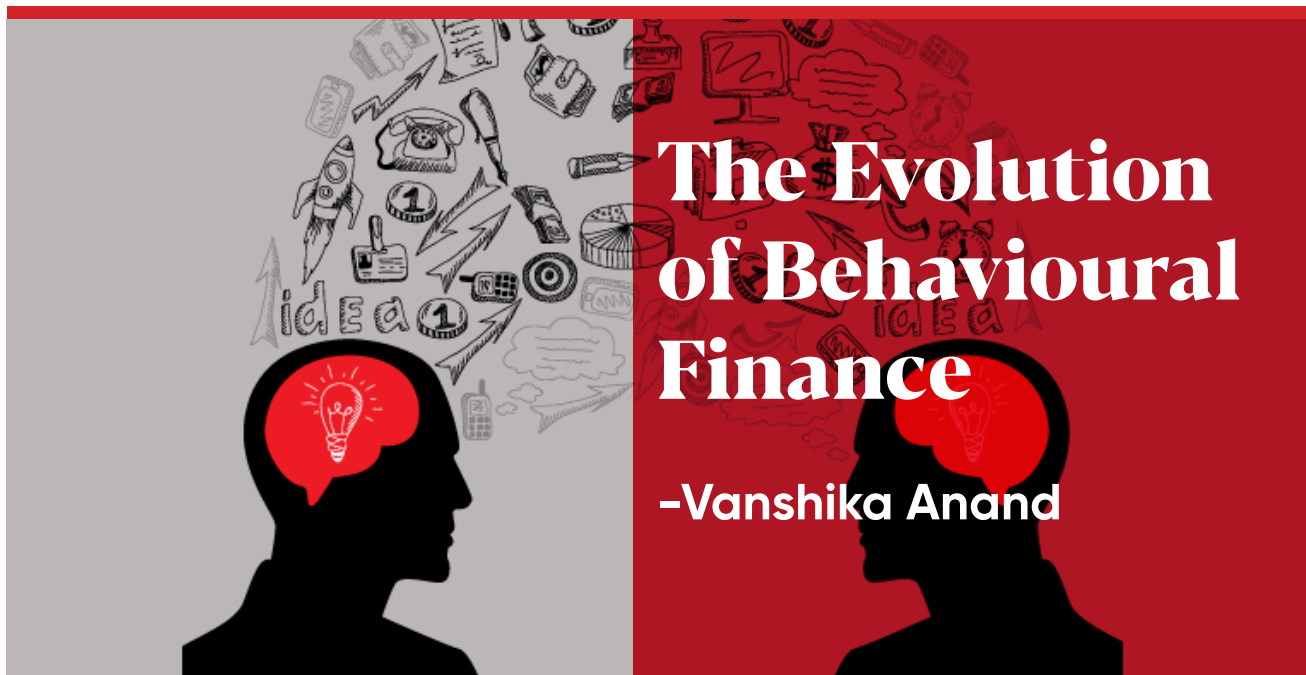
The narrative surrounding George Floyd's death, brought to our knowledge by the way of a video, has created a grim atmosphere globally. The video mournfully exemplified what many already knew, about police brutality and its disparate effect on black men and women. The narrative urged people to pay closer attention to it, to stand up and demand change. What was new or different about this was in the way it was done. There were similar videos before but we couldn't see the faces. We didn't see the smug look on this man's face, his total indifference to what was happening. All of these things render human emotions and make things contagious - evident from how the video was widely shared and triggered an outcry around the world.

Numerous timeless narratives come back again and again mutating along with each new era. These stories

shape policy. But, answering the question of whether we can quantify the effects of narrative economics is not easy. It calls for more data in the form of interviews that question people about the stories they tell, hear and believe themselves. It demands a database of sermons that encapsulate the most essential passion plays of the day. Conventional research methods like focus groups can be used to supplement macroeconomic models. They help elicit conversations on economic narratives and new technological tools like textual analysis including counting of words and phrases in digitised texts.

We have to recognize that people are not rational. Their attention is caught by certain narratives, and they live on as if those narratives were true for a while until they forget them.





Exploring the origin of theories in the field of behavioural finance

A world loaded with luxuries prompts people to multiply their wealth, the psychology behind this being their desire to become rich. As people have different tastes and preferences, the path that they choose to gain prosperity depends on their thought process. Their selection between investing or saving and their behaviour is influenced by both external and internal factors.

Behavioural Economics is a broad term that brought to light the relationship between economic actions and human behaviour at macro and micro levels. Behavioural Finance is a part of Behavioral Economics and first came to notice in the 1980s. It has continued to evolve since then.

While studying how short term price changes occur, it is amazing to discover that there is no actual logic behind these fluctuations. Rather, they are driven by the mood of the investors. As the customer is the ultimate king of any market, in the world of capital budgeting, trading and investing, the investor decides the direction of the flow in the market. However, this differs in practice. Therefore, the classical financial models cannot always predict the future with their calculations.

Human judgement and decision making are dynamic and uncertain. The 1759 book "Theory of moral

sentiments" by Adam Smith discussed emotions including pride, disgrace, egoism and insecurity and how these emotions impacted the field of Economics but soon lost momentum, yet it came into picture again in the second half of the twentieth century. In 1985, the Journal of Finance published articles about stock prices and investor incomes explaining how people tend to behave rationally only within specific limits and how the intervention of psychological factors disrupts the behaviour of an investor. Furthermore, there are two aspects to take into consideration when analysing behaviour, micro and macro level. The former is used for monitoring the behaviour of an individual investor and the latter for examining the Efficient Market Hypothesis (EMH).

The Efficient Market Hypothesis believes that markets are perfectly efficient and the present value of the stock perfectly displays all the necessary information. It assumes that competition between investors seeking abnormal profits drives prices to their "correct value" and all investors are not rational, rather the markets make unbiased forecasts of the future. The consistency of EMH began to be questioned in the 1980s.

On the contrary, behavioural finance assumes financial markets to be informationally inefficient. It also assumes that they might fail to reflect the fundamentals of Economics under limits of arbitrage in the financial markets and conditions of irrational behaviour. It helps in analyzing the anomalies of the markets. Robert Shiller brought about the idea that markets are efficient at the micro level while they are inefficient at the macro level; movements at the individual level made more sense than the movement

of the entire market. He also proposed important concepts in behavioural finance, one of which is the Feedback Model. This model explains how trade is based upon the feedback of others instead of the latest information. This leads to inefficiencies that traditional finance becomes unsuccessful in explaining.

Though nowadays investing has become a popular exercise via adequate availability of data and information, it makes investors go through a lot of emotions. From the pain of seeing the value of their investment fall to the pride of making a correct decision, emotions may also direct the market far from being efficient. This gives a free entry to price inefficiencies in the market which proves to be another market anomaly. In reality, the theories of behavioural finance are the prosecutors and vindicators of traditional finance theories.

Standard finance has not been able to justify the reason behind the irrational behaviour of the investors as observed by the market and this has curiously helped to figure out the direction in which the emotions flow. The initial theories of standard finance had made people widely believe in them as they were justified to a great extent. The foundation for these theories was laid by basic and simplified assumptions which surprisingly proved to have little fault. Traditional finance assumed that the investors were perfectly rational; they had the perfect information with their sole motive being self-interest.

The Expected Utility Theory, one of the most important theories, assumed that rational investors were only interested in maximizing the marginal utilities of individuals, subject to their situational constraint. It also assumed that the investors had access to good and sensible information which was reflected by the movement of the market and change in the prices of the stocks. Another important theory was the Modern Portfolio Theory which categorised portfolio managers and investors as risk-averse, risk-takers or risk-neutral individuals. Theories like these further became the development models for the Capital Asset Pricing Theory, Efficient Market Hypothesis and Arbitrage Pricing Theory. APT was developed back in 1976 to address some of the limitations of CAPM and hence, assumes that the rational investors use the opportunity created by the irrational decision making of some investors and ultimately correct the discrepancy in the pricing of securities. Except APT, all the above mentioned theories actually believed in the rationale of those investing and considered it to be the only indicator in the market. APT, on the other hand, considering how sometimes even the highest degree of rational and experienced players end up taking unintelligent decisions while being overwhelmed.

The views expressed by Adam Smith about the psychology involved in the market started to gain momentum as well. Philosophers like John Benthamen started explaining why happiness makes it almost impossible for a person to produce a decision devoid of emotions. Many other researchers discovered how stock exchange prices were dependent on the mental attitude of people and how their rationality is restricted to two factors, the information that they get and the cognitive limitations of their mind. This rationality bound by factors is more flexible and accurate as compared to standard theories. It is noteworthy that the assumptions used to develop standard theories were too simple and could not adjudge the inefficiencies in the market. However, the theories with behaviour as their foundation, are more realistic and practical.

Taking the new factors into consideration showcases an entire set of theories that have developed and changed over time. In order to analyse human behaviour profoundly, cognitive behavioural theories take social, psychological and anthropological factors into consideration. Tversky and Kahneman, the fathers of behavioural finance, introduced the prospect theory of Heuristic Biases countering the EMH. The theory is also referred to as the backbone of behavioural finance.

Heuristics simply refer to the mental shortcuts used in certain situations for quick and efficient decision-making and generally give precise results but they might be catastrophic at times. At times, people tend to follow the shorter route to reach their destination or to temporarily escape from a situation that was highlighted in heuristics. At first, heuristics had been divided into two categories which were representativeness and availability. Anchoring, however, was added to these two by Waweru et al. in 2008 in the name of "overconfidence".

Representativeness refers to the tendency of investors to buy hot stocks that have done well in the past and avoid the contrary; the investment that seems more representative and visibly good being the one that follows the 'trend analysis'. The most recent example of representativeness is the rally in the prices of the stocks when Elon Musk tweets about a particular financial instrument. This exposes the overreaction of the investors which is responsible for the sudden surge in the market. Anchoring Heuristic states that people make decisions taking a specific target number or a value as an anchor and adjust it subsequently to reach an acceptable value. It tends to consider the past returns as the base for setting the price of stocks. Availability, on the other hand, refers to the tendency of people to invest in stocks, wherein they have easily available information. People refrain from investing in stocks whose information is not readily available. The new

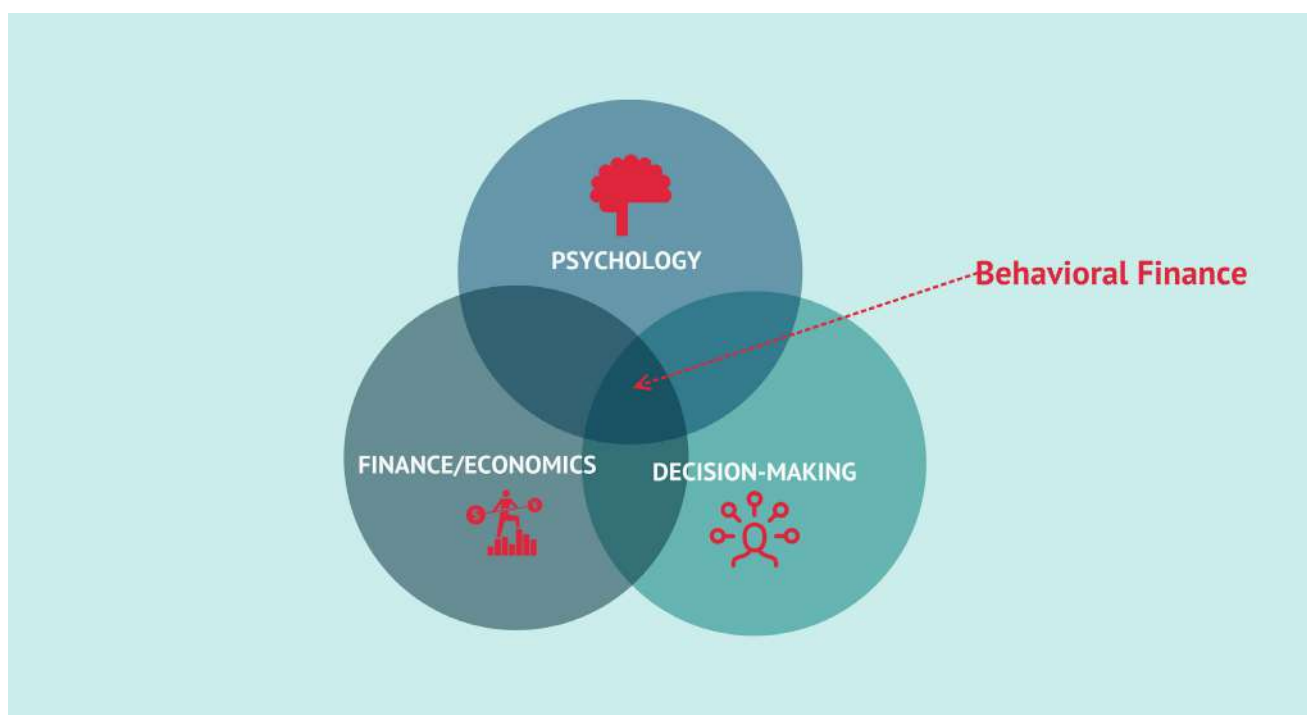
bias of “overconfidence” throws light on the exercise of undermining the market and overestimating personal skills and knowledge of oneself. Being overconfident develops a feeling of the surety of earning profits in the market.

Biases affect all types of decision making. Biases were first introduced in the latter part of the 20th century, they were further categorised into cognitive and emotional biases by Pompeian in 2006. Some of the cognitive biases include overconfidence, representativeness, anchoring and adjustment, framing, cognitive dissonance and mental accounting. Endowment biases, loss aversion, optimism and self-control biases and status quo are some of the emotional biases. Tversky and Kahneman also acquainted people with framing biases, which are of utmost importance for investors, bankers and portfolio managers to assess their decision-making abilities and their effects on market functions.

The Prospect Theory is certainly one of the most important theories in the world of behavioural finance. It emphasizes how people manage risk and uncertainty. It is the founding theory of behavioural finance, it challenges the expected utility theory. It states that people are more risk-averse to gains while they are risk-takers when in losses. They allot a considerable degree of importance to sure outcomes rather than merely probable outcomes, called the “certainty effect”. Their choices are affected by the “framing effect” which shows how decisions and solutions to the same problem change when framed differently.

The theory further explains loss and regret aversion and mental accounting. When investors face losses, they are risk seekers and at the time of enjoying profits, they are averse to the risk. This suggests that no one is inclined towards losses. Additionally, no one wishes to lament upon a “bad” investment decision they made and hence, they choose to hold on to the stocks despite their poor performance to avoid the creation of regret in their minds. Mental accounting refers to the different values a person places on the same amount of money, based on their subjective criteria. This is often accompanied by detrimental results like the Global Financial Crisis between mid-2007 and early 2009 or the recovery from this backlash. Mental accounting tries to decode the rationale behind irrational moves and forms an integral part of the framework of decision-making.

It is observed that general principles of investment strategies or experiences accrued by the parties involved do not impact the number of errors caused. There are multiple reasons as to why and how people fall victim to these cognitive biases. Theories like the Behavioral Asset Pricing Theory and Behavioral Portfolio Theory are being used in place of traditional finance and there is so much yet to unfurl, be it the theories that impact the real estate market or the research on people with “normal” wants and how these wants influence the market. Behavioural Finance has successfully entered the field of global political thinking that drives people towards making better life decisions.



Feminising Finance

–Khushi Kapoor & Sanya Madan



Dissecting investing patterns and understanding how the future of finance lies in the hands of women

Women's role in today's world has experienced tremendous change. Women are breaking gender barriers and playing major roles in various arenas like politics, defence, sports, finance, business, etc. Smashing the patriarchy, the world has witnessed the impressions left behind by powerful women. The 21st century has brought new hope and has empowered women to be self-sufficient, well aware and financially independent. In this changing world, women must know how to make their hard-earned money work for them.

Personal wealth management and healthy investing practices are indispensable skills today, as we aim for financial equality and independence. Breaking the stereotype that investing is for men and savings is for women, numerous studies have proved that women's portfolios outperform their male counterparts. This is because of the inherent qualities that women possess by nature that differentiates them from male investors when it comes to their approach to investing. Although the performance of women investors has been excellent in the market, the number of women involved in managing their personal wealth is slim.

Historically, women have been inclined towards safer investment opportunities like Gold and Fixed deposits. Women generally prefer to buy physical gold in the form of jewellery or ornaments, but a shift may arise as more flexible and affordable options like digital gold are now available. Young, millennial women investors are more likely to choose high-risk, high-return options like the stock market over traditional options. Mutual funds have been one of the favourite options for women investors. Wealthier women also tend to invest in real estate, as it requires a significant amount of investment, but can generate great long-term returns. Women, in general, are less inclined towards unorthodox investment options like Cryptocurrency, commodity market, futures and options, etc. Even the statistics for women in the stock market are not satisfactory. The possible reason behind this could be the risk-averse behaviour of women along with lack of confidence that accompanies the gap of financial knowledge.

However, this investing psychology has not always proven to be unfavourable to women as these very traits are what make women better investors than men. A study by the University of California, Berkeley concluded that the portfolios of females often generate higher returns, up to an average of 1% per year more, than those managed by their male counterparts. According to Goldman Sachs, even in the professional world, a higher percentage of women-managed mutual funds outperformed their benchmarks as compared to

those managed by male professionals, in 2020. This may sound unbelievable to some, but, the reason behind these observations is inherent in female behaviour.

According to BlackRock, women tend to be comparatively risk-averse while investing. A majority of them prefer to invest in cash and cash equivalents, money markets etc. to avoid uncertainty in returns, while only 21% are willing to invest in stocks. However, this does not mean women do not tolerate risk in their portfolios. It is observed that they include more investment schemes like target-date funds to skillfully diversify and spread their risk across the portfolio following a more passive approach instead of investing most of their savings in equities. Nonetheless, those women who do invest in the capital markets have the same risk tolerance as males. Moreover, women seek facts and information before investing in any opportunity. They make sure that it is beneficial to them on an individual level instead of merely following their gut and are less susceptible to having an anchoring bias. In contrast, men tend to suffer from confirmation bias and over-confidence at times. This is owed to women's lack of financial self-confidence which often ends up rewarding them and also makes them, as a group, more likely to seek professional advice, as reported by McKinsey.

Both genders have contrasting ways to study any investment opportunity, for example, women focus more on the forecasts while men tend to focus on the company's past performance. It is also observed that women are more inclined to participate in ESG investing and put their wealth towards creating a positive impact. For females, wealth creation through investing is merely a means to an end as they indulge in purpose-oriented investing. These goals are generally long-term goals as proven by a survey done by Groww. Personal goals were the top priority of more than half of the participants followed by support to the family, more travel and early retirement plans. While growing returns are always attractive, women's main aim continues to be real-life goals like retirement, healthcare and unforeseen contingencies which gives them a more holistic approach towards investing.

Lastly, conservative trading is the key for females as they trade less often and are not impulsive in their decisions. Vanguard reports that women trade 40% less frequently than men. This prevents them from incurring unnecessary costs and makes them less susceptible to behavioural errors. Before investing, they ensure that the forecasted gain outweighs the cost incurred to perform the said transaction. Additionally, women are 10% less likely to sell at the time of a market slump than their male counterparts, as concluded by Vanguard.

With women taking charge and performing outstandingly in their personal investment decisions, it's time to make room for them in the financial world. The unconscious bias in the wealth management industry poses a problem, as the firms treat women as a homogeneous group, ignoring their individual needs. They need to cater wisely to their women customers, as they will constitute a large part of their market share. We need more female advisors and more women making their career in the financial sector, to inspire other women to take assistance and learn to become financially independent. A more consciously inclusive environment in the banks and financial institutions is a need that will help change the paradigm. Furthermore, the fight to reduce the gender pay gap must continue as it would increase their savings and investment capital, and therefore help in generating higher returns. It is also crucial for women to feel confident about their investment decision, and the best way to achieve that is for the society to encourage financial literacy and self-education. Enabling women to manage their bank accounts and Demat accounts would give them practical experience on how their money is working for them, and how they can do better.

Women are the future of finance. Although it is observed that women are better investors than men, the latter still dominate the money-making industry. Women are transforming the global financial markets and society must welcome this growing community and support them in every possible way so that they stand bold and independent.

Addiction to Rehabilitation

-Kritee Agarwal



The behavioural insight into addiction and substance abuse

Substance abuse simply refers to the excessive use of psychoactive drugs, such as alcohol, pain medications or illegal drugs by consumers of an economy. It leads to physical, social and/or emotional harm. These medications when taken under prescription limits from a doctor are meant for a patient to overcome emotional or physical trauma and are often used to cure and recover from phobias. However, when drugs are taken in the form of an overdose, the term drug abuse is applicable. There are different kinds of drug abuse including alcohol, heroin, cocaine, marijuana, cigarettes and other tobacco products. This does not include the consumption of Over-the-Counter (OTC) medicines.

These often take an ugly form during young adulthood and can interfere with critical development and set the stage for chronic substance misuse which is associated with social, educational, and health-related problems. Behavioural economics can be applied to tackle this trouble of over-use and theories thus built on addiction can be put into motion to reduce the catastrophic effects of the same. A few of the theories that explain how behaviour influences substance abuse are:

1. Hyperbolic discounting:

This is a time-inconsistent model of delay discounting. The discounted utility approach states that “intertemporal choices” are those choices where the amount of utility/satisfaction gained from any of the choices is the same, except that some consequences are delayed and hence must be analysed and discounted (i.e., reweighed to take into account the delay). Given two similar rewards, humans are more likely to proceed with the return that arrives sooner rather than the one which comes later. Humans are said to discount the value of the later reward by a factor that rises with the duration of the delay. It refers to the propensity of people to choose a smaller-but-sooner reward over a larger-but-later reward.

The rewards from drug use are immediate and the adverse consequences tend to be delayed; were the reverse true, consumers would not be addicted to drugs. What continues is then the consumer becoming habitual to them and seeking the same, or rather a more intensified dosage with time. However, in the same way, hyperbolic discounting motivates self-control; there have been many opinions about how people achieve self-control. They could use a reward system of sorts to be able to promote control and keep themselves motivated. The simplest solution to this concept would be that people learn to modify the steepness of their discount curves directly.

2. Melioration (Richard J. Herrnstein, 1961):

Melioration theory in behavioural economics is a theoretical mechanism that predicts the matching law. Melioration theory states the reason behind an organism's choices is based on the rewards it receives. The principle of melioration states that animals will invest a greater amount of time and/or effort into whichever option is better, i.e. more rewarding taking into consideration the time duration. To meliorate essentially means to "make better". In choosing between options, consumers need not maximize the expected payoff as classical economic theory assumes. Rather than being aggregated, the alternatives available in this scenario are seen to compete against one another based on differences in their local reinforcement rate. The consumer keeps shifting from one alternative to the other, if one is better than the other, until the other is better than the first one, without considering the effect on the overall rate of reinforcement. Cognitive-behavioural therapy, which helps people recognize and change the ways of thinking that have been associated with substance use along with motivational incentives that encourage abstinence through positive reinforcement can be used to bring about a change while using the Melioration theory in a positive aspect.

3. Theory of Rational Addictions (Kevin M. Murphy and Gary Becker):

This model has a broader application in real-time by modelling addictive behaviour as the gradual implementation of a rational, forward-looking plan. Here drug consumption is partly motivated by the immediate satisfaction of the drug intake and partly by the effects it has on the individual in the future. This is where the consumer has to make a rational choice and is assumed to be smart enough to pick the more lucid and coherent option. Using this theory, we can almost eliminate the requirement of government policies and other interventions to cure addiction because the very consumer is supposed to make a decision based on both short-term and long-term satisfaction.



After understanding the basic theories of addiction as suggested by psychologists, we can come to a few related solutions. Behavioural-economic principles suggest drug-abuse treatment efforts should use methods that decrease drug availability. However, consistent effort needs to be made and implementation of the same has to be kept in check for people to not arrange the same through illegal mechanisms. Another important method, which can be done alongside as well, is to increase the availability of nondrug activities that may substitute drug use. These could include but are not restricted to the hobbies of said individuals. A program/committee, such as rehab, could be formed within every society to make this possible. Following the hyperbolic discounting model, drug addicts can use treatment methods that will increase the extent to which delayed events control behaviour.

Challenging the Monopoly of Neoclassical Economics

–Manasvi Mathur & Harrsita Sanjesh



Neoclassical economics is "like an airbag that works all the time, except when you have a car accident" – David Orrell

Human behaviour has always been hard to explain since it is influenced by a plethora of external and internal factors. People's reaction to situations mainly in the market was hard to predict but it was important, as they form the household sector which is a significant player in the market. Milton Friedman noted that economists could not use scientific methods for explaining consumers' buying behaviour and had to rely on "uncontrolled experience rather than on controlled experiment." These 'uncontrollable experiences' gave rise to the need for assumptions. To study the influence of one factor on the buying behaviour, the other factors were assumed to be constant. Although the classical school of thought also relied on various assumptions, their importance grew in the neoclassical school of thought.

Economics is an art so the assumptions and controlled experiments do not work fully. Economics is just as much a science necessitating isolation of variables to study individual causality. Assumptions are of course important since they facilitate breaking down complex processes. However, the problem begins when these assumptions simplify the process too much making it impractical to use in the real world. Since in the real world, variables cannot be isolated, the assumptions

and variables have to be considered in such a way that the theories still work practically. Economics syllabus must provide for situations when the assumptions do not hold true and encourage student discussions on the possible outcomes and solutions.

Neoclassical economics is an approach to economics in which the production, consumption and valuation (pricing) of goods and services are driven by the supply and demand model. According to this theory, the value of goods or services can be estimated using a hypothetical maximization of utility by the consumers with limited financial resources and profits earned by firms having production costs and employing available information and factors of production, in accordance with the rational-choice theory.

The neoclassical school of thought rejected the production approach of classical economists to reconstruct economics as a mathematical science of behaviour and markets expressing the interplay of demand and supply.

Thorstein Veblen claimed that neoclassical economics assumes a person to be:

A lightning calculator of pleasures and pains, who oscillates like a homogeneous globule of desire of happiness under the impulse of stimuli that shift about the area, but leave him intact.

It has been accepted that the assumption of rational behaviour is the foundation of various neoclassical

theories. But psychologists have propounded several theories suggesting that consumers do not always behave rationally, thus, challenging the fundamental ground of the neoclassical school of thought. Under neoclassical economics, rationality means a reasonable reaction compliant with a recognized goal. It doesn't elaborate on the nature of such rationality. According to it, a set of choices that were apparently reasonable when implemented is what led to market bubbles and crashes. It ignores important facets such as consumer perception and behavioural bias.

In an economy, the individual chooses that option that gives him the maximum possible satisfaction, i.e. the highest marginal utility. For example, if the consumer looks towards increasing his satisfaction he will consume that amount wherein he gets the highest benefit with respect to resources spent and satisfaction received. He is assumed to have unlimited resources at his disposal to choose the alternative best suited for him. The producer will produce a specific quantity after taking into consideration the marginal cost versus marginal benefit. The stakeholders are assumed to possess full knowledge of the market and act rationally. The environment is expected to remain certain. Clearly, the concepts of globalization resulting in dynamic environments, information distortion, diverse goals apart from profit maximization emerging nowadays, lack of accuracy in graphing demand and cost curves and lack of resources to analyze the market thoroughly are of no significance under this theory. In the real world, uncertainty is dealt with a probabilistic approach. Apart from expected profit determined through a probabilistic approach, individual's attitude towards risk also influences the decision making. Neoclassical economics is widely critiqued mainly because assumptions about human behaviour and rationality are flawed. They were not framed after analysis of human behaviour but because these are necessary to attain market equilibrium. Critiques of neoclassical economics mainly advocate towards recognizing consumers behaving irrationally on certain occasions, or not having adequate information, a meaningful time frame to carry out analysis on which theories are framed, and basing research on fields apart from mathematics like sociology.

In the real world, we often see irrational behaviour – decisions that don't maximise utility but can cause a loss of economic welfare, thereby contradicting the rational-choice theory.

Psychologists have coined various types of irrational behaviours, some of which influence consumer buying behaviour, one of them being irrational exuberance. It is unfounded market optimism that lacks a real foundation of fundamental valuation but instead rests

on psychological factors.

For example, if shares rise and people see an increase in wealth, this may encourage them to keep buying more. Irrational exuberance has occurred during 'bubbles' such as the 'Dot Com Bubble' of the late 1990s and the financial bubble of the early 2000s.

Another type of irrational behaviour is herding where individuals assume that 'the majority must be correct'. Consumers' decisions are based on their personal needs and wants while few individuals follow the herd mentality believing the 'usual' to be 'correct'. While the decision may prove to be fruitful for various consumers, it may not be the best choice at an individual level.

Consumers also have a cognitive bias which occurs when consumers make irrational decisions, but often are unaware of their own irrationality. They try to mould the information they have to fulfil their wants and use it to justify their behaviour. Also, while making decisions they tend to use 'mental shortcuts' or 'heuristics'. These decisions are based on impulsive or emotional responses instead of reasonable thought.

Another leading example of irrational behaviour among consumers is the purchase of demerit goods. These are damaging to individuals, but people continue to consume as they are either unaware of or ignoring their harmful effects. For example, drinking can cause various health problems, but that does not stop many people from consuming alcohol heavily.

Status quo bias is a special type of cognitive bias wherein a consumer is preferring a choice that we are used to. The theory of rational choice implies that consumers do a cost-benefit analysis before purchase but sometimes, rather than spending time trying to gather information about the market, they stick with the default option – what they already have. This also saves them from the process of adjusting according to the change of purchase.

There are various other types of irrational behaviour including 'Discrimination' in labour markets wherein the firms do not take decisions that maximize their profits but based on their discriminative beliefs, present bias, sunk cost fallacy and lack of control which influence consumer buying behaviour but cannot be labelled as a rational decision.

There has been increasing evidence of irrational behaviour in consumers, one of them being the purchase of speciality products. These goods/services have reached the highest value of customer loyalty and

their demand curve is inelastic. Their consumers do not respond to change in their prices and sometimes, their purchase is not the best alternative for the buyer. Although the satisfaction derived from availing the service is high for the consumer, the allocation of financial resources is inefficient.

The person may not need the good but falls prey to the heavy endorsement of the product because companies often present their products as unique and revolutionary in advertising campaigns with the claim that they have features better than their competitors. This also stands against the theory of rational choice. The social environment of people can also promote irrational buying behaviour. For instance, expensive phones or fancy cars are unaffordable for some people, yet they buy them as their ownership is associated with a prestigious social status. Driven by peer pressure or social norms, people tend to purchase luxury goods by taking debt.

is 'nudges'. Since individuals are prone to emotional/impulsive decisions, firms make use of it to sell their products using different promotional tools. In a positive way, governments also 'nudge' consumers into better behaviour by giving incentives to save for a private pension, making it difficult to purchase demerit goods and setting default options to be the choice that maximises utility.

In the past, irrational behaviour among consumers has led to the creation of financial bubbles which in turn caused financial instability. This understanding of irrational behaviour helps statutory bodies regulate the market and ensure people don't follow the herd mentality. Neoclassical theories believe the economy is self-regulating and participants will handle the needs of the economy i.e. there is no necessity for government intervention. The disregard for theories other than neoclassical theories mainly contributed to the 2008 crisis.



Although an individual consumer's decision is a microeconomic variable, consumers form the household sector which is an important player in the economy. Thus, this irrational behaviour on a larger level affects the economy as a whole. Irrational behaviour can lead to market failure which might lead to an inefficient allocation of resources in the economy. For example, the production and sales of alcohol/ tobacco generate revenue but its consumption has a detrimental effect on the health of the consumers. Such externalities cause market failure as the social cost exceeds the social benefit.

Another implication of irrational buying behaviour

Then according to this, in the 2008 financial crisis, there shouldn't have been a necessity for money diverted towards bank bailouts or stimulative measures during the great recession that followed. Thankfully, the government intervened. We all know that further disaster could have occurred if we had let neoclassical ideologies take effect. Even after myriad effects of the 2008 crisis ranging from a bank bailout costing hundreds of billions, unemployment rates almost doubling, and many becoming prey to poverty, the economic syllabus remains relatively unchanged. In 2008, Alan Greenspan, the former chairman of the U.S. Federal Reserve, once hailed as "the greatest banker who ever lived," confessed to Congress that he was

astonished that the markets didn't operate as per his predictions. He acknowledged his mistake of assuming that organizations, especially banks, could protect their interests and their participants. The crisis signalled the failure of the free market neoliberal model, the extreme version of neoclassical neoliberal orthodoxy.

An interesting observation is that most Nobel prize recipients are neoclassical economists. The irony is that most of them won it for identifying and acting upon anomalies within the neoclassical paradigm, for example, Gary Becker won the award for dealing with the neoclassical assumption that economic participants were always rational and widened the domain of economic analysis to human behaviour and Ronald Coase won for his work indicating insufficiency of abstract, mathematical models to describe the operation of the real-world economy and he countered the belief that firms are organized hierarchically, not voluntaristic which is the basis of neoclassical economics.

Economics graduates are critical to shaping the political narrative surrounding economics, but learning neoclassical theory alone does not make them fully capable of performing this role. Many other

economic theories such as Post-Keynesian, Austrian, Institutional, Marxist, Evolutionary, Ecological or Feminist Economics are not given enough importance because they are considered relatively inferior. The consequences of this disregard for such crucial theories are many. Economics departments must turn more pluralistic and students should be taught a variety of economics theories. The final goal should be to improve economics education for students and provide a more comprehensive syllabus incorporating scope for critical thinking and analysis. We are in full understanding of the vitality of neoclassical economics and support some of the reasons it has allured the greatest of minds, however it's high time the need for more than just neoclassical economics is understood and brought about in substantive terms. Neoclassical economics shouldn't exercise a monopoly over academic syllabus excluding other beneficial approaches. After a thorough understanding of phenomena from various schools of thought, educational centres should encourage discussions on the phenomenon that is most likely to occur in reality, why there are clashing opinions, the basis for formulating theories etc. Thus, all these disagreements shouldn't lead to a perpetually unresolvable dispute, rather the syllabus must evolve and incorporate theories from different fields making economics a more exciting academic discipline.



Exploring not only how the asset bubble came into existence but also the reasons behind it.

Asset inflation is a phenomenon in which there is a massive increase in the nominal value of an asset relative to other assets in the economy which conflicts with its intrinsic value.

The first recorded asset bubble was seen in Holland during the early 1600s and is commonly referred to as the 'Dutch Tulip Mania'. Since then, the world has witnessed similar bubbles including Japan's real estate bubble, the dotcom bubble and the U.S. housing bubble to name a few. What is common in all of these is that they have repeatedly occurred in the financial markets, they often lead to large losses for the players involved and tend to spiral out of control to affect the economy at large.



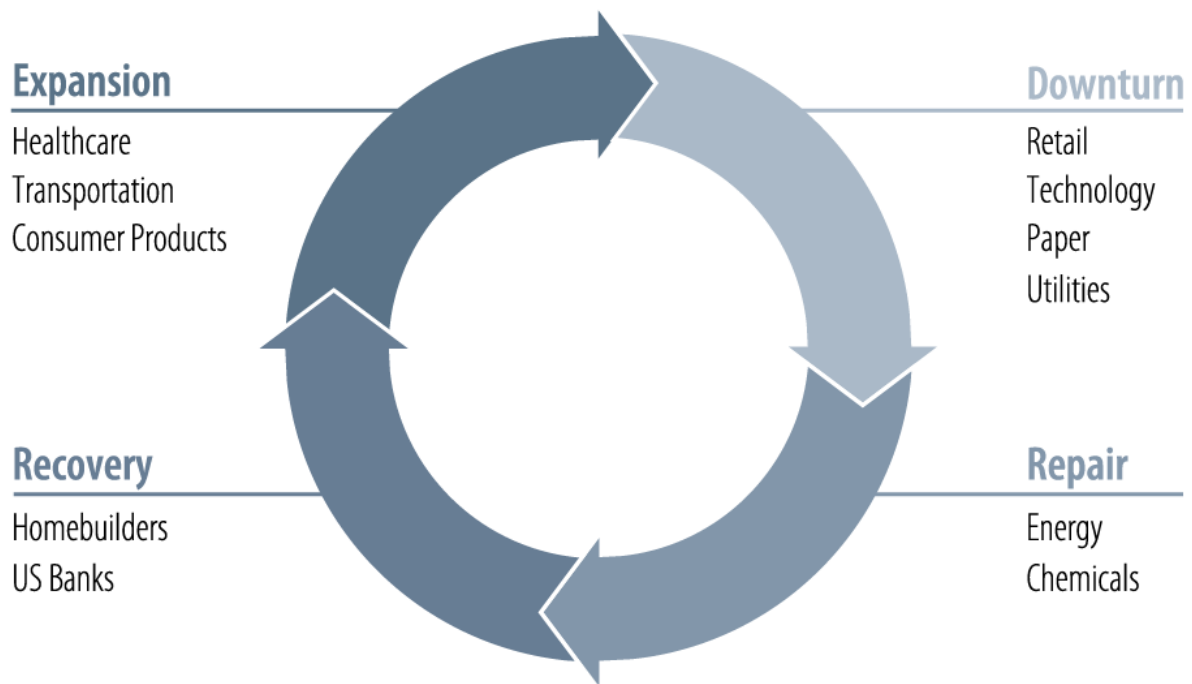
A closer look at asset inflation in modern financial markets will show that it often occurs when a few formal institutional investors identify an opportunity and decide to invest in an asset. After the prices rise to a certain extent, other institutional investors also get interested in the movement of such smart money and decide to pump in more money. Competitiveness, extreme optimism, fast-paced decision making and the heuristic of overconfidence can explain such behaviour. Seeing the asset prices rise due to the demand picking up, the retail investors also decide to jump in on the bandwagon. When the money stops flowing in, demand starts drying up and as fate would have it, a secular fall in the price of the concerned asset occurs.

The economy is affected by several economic cycles and these cycles, while hard to predict, have a wide-ranging impact on the players in the market and the bubbles. One such cycle, which is one of the most underappreciated, is the credit cycle. According to the 'Cantillon Effect', changes in the money supply affect the prices of different goods in the economy in different proportions. So, in our discussion, if the money supply in the economy increases, the point of injection benefits more because the prices in the economy have not yet risen due to inflation.

An increase in the money supply also reduces interest rates, increases investment and credit is easily available in the market which is first accessed through financial institutions (in most cases). The recipients of this money divert it towards the asset bubble and prop up the demand. This is the expansionary phase of the credit cycle and the prices keep on rising in this phase.

When the credit cycle takes a downturn, there is a fall in asset prices.

Combined with this, the euphoria in the market regarding the future possibilities of the asset class



Seeing the decreasing asset prices, there is panic at the top and these investors engage in a mass sell-off due to which there is again a considerable fall in the prices. This chain reaction causes mass hysteria. Risk aversion is a common behaviour that explains that generally, people prefer outcomes that are more certain even though they may provide lower payoffs when compared to outcomes with more uncertainty but equal or higher payoffs. The only viable option that remains open to these now risk-averse investors is to try and sell their asset at any price currently prevailing in the market rather than at a much lower anticipated future price. This is one of the most common examples of a collective action problem where self-preservation of the investor by reducing losses is at odds with the collective good of stopping the price fall.

Edward Altman in his article, 'Where Are We in the Credit Cycle?' explains that a benign credit cycle has the following four characteristics:

- Low and below-average default rates
- High and above-average recovery rates on actual defaults
- Low and below-average yields and spreads required from issuers by investors
- Highly liquid markets in which the riskiest credits can issue considerable debt at low-interest rates

pushes them into thinking 'nothing wrong can happen' or 'no price is high enough. While these phenomena have been visible in stock markets involving particular securities like the technology stocks in the 1990s in America or the Nifty stocks, which were deemed to be corporations too great to fail; these excessive expectations built into their prices led to their eventual decline.

The key thing to note here is the use of the word cycle and not phenomenon as it is always one thing leading to another. As Howard Marks describes it in his book, 'Mastering the Market Cycle', the shift from one scenario to the other is the causation of the other. He further describes the movement of a pendulum in which the pendulum rarely stays at the 'happy medium' and has wide extremes.

While the bursting of a credit cycle can be a tricky topic that is always hard to predict, it can be due to various reasons ranging from exogenous shocks to inflation or even psychological factors like the underperformance of the economy.

Now, an important fact to note is that the duration of credit cycles tends to be long. To give an example, from the 1980s onwards, the U.S. credit cycles have averaged nine years according to Schrodgers and according to an RBI report, the average Indian fiscal cycle is fifteen years.

So, what explains so much volatility in the asset prices given the relatively stable credit cycles? The answer may be provided by the heuristics and cognitive biases that affect the investors. Heuristics are the various mental shortcuts that the brain takes to solve a host of problems given a limited time frame without involving much active thinking. Given the brain's limited mental resources, heuristics are often extremely useful but can also end up forming many wrong assumptions and mental blind spots.

One such heuristic is the representativeness heuristic which leads one to believe that the increase in asset prices may be due to a rise in the intrinsic value and they will continue to rise. This is one of the most dangerous lines of thinking in the financial world. Other biases that lead to such behaviour are confirmation bias, hindsight bias and herd behaviour. Economic cycles have been found to be exacerbated by psychology and emotions at large and not by mechanical processes or the underlying fundamentals like GDP growth which have been relatively stable during the same period.

A theory that also explains this behaviour is the greater fool theory, in which an investor buys questionably priced securities ignoring valuations, earnings and relevant data just to sell them at a higher price to another investor in the future in the hopes of proving that person the greater fool. So, how does the investor know that there will be a greater fool? The short answer is, they don't. These investors take the risk keeping in mind the possibility that the price rise is not stable but, given the liquidity in the markets and the euphoric environment, the loss expectancy is lowered. Many a time, such investors also get trapped when there is a collapse of prices which generally happens at the prime of the bubble when most of the naive investors are trapped.

Even the institutional investors having insights into bubbles face problems in dealing with them. As J.M. Keynes succinctly puts it "Markets can remain irrational longer than you can remain solvent." Institutional investors find it difficult to not participate in the euphoric rally where everyone is minting money. If they don't do so, they underperform in the market and thus also face losing out on Assets Under Management(AUM) and there are ample examples where funds have seen outflows even though they were ultimately proved right. As Keynes again marvellously puts it, "In the long run we are all dead." Losing out on AUM directly impacts such managers as their remuneration is often a percentage of their AUM. Citigroup CEO Charles Prince in June 2007, virtually on the eve of the Global Financial Crisis, in a statement that became emblematic of the era, said "When the music stops, in terms of liquidity, things will be complicated. But as long as the music's playing, you've got to get up and dance. We're still dancing."

Asset bubbles have been created by human emotions at large, supported by the existing economic environment and thus will continue to rise.

The traditional aspects of economics fail to explain this phenomenon to its fullest potential since they have an assumption of a rational being which is rarely the case even at an institutional level. Developments in behavioural economics have strengthened understanding of the asset bubbles but further developments are needed to fully comprehend and deflate them SAFELY. Central Banks have tried to do so by using innovative methods like macroprudential tools but the results are still questionable.



Decisions & Dissonance

-Manasvi Mathur & Mahika Singh

Delving into the applications of the Theory of Cognitive Dissonance

Almost everybody has instances in their life when they have felt uneasy with a decision they have made. Feeling of embarrassment about one's actions and the subsequent attempts to prevent it from reaching the public eye or internal tussles with the brain, followed by desperate efforts to justify a decision made - all these internal sensations find rationalization in the Theory of Cognitive Dissonance.

People strive to attain consistency in their ideas and behaviour, but in the fast-changing world, they often come across new information which challenges their belief system causing psychological discomfort. This phenomenon where a person experiences psychological stress when encountered by conflicting beliefs has been propounded as cognitive dissonance.

Renowned psychologist, Leon Festinger proposed that human beings strive for internal psychological consistency for their mental functions in the real world. Whenever they face any internal inconsistency, they tend to get uncomfortable. This discomfort acts as a motivator for them to act on the conflict in order to reduce the cognitive dissonance.

Thus, cognitive dissonance is a belief perseverance bias i.e humans tend to stick with ideas they already believe to be true.

History

It was over 6 decades ago through the book "A Theory of Cognitive Dissonance" (1957) when psychologist Leon Festinger introduced into the academic foray, this very idea of psychological discomfort caused by internal inconsistencies between beliefs and behaviour. Festinger is believed to have drawn inspiration from the Field Theory propounded by Kurt Lewin to view human behaviour. It was through several experiments and an observational study on a cult anticipating the doom of the earth by a flood, that Festinger established the existence of an innate drive to achieve consistency of cognitions. Festinger's theory challenged the long-standing domination of reinforcement theory in social psychological research that persisted in the mid-50s and opened up a new era for cognitively oriented psychologists. The theory continued to flourish from the late 50s to the mid-70s and saw a brief interval of decline till the amalgamation of motivational processes with cognitive processes in mini-theories in the 1980s ensured its successful revival.

Causes and Effects

Ever since he propounded this theory, many psychologists have been trying to determine the causes or situations in which a person experiences such dissonance and their respective effects.

Few situations have been attributed as causes of cognitive dissonance, one of them being forced compliance behaviour. Human beings are dependent

on one another thus creating various social obligations. Sometimes, such obligations force people to go against the ideas they stand for, thus creating discomfort. Forced compliance behaviour is not only driven by social norms, but legal regulations also play a role in causing it. For instance, a person does not buy insurance as he feels that the premium paid reduces his disposable income to a considerable extent which he wants to earmark for some other purpose, but the Motor Vehicle Act of India has made it compulsory for vehicle owners to buy an insurance cover.



Another very important cause that scientists have identified is new information and decision making. Economists have described scarcity as the foundation of essential problems facing an Economy. Considering decision making as a general source of dissonance, this scarcity has led to the creation of the problem of choice, further urging people to make decisions about how to allocate resources efficiently, in order to satisfy basic needs and as many additional wants as possible. As the world of technology keeps bombarding us with new information, the process of decision making never really ends thus creating a continuous cycle of cognitive dissonance. The effort put into various projects can also be a cause of such dissonance. Human beings tend to weigh the cost and effort put into the projects against the satisfaction achieved. Sometimes, when the satisfaction gained from a task is

not commensurate with the effort, it causes cognitive dissonance. Psychologists have not only identified its causes but also observed that its degree varies from situation to situation. For instance, people are more protective about the beliefs that are more personal to them and when these beliefs are challenged, the extent of dissonance caused is much higher.

The effects of cognitive dissonance are mostly psychological such as stress, regret, embarrassment, anxiety etc., but they are not limited. In case a person ignores dissonance and it grows stronger, then the impact may be physical such as sweating, acidity and pain in various body parts.

Remedies

Whenever inconsistencies arise between the behaviour and beliefs of an individual, the resultant unease can be tackled by various measures. First, changing dissonant beliefs involves harbouring the belief that no conflict exists in reality by believing the existing beliefs to be false so as to justify one's actions. Taking the example of a smoker, the person would, under this approach, seek to reduce the dissonance by means of searching for research that overrides the widely known health risks (which form the source of dissonance) and deems them to be untrue or overexaggerated. This is often seen as the simplest and most effective approach.

The second is changing the conflicting behaviour. This method, regardless of its high degree of effectiveness, is the most difficult to implement as humans tend to be creatures of habit and it becomes an uphill task to change behaviours - developed over a significant period of time and shaped by political leanings & religious beliefs - in line with beliefs. In the case of the aforementioned example, it involves the smoker giving up on smoking by developing cognizance of the health risks it poses (which in reality is extremely difficult to achieve given that smoking becomes habitual for most individuals). The third measure involves trivializing the significance of the conflicting belief. This is done either by adding more supportive beliefs to diminish the dissonant beliefs or by paying less heed to the existing thoughts. Commonly used, this method involves changing the perception about the conflicting behaviours or beliefs in a way that helps rationalize the conflicting cognition. The existing knowledge is often discarded and the receptiveness to new conflicting ideas is limited (a phenomenon popularly known as confirmation bias). The smoker under such an approach would go on to justify smoking as essential for pleasure in life thus reducing the impact of the belief that it is injurious to health.

Applications

The theory of cognitive dissonance has far-reaching applications in a myriad of fields ranging from

for marketers so that they can use it to their benefit. Consumers indulge in a cost-benefit analysis before buying any durable product. The psychological process of cost-benefit comparisons helps the person assess



education, psychotherapy, consumer behaviour, investing patterns, political science, communication, economics, law to even artificial intelligence. It has sparked research, based on its application on a host of topics like conservation of water and energy, attitude towards smoking by researchers to the likes of Nel, Helmreich, & Aronson (1969); Aronson, Fried, & Stone (1991).

This theory of cognitive dissonance has a very prominent application in the study of consumer behaviour. The buying behaviour of a consumer has been categorized into various types, namely routine, limited research, extensive research and impulsive. However, the application of this theory can be observed in every behaviour. Whenever a consumer experiences an unexpected price encounter, they either employ a strategy of continual information where they search for information that supports prior beliefs or employ a change in attitude by re-evaluating their beliefs. Sometimes, consumers also engage in minimisation wherein they reduce the importance of the element causing dissonance which is money.

Since the theory of cognitive dissonance has an impact on buying behaviour, its study becomes imperative

and justify the feasibility of an economic decision. This forms the basis for determining if the benefit outweighs the cost and if it does then by what extent. By appealing to their beliefs, sellers are able to sell their pitch to potential consumers. Sometimes, an offensive remark by the salesperson causes cognitive dissonance to the consumer and the consumer makes an impulsive buying decision. For instance, in the course of a visit to a high-end auto dealership, the salesperson emphasizes that "a lot of people aren't sophisticated enough to understand why this car is actually a great buy." On one hand, if the consumer resists the sales pitch for this very expensive car, he appears to be unsophisticated; on the other hand, if he agrees, then he will go forward and purchase a car he cannot afford. Also, the car may not even fulfil its purpose. Faced with this kind of cognitive dissonance, many consumers make an impulsive decision and go along with the sales pitch to avoid being viewed as an unsophisticated person without the real knowledge required to fully appreciate the car.

The salesperson is able to sell the car by manipulating the dilemma faced by the consumer via an understanding of cognitive dissonance, but this understanding is a double-edged sword. After purchase, while using the

product, the consumer does a post-purchase evaluation in which he measures the psychological value of the product against the cost. If the satisfaction does not exceed the cost, the consumer will regret the purchase, which in turn again causes cognitive dissonance. This impels the consumer to completely eliminate the thought of repeating the purchase. Hence, the company will still be able to tap potential buyers but, while losing the existing consumer base.

In the world of investing and finance, cognitive dissonance takes the shape of irrationality in decision making. It manifests in the form of the unease felt after the realisation of the mistakes one made while investing which further urges the individual to take steps to resolve the conflicting beliefs in order to satiate the innate need for consistency. Research has established the existence of a correlation between sunk costs and cognitive dissonance. It is believed that sunk costs (costs incurred in the past that should not shape future investment decisions) reaffirm cognitive dissonance due to the tendency of investors to base future decisions on past experiences. Investors tend to take future investment decisions to reaffirm the cost – both in terms of time & money invested in previous ones, regardless of whether it goes against their investing beliefs. Many instances suggest that cognitive dissonance bars investors from recognising valuable information that could foster good investment decisions due to the human tendency of denying faults in one's decisions. Self-esteem acts as a barrier that prevents learning from past investment mistakes. Investors often attribute their failures as chances rather than admitting faults in their decision making with a view to ease the dissonance arising out of bad investment decisions. The propensity to not learn from past mistakes increases the likelihood of miscalculations in the future thus reinforcing the cycle of denial and unease. This behaviour plagues thousands of investors and at the macro level, this can raise market volatility.

Suppose an investor perceives the market to be in a high position and expects the prices to fall most certainly and thus plans to sell out some equity holdings based on newspaper articles. The investor is advised by their investment manager to avoid basing decisions merely on articles but the investor unmindfully goes on to sell 60% of their holdings. The next day the markets fall by 6% which reinforces the belief of the investor in their decision. However soon enough news breaks out about the economy recovering and the resultant rallying in the market. The investor is now advised to add back to their portfolio by the investment managers and is left with a sense of dissonance caused by the sheer difficulty in acknowledging their mistake. This depicts how cognitive dissonance acts as a barrier for investors to recognise valuable information that yields good investment decisions.

The detrimental responses that people adopt to mitigate the discomfort arising out of cognitive dissonance forms the root of irrational decision making while investing. Thus the key to making better investment decisions lies in giving precedence to objectivity and analysis over emotions and identifying and abandoning the aforementioned counterproductive coping techniques.

Conclusion

The theory of cognitive dissonance and its impact on economic, political and social sectors, stands proof of the fact that the fields of psychology and economics are no more exclusive. Human beings function in a society and every decision that they make is influenced by various economic, psychological and environmental factors which cannot be separated from each other. Thus, the stringent separation of fields of studies has started to decrease and led to the birth of behavioural economics.



"Your predictability gives them a sense of control. Turn the tables; be deliberately unpredictable."
-Robert Greene

GameStop, the largest video gaming retailer headquartered in Texas, operates more than 5000 stores across the globe. But with the shift towards e-commerce and gamers preferring digital downloads on Xbox, PlayStation, etc, GameStop had become just an old friend. With weak fundamentals, falling revenue and unsuccessful investments exposed to the world, the shares of the vulnerable stock were bound to fall. Moreover, with hedge funds like Melvin Capital and Citron Research betting against the video game retailer, no one could have expected it to be in the news for the opposite reasons!

A dramatic battle was observed between the retail investors and the big forces of the Wall Street at the beginning of 2021 when GameStop experienced a Short 'Squeeze'. Counting on the weak fundamentals of the company, the hedge funds were short selling and were waiting for the shares of GameStop to fall, in order to make profits in billions. But redditors had different plans altogether for the stock's future.

Redditors who were a part of r/WallStreetBets, a subreddit that discusses finances and stocks, noticed the short selling by the big investors and put together

a plan to undermine these shorts and profit off their losses. Surprisingly, the Reddit-fueled trading craze managed to spark the frenzy as GME share price managed to rise from \$18 to more than \$450, accounting for an increase of an astonishing 1700%.

Reddit users had multiple reasons to do this. The GameStop fan base was supported by those who wanted revenge against the Wall Street hedge fund managers for driving the markets with their deep pockets and also by the ones who merely wanted to have a good laugh. They wanted to check the power of collective investors against the big people driving the stock markets. The frenzy was also supported by Elon Musk, popular for his market-moving tweets, as he posted 'GameStonk!!' and the shares rose by 92% in a day.

The incident put a huge dent on the hedge fund companies as the headlines covered that Point72 and Melvin Capital lost 15% and 30% of their values respectively, along with the total loss of Wall Street hedge funds standing at \$5 billion.

Many hedge funds, who did not benefit from the surge in prices, accused r/WallStreetBets of market manipulation and questioned its legality. But experts emphasise that nothing illegal as such transpired. For the Securities and Exchange Commission to successfully allege market manipulation, they have to prove that the Reddit traders knowingly spread false information.

To successfully allege price manipulation against a

defendant under the Securities Exchange Act of 1934, the plaintiff must prove that the defendant possessed an ability to influence market prices, an artificial price existed (a price that does not reflect the legitimate forces of supply and demand), and the defendant intentionally caused the artificial price. However, simply expressing an opinion or discussing your stock preferences is perfectly legal. So, these Reddit traders who got together to bankrupt a hedge fund by buying the Reddit stock without spreading false information about the company were completely legal.

But, what can end up potentially being illegal is how certain trading platforms like Robinhood responded to the GameStop frenzy. On the morning of Jan. 28, Robinhood posted a blog saying that it was limiting users from buying stocks of several companies such as GameStop, AMC and Nokia. It cited market volatility as its primary reason and further elaborated that it would only allow customers to sell or hold their shares of these companies, not buy or trade-in any other way.

On the back of this, the Reddit traders urged that the freeze harmed small traders and favoured the Wall Street establishment as individual investors were stripped of their ability to trade on the Robinhood app, while hedge funds and institutional investors could continue to trade as normal. Moreover, Robinhood users flooded the Google Play Store and Apple's App Store with negative app reviews. There were so many one-star ratings that Google had to intervene to remove tens of thousands of them.

The retail participants also filed a lawsuit on Jan 28 in the Southern District of New York accusing Robinhood of willfully and knowingly removing the stock 'GME' from its trading platform amid an unprecedented stock rise and depriving retail investors of the ability to invest in the open market.

In response to this, the SEC released a statement saying that the Commission will closely review actions taken by regulated entities that may have disadvantaged the investors or otherwise unduly inhibited their ability to trade certain securities, and will act to protect

retail investors when the facts demonstrate abusive or manipulative trading activity that is prohibited by the federal securities laws.

Many wonder whether a similar thing can happen in India. Well, the answer is NO.

In India, an automatic mechanism, called Lower or Upper Circuit, has been put in place to keep a check on both: a freefall or a massive surge in an individual security or an index during trading hours. This helps in keeping volatility in the market under control.

Moreover, almost all overnight short positions in the Indian markets are done using futures and options. SEBI and stock exchanges have robust surveillance systems to keenly watch any concentration in stock or F&O through limits on market-wide position limit (MWPL). The MWPL mechanism limits the net position including the futures and the SLBM to 20% of the free-float market capitalisation of the company. So, any contract that crosses 95% of the market-wide position limit will come under a trading ban and can resume trading only if the position limit goes down to 80%.

Lastly, in India the shares are kept in the Demat account of the particular trader and brokers are not allowed to use them for lending. The strict regulatory environment allows lending in stocks only through an exchange platform called Stock Lending and Borrowing Mechanism (SLBM), which is not yet very popular among retail investors in India. On the other hand, Wall Street has a thriving market for lending and borrowing shares. Short sellers in the US can borrow shares for a fee and sell them if they feel the stock is overvalued. Brokers thus keep shares in a pooled account, which makes lending possible.

Thus, it's hard to say how this saga will end. However, this incident has marked the success of the Redditors as there has been a transfer of wealth from the big players to the small ones. Can the volatility of the stock markets prove to be nerve-racking even to the big players?





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Beware of the Dead

-Anuja Guglani & Anushka Jain

Elaborating on the concept of 'Zombie' Companies and their prevalence in the Indian economy

Most of the Gen Z, at some point in time, has had a penchant for the enigmatic world of zombies - dead corpses supernaturally reanimated. While few delved deep into the thought of how survival is possible in a zombie apocalypse, others wondered about the folk beliefs regarding them.

This thought is not just fictional but exists in the real financial-world as well, which brings us to the fact that even a company can be termed as a 'Zombie Company'.

A Zombie Company is a company that cannot fend for itself - it needs bailouts to carry its operations, or survive with permissive lenders and low market interest rates. Such a company is just capable of paying interest on debt and not the principal amount. The inability of cash generation results in stagnation of growth and investment. The term 'Zombie' was first used in relation to companies in the 1990s, the Lost Decade, in Japan after the continued backing of deficient and inept companies by the banks resulting in the bubble burst.

They come into existence by exploiting the system's loopholes; the banks' leniency in the form of

continuation of age-long debts till the time interest payments are being received, and consideration of these companies as 'too big to fail' because of political or major business associations being such instances.

Such companies are prone to unforeseen changes in the economy in either direction. On one side, if the economy is boosting, there is an apprehension on part of these companies that these might be left long behind in the race while others would grow immensely owing to the boost; on the other side, if the economy is facing a slump, it would again trigger liquidation of such companies.

The COVID-19 pandemic added to numerous other factors and escalated the number of Zombie Companies in America to over 600, which includes the country's large corporate brands like Boeing, Carnival, Exxon Mobil, Marriott International, etc. too, which have amassed \$2.6 trillion of debt.

The existence of zombie companies plagues the economy of India and the rest of the world. As per the data from the Swiss-based Bank for International Settlements published in 2018, 12% of the publicly listed companies across 14 advanced economies are zombie companies, with the United States leading the number of zombies overall. However, if we take a look at the scenario of Asian countries alone, India emerges as the top contender with a whopping 617 zombie companies, followed closely by China with 431. Other countries like South Korea and Taiwan have 371 and 321 companies respectively. Surprisingly enough,

though, the parent country of the very concept of these corporate zombies, i.e., Japan, has a comparatively low number (109) owing to low debt levels in Japanese establishments.

The increase of such setups in India is also fuelled by the fact that some of these are power companies allied to major conglomerates – for instance, Adani Power and Reliance Power units of the respective parent companies.

The previous year saw RBI taking intensive measures to help boost our economy, which was left crippled due to the effects of an unprecedented pandemic and the consequent lockdown that ensued. One such measure taken by it was the reduction of the repo rate by 135 basis points, each basis point amounting to a hundredth of a percentage. The resultant repo rate between January 2019 and February 2020 was 5.15%. This was done to ensure lower interest rates on bank loans, in order to enable not only the masses to borrow more, but also to help expand businesses hit by the pandemic. While the move was taken in good faith, it ended up becoming a boon to the already increasing zombie companies as well.

Should the zombie companies keep increasing in number, they are going to pose an enormous threat to the economy, for not only do they exist as burdens on the country's economic infrastructure with almost no profitable yield, but they also divert a major share of the already scarce resources away from the companies which might actually help the economy recover. In all, they slow the very economic growth of the entire country.

Despite the prevalence of this problem running rife amidst the world economies, no plausible solution has been proposed so far to tackle these parasitic establishments. As far as our country is concerned, two policy interventions had been implemented, separated by an interval of almost two years, as an attempt to control their proliferation.

The first was the Insolvency and Bankruptcy Code (IBC) of 2016 implemented by the Parliament, which was a welcome overhaul to the existing bankruptcy policy of our country, and led to a small but significant increase in the reporting of zombie companies. However, a bigger impact on the existence of zombies was because of the RBI-led intervention of 2018, known popularly as the 'February 12th Circular', wherein the banks had to shoulder the responsibility of identifying and culling the defaulters at the earliest. This move led to a four-fold increase in the reporting and control of zombie establishments. Unfortunately, this circular was scrapped by the Supreme Court, under the pretext that it evinced the overstepping of authority by the RBI. In spite of all the measures, it is still difficult to eradicate all zombies, especially the ones with political affiliations.

The ever-increasing proportions of these corporate 'living dead' leeching off of our already COVID-afflicted economy needs to be curbed in time before our very economy lands in peril.



The Cockroach Theory showcases the multi-pronged attack by 'cockroaches' on industries

Decoding the Cockroach Theory

Katsaridaphobia, the fear of creepy cockroaches, finds its place even in the financial markets as it paralyses investors and their decisions. Cockroaches continue to be the most persevering species of Kingdom Animalia as they brave nuclear wars and survive the extinction of dinosaurs at large. With their ability to multiply at an exponential rate, cockroaches' existence becomes a nightmare as they triumph over our kitchens, washrooms and now preside over the financial ecosystems with a theory named after them!

The cockroach theory is a non-scientific market theory that states that when a company reveals bad news to the public, many more related negative news or events may be divulged in the future.

The negative news may be a lawsuit or an earnings miss or any other unfortunate event that might have taken place. The agreed notion is that a company's fortune culminates from both external and internal factors and one negative news cannot drive changes in its operations. However, cockroaches never stay alone in the sneaky dark nooks of our houses. If you spot one,

you know more are coming! Therefore, when some unfortunate revelations are babbled in the public about a company, similar misfortunes being bestowed upon other related companies in the industry are anticipated as they have the implausible possibility of immunity against these external forces.

These negative circumstances are unavoidable and inevitable in the entire trajectory of a company or an industry. However, when the news does hit the town, it moulds the investors' behaviour and makes them reconsider their decisions about the entity in question. The investors are also quick to divest in the shares of the company upon such a revelation if the news seems plausible enough. This plummets the stock prices in no time. Ultimately the panic created in the market spurs the government agencies to scrutinize the working of the other companies in the industry as well, which increases the probability of prices across an entire sector to fall. To prevent that, the upper management often tries to forge a silver lining in this cloud and downplay the effects of such news. Nonetheless, the wise investors make well-timed decisions and do not fall prey to these public relations strategies while the naive ones succumb to these fallacies.

The cockroaches attack Enron

One of the staple examples of this devastating theory continues to be the fall of the Wall Street darling, Enron Corporation. The Corporation was an American energy, commodities and services company. Often seen as the flagbearer of success in US Corporations, Enron's

shares were worth \$90.75 at its peak and dwindled to \$0.26 in a year.

From dramatic heights to a dizzying fall, the first cockroach in their collapse was seen in the form of a revelation that the company engaged in deceptive accounting practices that misled investors and the public for years about Enron's financial health. Mark-to-market accounting practices laid the foundation for this malpractice. Under this, falsification of financial position was possible by writing unrealized future gains from diverse trading contracts into current income statements. This disillusioned the stakeholders to assume higher current profits.

In order to cope with the mounting liabilities, Andrew Fastow rose the rungs to be the CFO in 1998. He orchestrated a scheme that window dressed the company's position despite the huge money lost by its subsidiaries. To add fuel to this blazing fire, Enron indulged in off-balance sheet Special Purpose Vehicles (SPVs) that were used to hide all losses over operating results. Using these as dumping grounds, Enron transferred all of its troubled assets to these SPVs. They operated on the assumption that their stocks would continue to appreciate. Some of Enron's rising stocks were transferred to the SPV for cash or a note. An asset on Enron's balance sheet would then be hedged with the stock by the SPV. In return, Enron would be guaranteeing the SPV's value to reduce apparent counterparty risk.

The second cockroach came in the form of extensive digging by the regulatory authorities. This was propelled by the retirement of then CEO Kenneth Lay and the subsequent resignation of Jeffrey Skilling. Analysts began downgrading Enron's stock, descending it to a 52-week low of \$39.95. This caught the Securities and Exchange Commission's eye as they began investigating Enron and the SPVs. This revealed the company's faulty practices and Fastow was fired. By the end of 2000, Enron had accumulated losses of \$591 million and were \$690 million in debt. The employees' pensions too were miserably hit as they were tied to the company's stocks. The company had forbidden the employees from selling the shares just before the SEC's investigation.

Another setback was when a company, 'Dynege' that had previously announced a merger with Enron backed out of the deal when Enron's credit rating had sunk to high-risk junk-bond status. This third cockroach paved the way for Enron's bankruptcy. On December 2, 2001, the company filed for Chapter 11 bankruptcy protection. Involving around \$60 million worth of assets, the collapse of Enron was one of the biggest bankruptcy filings in the history of the United States.

Many of Enron's executives were convicted of criminal charges of conspiracy, insider trading, and securities fraud. A primary casualty of Enron's notorious demise was Enron's auditor Arthur Anderson. He had to surrender his CPA license and came under intense scrutiny. He lost the majority of his clients and resulted in the loss of about 85,000 jobs. In addition to federal lawsuits, hundreds of civil suits were filed by shareholders against both Anderson and Enron. The damage caused was irrevocable and later drove to the complete dissolution of the corporation.

The fall of 'America's Most Innovative Company' raised imminent questions about the judiciary and regulations in place. It served to be a strong indicator that these illegal accounting practices were widespread. It also alerted the authorities to be more on their toes and proactive to prevent an Enron repetition.

The theory takes over the industries

All in all, Enron in its entirety served to be the first cockroach for the destruction of multiple other entities of the industry. Light was shed on similar accounting scandals which had pulled down a host of companies including WorldCom (2002), Tyco International (2002), and Adelphia (2002). The example cites how one cockroach indicated the presence of multiple more coming!

Later on, in 2007 a similar trajectory could be traced when subprime lender New Century Financial Corporation faced liquidity concerns. These were driven by mounting losses caused by bad loans to defaulting subprime borrowers. This was followed by more cockroaches as more subprime lenders found themselves in the same crisis. This majorly triggered the subprime mortgage meltdown!

Final Note

No form of repellent can keep the financial cockroaches away. Their existence is indeed notoriously inevitable. However, as prudent investors, it becomes all the more imperative to diversify our portfolios, invest in sound shares and be mindful of executives that attempt to downplay the impact of these cockroaches. Insulation of our portfolios from these financial cockroaches is attainable even if it isn't possible to protect our homes from the biological ones.

Just remember when you see one, many more are incoming!



Going Public the SPAC-tacular Way

-Anirudh Gupta & Sanya Madan

The growing importance of blank-cheque companies and their functioning during the pandemic

The SPAC mechanism was introduced by David Nussbaum, an investment banker with an undergraduate degree in psychology, and his lawyer friend David Miller in 1993, a time when blank cheque companies were prohibited in the US. No one could have predicted that this form of investment vehicle would become the most attractive proposition for sponsors, public investors and private companies almost three decades later, that too amidst a global pandemic.

A SPAC or a Special Purpose Acquisition Company is essentially a corporation founded by investment experts with the sole purpose of raising capital through an IPO. These experts or the sponsors of the SPAC, use the capital raised to acquire one or more existing companies, which are to be identified after the IPO is completed. Post the acquisition, the SPAC reverse merges with the acquired company, and the acquired company survives the transaction and the benefits derived from the SPAC mechanism. Even though SPACs are listed and publicly traded, they do not hold any operating assets of their own. Therefore, they are also called Blank-Cheque Companies.

The sponsors of the SPAC believe in their past

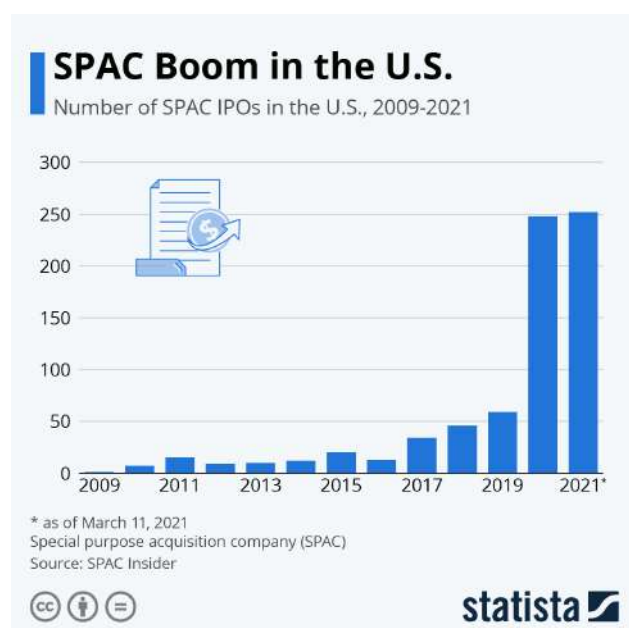
experience and reputation which will help them identify a target company to acquire. They generally provide the starting capital for the SPAC and stand to benefit from a substantial stake in the acquired company. Once the SPAC has been established, the sponsors approach institutional investors for the purpose of seeking investment. The reputation of the sponsors plays a pivotal role here as the institutional investors are aware that the SPAC they are investing in is indeed a shell company. Neither does the SPAC own any operating assets nor are the investors told about the acquisition targets. Therefore, the institutional investors are essentially betting on the promise of the sponsors to deliver.

Once the SPAC has secured adequate investment, the sponsors approach an investment bank in order to get it listed for an IPO. The prospectus of the SPAC essentially pivots around the sponsors, and less on its performance and revenues because it lacks any such history. After the required capital has been raised through the IPO, the SPAC has 18 to 24 months to identify a target company to acquire. Till then the proceeds from the IPO are held in a trust account. The fair market value of the target company must be 80% or more of the SPAC's trust assets. The SPAC is liquidated in case it is unable to locate a target company and all the funds are returned to the investors. Otherwise, the SPAC after identifying the target company approaches it with an acquisition offer. If the offer is accepted, the same needs to be approved by the regulatory authorities.

Once the acquisition is approved and has been completed, the SPAC is dissolved as a result of a reverse

merger with the acquired company. This is known as de-SPACing and ultimately leads to the acquired company surviving the deal. The acquired company thus becomes a public listed company whose securities are traded in the stock market, without ever having to go through the hassle of an IPO process.

Today the SPACs' buzz dominates the Wall Street and Silicon Valley. 2020 was identified as the "Year of the SPACs" in the US. They managed to raise around \$80 billion from more than 230 IPOs, accounting for nearly half of the total U.S. IPO market. Some of the success stories like DraftKings, Nikola and Virgin Galactic have raised the bar and validated the SPACs' booming prospects.



There are numerous merits offered by a SPAC that makes a company want to participate in such a deal rather than opting for private equity investment or going public with the traditional IPO. While traditional IPOs may take up to 2-3 years to finalize, SPACs are typically completed within 2-3 months. SPACs also enable the company to benefit from the experience and network provided by the sponsors. They are not only faster but also offer cost benefits. Lastly, they offer an opportunity for higher valuation while maintaining a significant stake in the company.

SPACs have created a win-win situation for all their stakeholders. If the sponsors have chosen and announced a target company, but the investors are sceptical of the success of the deal, they have the option to redeem their capital. Thus, this opportunity to get their money back is what makes the SPAC deal lucrative for the investors. Furthermore, the sponsors stand a

chance to benefit immensely from the financial gains from the whole transaction. They purchase 'founder shares' at the onset of the SPAC registration. After the completion of the IPO, they pay nominal consideration for the number of shares that results in a 20% ownership stake in the outstanding shares. Thus, glamorous names like Michael Klein, Chamath Palihapitiya, Harry Sloan and Gores Group have successfully made millions out of SPAC deals.

In recent times, however, the Wall Street frenzy over the SPAC mechanism has drawn the attention of the SEC in the US and brought it under its microscope. The SEC is particularly focusing on the illegal activities related to SPACs and has encouraged the investors to ignore the celebrity endorsements of these investment vehicles. Many consumer advocates and lawyers are raising their concerns about risks faced by retail investors, who might not be able to locate a shady deal on their own. They emphasise that a chunk of companies are using SPACs to evade the disclosures and liabilities inherent upon taking a company public. Other experts believe that soon there are going to be too many SPACs, but only a few merger targets, resulting in a few bad deals being struck. Thus, established companies would be under severe pressure to strike a bad deal instead of none at all. The consequence would be the early investors getting a big return, the sponsors getting their fees and the retail investors ultimately bearing the loss when share prices plummet.

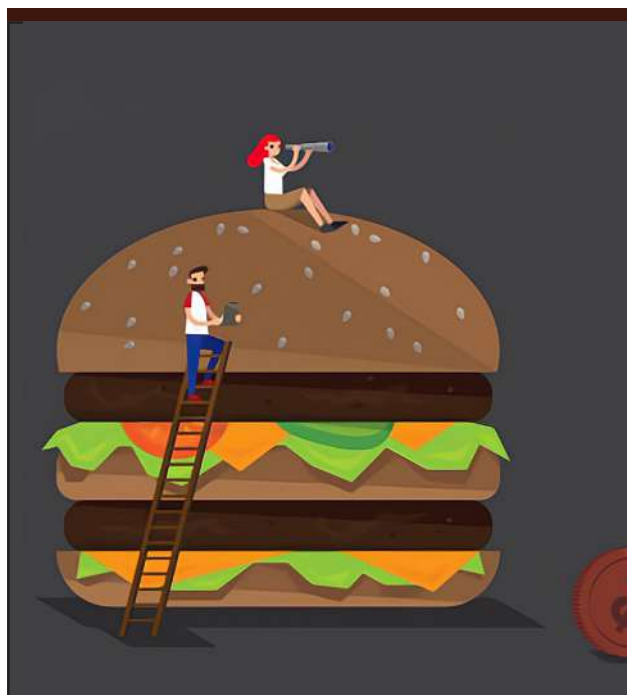
Additionally, Indian news platforms have recently started covering SPACs, as ReNew Power, India's biggest renewable energy company has planned to opt this route to list itself on Nasdaq. Other companies like Grofers, Videocon D2H, Yatra and Flipkart are working on a similar pathway too. India, thus, is showing signs of catching up onto the SPACs wave. With SPACs gaining momentum in the markets, India needs a regulated mechanism to facilitate and ease the listing of startups in the country. Otherwise, the Indian companies seeking to go public might opt for the foreign SPAC route that eventually reduces their capacity to a mere foreign subsidiary. This makes India a hub of regulated subsidiaries rather than that of flourishing startups. Another matter of concern is that the current legal framework in the country is not supportive of SPACs. The Companies Act 2013 has authorized the RoC to strike off the names of companies that do not manage to commence operations within one year of incorporation. On the contrary, SPACs generally take 2 years to identify a target company. Furthermore, the SPAC's mechanism conflicts with the SEBI's guidelines which prescribes that any company making an IPO must have a net worth of minimum Rs. 1 crore, and net tangible assets worth minimum Rs. 3 crores in each of the three years preceding the offer along with pre-tax

consolidated profits of minimum Rs. 15 crores in three of the most profitable of the five years preceding the offer.

With alternative modes of investments like SPACs, India should explore the possibilities of developing its capital markets to boost industrial and economic growth by welcoming fresh funding. The Indian markets can look forward to a SPAC regime considering that SEBI has shown an open-mind towards the issue. A committee of experts has been instituted to examine

the feasibility of bringing regulations for SPACs in India.

Therefore, the increased traction enjoyed by the SPAC mechanism makes it a potential liquidity option amidst the uncertain times of the COVID-19 pandemic. This has raised numerous questions and pangs of doubts in the minds of investors. Some argue that it is the start of a new trend while others emphasise that it is merely a finance bubble. Whether SPACs would be a better bet in 2021 or not remains a topic of debate.



The Big Mac Index

-Chetsi Chaudary & Nikita Rajagopal



The unconventional way of understanding the concept of purchasing power parity

McDonald's, the popular fast-food giant, started as a hot dog stand. From there, to opening a barbecue restaurant which was then converted into a hamburger and milkshake restaurant, the McDonald brothers, Maurice and Richard, laid its foundation. Over the next 70 years, McDonald's grew exponentially, from new locations to new products. However, this growth was not limited to just the culinary world; McDonald's Big Mac finds mention in the world of economics as well.

History

As much as humankind crushes on the deliciousness of McDonald's Big Mac, it is highly amazing to discover the Big Mac Index. Formulated by The Economist in 1986, the Big Mac Index is based on the theory of Purchasing Power Parity (PPP). This theory explains how exchange rates should function at a pace that would equalise the prices of an identical basket of goods and services in the long run in any two countries. Consequently, The Big Mac Index draws a comparison between the purchasing power of two currencies using the price of McDonald's Big Mac as the base. This helps in determining whether a currency is undervalued or overvalued at a particular point in time. The index is also referred to as the Big Mac PPP or Burgonomics.

Though the index might have been derived informally, it successfully replaces the "basket of goods" concept used by economists earlier to measure the differences in the pricing of consumer goods across nations. A "basket of goods" in one country cannot find its close duplicates in every other country. This limitation is countered by this index as McDonald's Big Mac is sold in about 120 countries and is made in every country with similar ingredients and labour capacities.

Working of the model

The Big Mac Index is fairly easy to calculate. It is calculated by dividing the price of a Big Mac in one country by the price of a Big Mac in another country in their respective local currencies. This helps in arriving at the exchange rate which is called the implied value. The rate obtained can then be compared with the official exchange rate (market value) between the two currencies which in turn helps a person gauge whether the currency is optimally valued, undervalued or overvalued as against the other currency according to the Purchasing-Power Parity theory.

If the implied value is higher than the market value, then the target currency is overvalued in contrast to the base currency. This implies that the burger, theoretically, should be sold for a higher price in the target country. If the implied value is lower than the market value, this essentially means that the currency is undervalued as opposed to the base currency. Theoretically, this also means that the Big Mac should be sold for a lower amount in the target country.

For Example, in India, the price of a Big Mac is Rs. 241 and the price of a Big Mac in the United States is \$3.99. After dividing both these figures, the Big Mac exchange rate of Rs.60.401/\$ will be arrived at. The current exchange between the countries is Rs.74.61/\$. From the implied and market value it can be understood that the Indian currency is undervalued as compared to the US dollar.

Criticism

The Big Mac Index, undoubtedly, has an interesting approach towards the concept of Purchasing Power Parity however, it does face criticism as well. Since the economic status of all countries in the world is not the same, the index can be misleading as it disregards the fact that the average burger prices would be cheaper in poorer countries as compared to the rich ones. The cost of labour and raw materials, which plays a huge role in the determination of the price of the Big Mac, is lower in poorer countries. However, a solution has also been

put forward that suggests an adjusted index that helps in predicting the Big Mac prices in a country's GDP per person. This adjusted index, called the GDP adjusted Big Mac index, can establish a better outlook on what prices and exchange rates should be and recommends a finer perspective towards the difference between the predicted and the market price as an alternative measure of currency valuation.

Conclusion

The Big Mac Index is certainly an interesting and fairly easy way to determine the exchange rate between countries. The index which started out as a method by the Economist to catch the readers' eye has proved to be so much more. The concept of Purchasing-Power Parity has gained huge traction enabling better awareness and understanding of the foreign exchange rate in play. McDonald's has managed to deliver yet again, just not in fries and burgers this time.

Micro-Finance: An Emerging Concept in the Indian Economy

–Srishti Jain



Exploring the concept of Micro Finance and its status and potential in the Indian Economy

The What and Why of Microfinance

Credit plays an essential role in economic development and progress as it is an important input for production activities. It helps to meet the capital needs for new start-ups or the expansion of existing production lines. It also meets the requirements of the current production activities. Credit plays a crucial role in everyday life as it helps in consumption smoothing, i.e., bridging the gap between present consumption and present income, especially in rural areas.

There has been a venerable interest among development economists and practitioners in the role that finance plays in development. Studies show that lack of access to capital – whether monetary, educational or health – is one of the major reasons for continued poverty, more so in the rural sector. The timely availability of credit in the right quantity and at a reasonable cost can help to lessen the high incidence of poverty and thus go a long way in contributing to the well-being of the people. Market failure is a major cause of poverty. Particularly asymmetric knowledge and high, fixed costs of small-scale lending curb the access of the poor to formal finance. Expanding the supply of financial services that

can be accessed by the poor can help to reduce poverty through an increase in income and employment.

Despite policy push through the conventional banking system, few factors act as obstacles to this crucial national objective of financial inclusion. First is the fact that our formal banking system mostly intends its policies and reach, be it brick and mortar or digital, to tailor to the urban/semi-urban population with formed track record/income and collateral that fit into their predefined risk/reward matrix as an asset class. Second, the 'cost of delivery' for bite-size transactions in the Balance of Payments market become a dampener for the banks. Lack of financial literacy also acts as an obstacle.

The microfinance model of offering small collateral-free loans to the bottom rung clients, so far overlooked by the formal sector, has established itself as an efficient & sustainable model for financial inclusion. Microfinance means the financial services offered to low-income individuals or groups who are normally barred from conventional banking. Microfinance seeks to improve financial services access for marginalized groups, especially women and the rural poor, to promote self-sufficiency.

Microfinance allows people to take on sufficient small business loans safely, and in a manner that is coherent with ethical lending practices.

The How of Microfinance

Microfinancing Institutions (MFIs) support a plethora of activities, be it provisions of basics—like bank checking and savings accounts, start-up capital for small business entrepreneurs or educational programmes that explain the principles of investing. Unlike typical financing situations, in which the lender is mainly concerned with the borrower having enough collateral to cover the loan, many microfinance organizations aim to help entrepreneurs prosper. The following products and services are presently being offered by MFIs:

- **Microloans:** Microloans are loans that have a small value; most are less than \$100 in volume. These loans are generally extended to finance entrepreneurs who run micro-enterprises in developing countries. Micro-enterprises include basket-making, needlework, street vending and raising poultry. The average global interest rate charged on micro-loans is about 35% and though this might seem high, it is much lower than other available options.
- **Micro savings:** Micro savings accounts let individuals store small amounts of money for impending use without minimum balance requirements. Like conventional savings accounts in developed nations, these are used by the saver for life needs such as ceremonies, funerals and old-age supplementary income.
- **Micro-Insurance:** Individuals residing in developing nations have more risks and uncertainties in their lives. For example, there is more immediate exposure to natural disasters, such as mudslides, and more health-related risks, such as communicable diseases. Micro-insurance, like its non-micro counterpart, pools risk and helps manage it. But unlike its conventional counterpart, it allows for insurance policies that have very small premiums and policy sums. Examples of micro-insurance policies consist of crop insurance and policies that cover unpaid pending balances of microloans in the event a borrower dies.

Socio-Economic Impact

Access to essential financial services enables individuals economically and socially by establishing self-reliance and economic sustainability in impoverished communities where salaried jobs are scarce. Small loans allow people to start or expand micro, small and medium enterprises. Savings help families generate assets to finance school fees, improve homes (e.g., install power or running water) and achieve goals. Insurance products can compensate for the cost of medical care.

The Status of Microfinance in India

The microfinance sector has exhibited remarkable strength across the last decade and this has been made possible due to some key reasons:

- The innate need for such a model in India, where a large unserved or underserved population still has to be brought onto the financial bandwagon, ensured that Microfinance remained a 'preferred' vehicle for both the policy designers and the practitioners across the years.
- The remarkable support and conducive policy framework provided by the RBI has been a facilitator in Microfinance's mission of financial inclusion. The sector has been granted a special category under the bigger NBFC category of RBI – lending it a distinct identity and strong credibility by having the country's first RBI recognised Self-Regulatory Organisation.
- Microfinance being a high touch model, has ensured the highest degree of customer-centricity and understanding. Response time in crises is much faster and the resolutions proposed are very focused. This aspect helped the sector cope up with the challenges caused by Demonetization in 2016 but more recently this model has demonstrated its resilience and sustainability in the ongoing COVID 19 crisis. The frontline soldiers ensured that the wheels of financing kept moving when the customers required them the most during pre and post lockdown periods. Operating platforms were quickly modified to work on a remote basis delivering loan services digitally. Field processes were altered to integrate all health and hygiene guidelines.

Today, this sector is affiliating with the Government to roll out various social schemes, be it Shishu loans under Mudra or Pradhan Mantri Svanidhi scheme. The significance of the sector has been recognised by the Prime Minister in his United Nations General Assembly speech by terming it as instrumental in furthering women entrepreneurship.

The Road Ahead

Microfinance players must weigh the different considerations covering customer data protection, data privacy and strategic and market risks while moving on the estimated high growth path.

Macroeconomic considerations: To prevent any unfavourable impact of the global economic scenario, microlenders should index themselves to the right mix of leading and trailing industry indicators. They need to perform a detailed pattern study of parameters

like outstanding loans per year, waterfall effect from one reporting period to another, client dropout rates, liquidity ratio and inflation rate to predict future troubles and take pre-emptive actions such as changing their lending or collection mechanisms to prevent loss in business.

IT and operational considerations: A high number of technology partnerships have led to the formation of digital infrastructure, which has increased technological and operational concerns. With the government's guidelines for data localisation and the proposed Data Protection Bill, critical customer data will likely be stored in India for protection. Additionally, microlenders should develop mitigation mechanisms for the control of fraudulent activities in the lending process. Such activities should be scrutinized through demographic analysis, with mechanisms for detecting red flags at different touchpoints of the lending value chain.

Over-borrowing considerations: As the credit needs of borrowers grow, the risk of over-borrowing from several lenders becomes unavoidable. Though the RBI has set guidelines to avert overborrowing, borrowers may still depend on local moneylenders, co-operatives, peers and relatives, and other informal financing channels to meet increasing consumption needs. Microfinance players should be able to perform vigorous analysis on existing loans of borrowers to strike a balance between providing credit for sustainable business growth and mitigating the risks that may arise due to over-borrowing.

There are also a few reforms needed for the industry to sustain itself.

Need to develop credit information on microfinance borrowers: Over the years, the MFI industry has been making good use of credit bureaus to check delinquent

borrowers, limit lending, and conform to regulatory guidelines. However, as the demand for microloans increases, there needs to be a proportionate increase in the number of credit bureaus to support the demand. This is especially true for rural borrowers since it is hard for small lenders to establish their credit history and determine their repayment capability.

Need to develop crowdfunding platforms dedicated specifically to microlending: In the past few years, crowdfunding has surfaced strongly in India as a form of alternative lending. Though there are few crowdfunding platforms especially committed to microlending, Crowdfunding has largely ignored the micro-loan market. India needs to develop more crowdfunding platforms that provide larger access to capital across the nation. Public-Private Partnerships (PPPs) in this area could play a transformative role and could facilitate access to capital for the larger population. The more players that focus on micro-lending, the faster will be the process of poverty alleviation.

Need to develop cashless mobile banking platforms: Earlier, MFIs accentuated achieving high repayment rates. This process requires a lot of manpower in the field and the procedure was slow and inefficient. However, technology is changing the industry by helping to reduce costs and increase outreach. In the light of recent demonetization in India, there is an ever-increasing need to develop cashless payments systems in rural India. India has more than 1 billion mobile subscribers and this base could be taken advantage of to get a strong grip in rural markets. Paytm has been a great success in urban India and a similar model can be tailored for rural India.

Apprehensions:

While some have praised microfinance as a way to end the cycle of poverty, reduce unemployment, increase earning power, and aid the financially marginalized, some experts say that it may not work as well as it ought to, even going so far as to say that it has lost its purpose.

Others claim that microfinance merely makes poverty worse since many borrowers use microloans to pay for basic supplies, or their businesses fail, which only pushes them further into debt.

For instance, in South Africa,



94% of all microfinance loans are used for consumption, meaning, the funds are utilised to pay for basic supplies. This means borrowers are not making new income with the initial loan, which means they have to take out another loan to pay off that loan, and so on and so forth. This translates into a lot more debt. However, other experts say that microfinance can serve as an important tool for the financially underserved when used properly. They also consider the industry's high repayment rate as proof of its effectiveness. Either way, microfinance is a crucial topic in the financial sphere, and if done correctly, could be a strong tool for many.

In conclusion, India aims to become a USD 5 trillion economy by 2025 and the microfinance industry will play a prominent role in uplifting the lives of millions

of low-income households and allowing them to add to the country's economic growth. Capital and expertise are progressively flowing into microfinance. Increased competition can be seen among MFIs and as they continue to expand their internal operating capacities, more of the potential 80% of the market will be served. Key players such as rating agencies and institutional investors are also moving into the marketplace, indicating the fact that a true market is developing. As the microfinance industry tackles the current set of problems, the industry needs to establish strong governance and regulatory practices. The future course of the industry will be determined by the ability of players to forge new alliances, develop new products, create new investment channels and leverage technology to meet the demands of consumers.



Decoding the “Act Of God”

–Chirag Banka & Keshav Todi

Demystifying the concept of the “Act of God” in various fields, from insurance to tax collections and its relevance during COVID-19

Humans are mostly theists. We tend to believe in God(s) and attribute a lot of happenings - both happy and sad to it. It is an incredibly subjective matter. Some believe in the birth of a healthy baby, a process well explained by science, to be an act of God. One can’t question it as it is a matter of belief. However, “Act of God” has very different implications when it comes to the subjects of insurance and finance.

The Act of God, in the above context, refers to any event that is unforeseeable and is out of human control, as we have negligible power towards altering its outcomes and preventing any consequent damages.

Every contract is built upon the basic and foundational understanding that all parties shall perform their obligations as listed. If and when one party fails to do so, the forfeiture to the remaining parties is made good by it. Force Majeure is a clause that limits or prevents liability in such contracts. It is a French word that literally translates to “greater force.” It saves parties from being liable for events and occurrences that are fundamentally out of their control, which usually includes catastrophes and natural disasters such as floods, earthquakes, volcanic eruptions and storms.

In India, the force majeure claim is set out in Sections 32 and 56 of the Indian Contract Act, 1872. Both these sections suggest something on similar lines, that if a contract is contingent on an event happening or not happening or if the event is impossible in itself, then all such contracts shall be void. The main question that arises here is whether the whole COVID-19 condition can be regarded as an “Act of God” and whether the force majeure clause can be invoked. This depends solely on the phrasing of the contract written out between the parties. If pandemics and epidemics are covered in the terms of contract, then maybe the force majeure can be invoked. When there is no mention of such terms, the force majeure clause may still be invoked, if and only if the event which is to be performed is impossible to do.

Insurance contracts seem to be the most pertinent case where the concept of the Act of God comes into play. The idea of insurance is to pool risks and protect you from damages that can accrue from a plethora of risks - both personal and business. A noteworthy thing here is that insurance does not eliminate risk - it only pools the risks of all parties to the contract, based on probability, and hedges it for the ones who are affected. Therefore, it puts both the insuring party and the insured party at risk. Hence it becomes important to pen down and legally formalise the risks that come under the contract, and explicitly mention the ones that do not.

Insurance contracts use the Force Majeure clause to limit the risks that shall be covered. The clause explicitly mentions the Acts of God and other extenuating circumstances that are not included in the policy, along with the damages for which the insured party shall

itself be liable. This clause is customised and varies from policy to policy. The party seeking insurance can often choose to pay an additional premium to get one or more of the risks mentioned under Force Majeure covered, as an add-on to the principal contract. However, even in the case of add-ons, the understanding remains that the insured party shall do its best to mitigate all damages.

The All England Lawn Tennis Association got pandemic insurance after the 2003 SARS outbreak. It paid the US \$2 million as a premium each year, for 17 years, until it could claim US \$141 million in the year 2020. The Indian Premier League was not so fortunate. Their insurance policy covered 'epidemics'. However, since the definition of a pandemic is different from that of an epidemic, they could not get their claim.

On multiple occasions, the Union Finance Minister Nirmala Sitharaman has gone on to term the COVID-19 Pandemic as an 'Act of God'. She admitted that due to this act of a god-like situation, the economy might face a contraction, which it later did (-23.9%).

GST compensation dilemma

The Central Government of India rolled out the Goods and Services Tax in July 2017. The Goods and Service Tax (Compensation to States) Act, 2017 provides for a mechanism that helps in covering any loss of revenue that may arise to any particular state for a period of five years. Now, one may wonder as to why the centre will come up with tax systems where states will be at a loss?

After the rollout of GST, some states were better off than other states. The consumption rich states fared

far better than production rich states. GST, being a consumption-based tax, is the prime reason for this. Consider, a certain table has been manufactured in Haryana and sent to Maharashtra for selling. So, Maharashtra will be the state which will receive the taxes on it. Earlier, producing states were able to get such tax revenues by claiming the "point of origin" but that option is not available anymore. Thankfully, our Government was aware of this shortcoming and hence devised a way to compensate for such losses in revenues to the states.

The 2017 act laid down that the GST revenues of all states would increase at an annual growth rate of 14%. Any "loss of revenue" caused due to a reduction in the said percentage will be compensated by the centre. To get revenues for such compensations, the centre levies GST compensation cess on luxury and sin goods such as cigarettes, pan masala and certain passenger vehicles. All these revenues were transferred to a separate fund and all payments were made through that.

To get a better view, the centre had to pay compensation amounting to around 81,000 crores to such states for the year 2018-19. But, due to constant economic slowdowns and the unprecedented COVID-19 pandemic, such compensation requirements doubled and tripled in the following years. Due to the decline in GDP, the loss in revenues for states skyrocketed and the cess collections for the governments dropped making it a lose-lose situation. In 2020, the total shortfall amounted to a humongous amount of approximately 3 lakh crores. Out of this, around 65,000 crores were paid by the GST compensation fund. However, the net shortfall amounted to 2,35,000 crores. It was here that the "Act of God" or the "Force Majeure" clause was enacted. This came when there was no force majeure clause in the GST Compensation Act, 2017. This was



probably just the Government's way of saying that they're out of money.

The centre gave two options to the states regarding the net shortfall-

1. The shortfall arising out of GST implementation (calculated at 97000 crores) will be borrowed by the states through an issue of debt under a special window coordinated by the Finance Ministry and the RBI. The repayment of interest and principal will be done after the end of the compensation period ie. 2022.
2. The other option was to borrow the entire shortfall but through an issue of market debt and the interests will also have to be paid through the states themselves. Although, the principal had to be paid after the whole transition period.

So, which option was selected for the whole payment process? Well, none of them actually. States did not want to be indebted and emphasized on the moral responsibility of the Government. The States argued that the Central Government can raise resources through means that are not available to States. The Central Government has the monopoly over the monetary measures. Borrowing is more efficient and less expensive if it is undertaken by the Central

Government. The centre replied in defence that it only had the liability to compensate states for the loss of revenues arising due to GST implementation issues and not due to losses incurred due to the pandemic or any other unforeseen circumstances. The arguments kept coming back and forth for 2 months in 2020. A final solution was decided upon that the centre, not the States, would issue debt on its own but not to compensate the whole shortfall, and only 1.11 lakh crores. Even though this decision bore some heat by the states, it was the only decision that led to a win-win situation. What's worrying now is that the same situation, only far worse, could come again and there might be similar policies rolled out this year as well.

Conclusion

A pandemic of this scale has never been witnessed before. When it comes to parties in a contract or the Government and its people, everybody must discuss and come up with amicable and practical solutions to the problems so no one's left aggrieved at the end. Determining whether a certain situation amounts to an 'Act of God' will always keep changing from case to case. What one needs to look at is a negotiated settlement so that nobody's at a loss in these tough times.



Trading Across Time and Space

–Om Marwah

An enquiry into the econophysics of High-Frequency Trade.

During the Scientific Revolution, German physicist Albert Einstein had invested a major chunk of his funds, from the Nobel Prize for Physics in 1921, in stocks. However, the stock market crash of 1929 resulted in plummeting prices. What might have seemed like a lost fortune ended up as an investment yet to accrue returns to all those who reasoned why. Proposed in 1905, his Theory of Relativity moulded modern physics as we all know it today. Little did he know that his contribution in the field of science would prove to be a cornerstone for traders to make or lose millions as information transmitted at the speed of light!

From the ear-splitting crowded trading floor to the advancements in technology in the 21st century, the stock market has undergone a complete evolution. Trade that required mapping a counterparty and striking a negotiation has now been replaced by Machine Learning (ML) and Artificial Intelligence (AI). Execution is done automatically after the tactics are input.

As the name suggests, High-Frequency Trading (HFT) is algorithm-based trading using exceptionally fast supercomputers and ultra-low latency networks. This arrangement is capable of buying or selling a million stocks in microseconds. To be precise, 2,40,000 stocks

get traded in your 400 millisecond-long blink of an eye! The ultimate driving force is to execute orders in markets before anyone else does and hence taking advantage of this momentum to manipulate the market. It entails:

1. analyzing the data and news feeds from markets in a jiffy and placing orders accordingly,
2. taking advantage of various arbitrages, and
3. using aggressive strategies to sabotage other HFT traders and dominate the market, all without human intervention.

Surprisingly, it constitutes more than 50% of the global stock trade volume.

To understand this, let's time-travel to the 'dark' day of 8th November 2016, when Demonetisation was announced, and arrived at the still of 19:59:59, where the time dimension was wrapped immutable for exactly 5 minutes only for you! What would have been your next thought? Naturally, you would have run to the ATM and deposited all your cash. But before that, what you could have done is to realize your shares held at the exchange and diversely invest the same. Investing in e-commerce or e-wallet companies, gold and even bitcoins would have been lucrative investment options before the stream of time starts flowing back again. Now, as you teleport back in the present, reality seems less daunting when you find yourself in a much better position than mere 5 minutes ago.

This is precisely what HFT does. As the release of

information is virtually done instantaneously in the markets, an HFT firm accesses it much faster than any retail or institutional investor and processes it even before the others read the full headline. Albeit, HFT does not promise huge margins on a single trade but as the volume of trade rises, profit too multiplies manifolds. This tangibly proves it to be a disrupting venture.

The evolution of HFT has largely benefitted market participants. It offers better liquidity to the market by increasing the number of buyers and sellers on either side and facilitates price discovery. This technique helps big firms scan for arbitrage opportunities and make small margins out of them. The risk of entering the market falls as liquidity rises. Further, the bid-ask spread has gone down drastically, saving large trading expenses of retail investors. Mitigation of losses can also be done, inappreciably with the use of a stop-loss.

However, not all that glitters is gold! HFT comes with multiple cons too. Competition in this field has initiated an 'arms race', consequences of which have proved to be against public welfare directly or indirectly. The said liquidity is more of an 'illusion' since HFT firms cancel most of their orders after placing them and trade the stock hundreds of times before the real buyer/seller even touches it. Since the Sharpe-Ratio is exceptionally high, if algorithms fail to compete or go haywire somewhere, the firm's entire investment is doomed. Also, it is alleged that the malpractices of HFTs have triggered innumerable stock market crashes.

Now, here comes the obvious question: How did the Theory of Relativity feature here? Well, the theory states that the speed of light in a vacuum is unchanged for all observers, regardless of their motion relative to the light source. Through his seemingly straightforward equation $E=mc^2$, Einstein established the fact that nothing in the universe can exceed the speed of light. Even if they tried doing so, the mass of the body itself would prevent it from achieving it. This brought about the fact that though information cannot travel faster than light, one can reduce latencies (delays) in the networks to achieve a speed closer to it. This enables the firms to get the advantage of quicker execution and endless arbitrage opportunities.

Furthermore if beating light becomes possible, the mass of the body would start to acquire tremendous energy into it that will lead to 'quantum tunnels' being created in space fabric. Simply put, as particles cannot penetrate a solid obstruction without bumping into it but post achieving a speed close to light, there exists some non-zero probability that electrons transcend that obstruction. If traders somehow attain this speed,

the transmission of data would not be affected by any kind of disturbances and latency shall drop to zero. The disadvantages associated with losing better co-location opportunities to stock exchanges will be wiped out in this way.

Another intriguing element of his theory states that time moves relative to the observer and has given birth to concepts like time-dilation and the twins paradox. It means, time slows down for a body that travels at speed closer to light, due to which it was concluded that a person in space ages slower than his twin on Earth, by some microseconds to be precise. This leads us to the fact that traders may execute trades that theoretically take place in the 'past'. However, notwithstanding many experiments that have been conducted in the past, nothing of this kind has been ever attained. So, while this theory has not aided the traders with any 'breakthrough' it surely has demonstrated the path of trading.

Currently, three types of firms make use of HFT-independent and proprietary firms, brokers and investment banks, and hedge funds companies. As time has progressed, high-frequency traders have curated a plethora of strategies, ranging from making quick fractions of a rupee to displaying deceptive illusions to trap other traders, just by leveraging the technology. These include – market-making, spoofing and layering, latency arbitrage, quote stuffing, pinging, event arbitrage, front-running, ticker tape trading, statistical arbitrage, flash trading, dark pooling, and the list just goes on. While many of them seem to be easy money-multiplier tricks, they are undoubtedly illegal.

Top trading and investment firms have been infusing enormously in acquiring better hardware, network, latency, and co-location (proximity to exchange), and hiring quant-developers, to get at least a nanosecond leap over other HFT firms. Given these programs are coded by the companies themselves, when they are put to play in the market-field, these 'quick-reactionary systems making predictable trades' turn into complex machines that ingest petabytes of data in real-time, run regression or sentiment analysis over them and then make microsecond trades to make thousands of mini profitable transactions. Nonetheless, they are susceptible to infinite loop recursions, technical bugs, and strategy-emulation by rival firms, requiring constant tangible upgradation as well as intangible enhancements to maintain a competitive edge and avoid any mishap.

The Flash Crash of 2010 in the US has been cited as the archetypal example in history when 1 trillion US Dollars were wiped out in just 3 minutes and 20 seconds, all

In fact, from 2006 to 2011, more than 18,000 ultra-fast black swan events (sudden major dips/hikes) were observed, all due to similar and collective reactions by the algorithms of HFTs. 2012 saw the fall of Knight Securities, who lost more than 460 million US Dollars in less than 45 minutes, simply because of erroneous algorithmic input and uncalculated output of the same. ‘Latency issues’ at Chicago Mercantile Exchange (CME) caused HFT traders to take advantage of it in 2018, at the expense of retail investors.

Realizing the interests of public investors and companies to be of paramount importance, several steps have been taken on the legal front. Following the Flash Crash incident, the US Security and Exchange Commission (SEC) formulated a committee that recommended strict measures to restrict volatility and improve the predictability of the market. The committee emphasized the requirement for regulator's access to data and liquidity enhancement, and also on disclosure requirements regarding trade volumes and co-location to be made accessible to the public-at-large. It also banned other practices that were not in the collective interest of the market, like spoofing and layering, dark pooling, and front-running. Other mechanisms were also taken into consideration, like speed-bumps.

European Securities Market Agency (ESMA) introduced some regulations for its 27 countries' unions. The MiFIR (Markets in Financial Instruments Regulation) and



Australian markets designed price control mechanisms to prevent inefficiencies of automated trading. This includes longer lock-out periods, the use of ‘kill switch’, and separate identification to allow better surveillance. In India, the Securities and Exchange Board of India (SEBI) proposed seven measures to curb adverse effects of HFTs and improve ‘real liquidity’ in the market, which included: periodic randomization of order queues, order matching on the basis of frequent batch auctions, imposition of order-to-trade caps, etc. Also, a half-yearly audit is compulsorily required for all HFT firms, by certified auditors listed on the respective exchange.

With rigid enforcement of such measures globally, the growth of the HFT business has started to slow down. In 2009, 3.25 billion shares were traded a day in US markets, but later it accounted for only 1.6 billion shares a day. According to Tabb Group, reported revenues have plunged from a high USD 7.2 billion in 2009 to a low of USD 1.1 billion in 2016, of 'a dying industry' in the US.

The most evident reason is the saturation of technological dominance HFT firms can profit from. With the innovation of ultra-low latency networks, information could travel at almost the speed of light. For any firm to achieve a competitive edge, they are limited by the speed of light which cannot be broken. Small firms, after having invested in hardware and software of optimum quality and not earning returns as expected, are forced to leave the market due to their non-profitability in the long run. Until some innovation or loophole revives the market, many firms have shifted to trading cryptocurrencies, despite its high volatility. Having said that, all things shall move towards equilibrium, once all the misconceptions in the stock markets are cleared.

Growth vs Value: What Would You Choose?

—Hardik Kapoor



Exploring the concepts of growth and value investing using practical life examples

With the COVID pandemic disrupting everything in its way and forcing the Government to impose lockdowns for the citizens' safety, there is not much to do for the citizens stuck inside their homes. But for cricket fans, this is not much of a problem with the IPL 2021 entertaining them at their homes. The opening match of this year's edition garnered a total view of 9.7 billion minutes on Star India channels which, to put things in perspective, is the second-highest viewership record for an opening match in IPL's legacy.

Now, those who watch IPL will agree that it does some incredible advertising with brands from every industry promoting their product. And for those who don't watch it, the fact that Star Sports, the official broadcasting partner of IPL, earned a revenue of Rs. 3000 Cr from advertising alone in 2019 is evidence that BCCI takes advertising very seriously.

This year, among all the companies paying a whopping Rs 12-13 lakh for a 10 seconds ad, there is one company backed by Ratan Tata named Upstox which is a stock trading platform for common investors. Such stock trading platforms, along with easy to access financial acumen provided by learning platforms like Zerodha's

Varsity have made investing relatively easy for the people. This can be validated by the fact that CDSL (Central Depositories Services India Ltd) — one of the country's leading securities depositories — saw a near 20% rise in new Demat accounts.

These new investors may have come across terms like Value Investing and Growth Investing while researching and most of them may still be confused about what these terms really are. This article tries to explain these commonly used jargons in a very crude yet encompassing manner with the help of practical life examples. Further, it becomes imperative that investors know which style of investing they should pursue to generate the maximum returns.

Growth Investing and Value Investing are two schools of thought in the investing world wherein the investors focus on the future value and the intrinsic value of companies respectively. It would be fair and easy to comprehend if we initially look at each one of these approaches in singularity.

Growth Investing is the style of investing in which the target stocks are the companies showing a substantially higher growth rate compared to the mean growth rate prevailing in the market. The companies targeted demonstrate better-than-average gains in earnings in recent years and are expected to continue delivering high levels of profit growth barring contingencies. Another set of companies include those which have some new USPs and are trying to solve something unique because of which they have a comparative

advantage in the market. Investing in these stocks is based on the expected future value of these companies. Due to their expected 'bright' future, these stocks generally have very high demand and as a result, they are priced relatively higher. Growth stocks generally have a high P/E ratio, P/B ratio and EPS. Despite having such good fundamentals, these stocks pay little to no dividend because the companies involved retain their profits for future expansion. Also, the value of these stocks is prone to fall sharply if anything negative to their image was to spread because people put their money in them because of their perceived value which tends to be very volatile in the financial markets per se. A good amount of growth investing happens in the case of IPOs of the companies with a substantial market share in their respective industries. For example, as it can be seen with the case of Zomato going public, investors were more than willing to invest. This type of investing is as termed growth investing.

Value Investing, on the other hand, is the style of investing in which the target stocks are presently valued by the market at a lower level than their intrinsic value. In other words, these stocks are undervalued and the investors think that the value correction will make them a lot of money. The companies involved are well-established companies with rock-solid fundamentals but have a lower market value due to a negative PR campaign, a bad earning season etc. Since these companies are undervalued, they are priced relatively lower than the growth stocks. However, this low price corresponds to a huge risk because if the market doesn't correct itself, the investors are bound to lose a lot. Due to being undervalued, these companies have lower metric ratios like P/E ratio, P/B ratio and EPS etc. These ratios are expected to grow as the market corrects itself. Being well-established companies who have reached the saturation point of their growth, these stocks generally pay handsome dividends, optimum to those in need of a constant income. A good example of value investing was when investors invested in Infosys in October 2020, after the whistleblower case, based on the company's fundamentals rather than based on market sentiment. Such investors benefitted quite a lot once the stock's value was corrected in March 2021 after the company got a clean chit from the SEC.

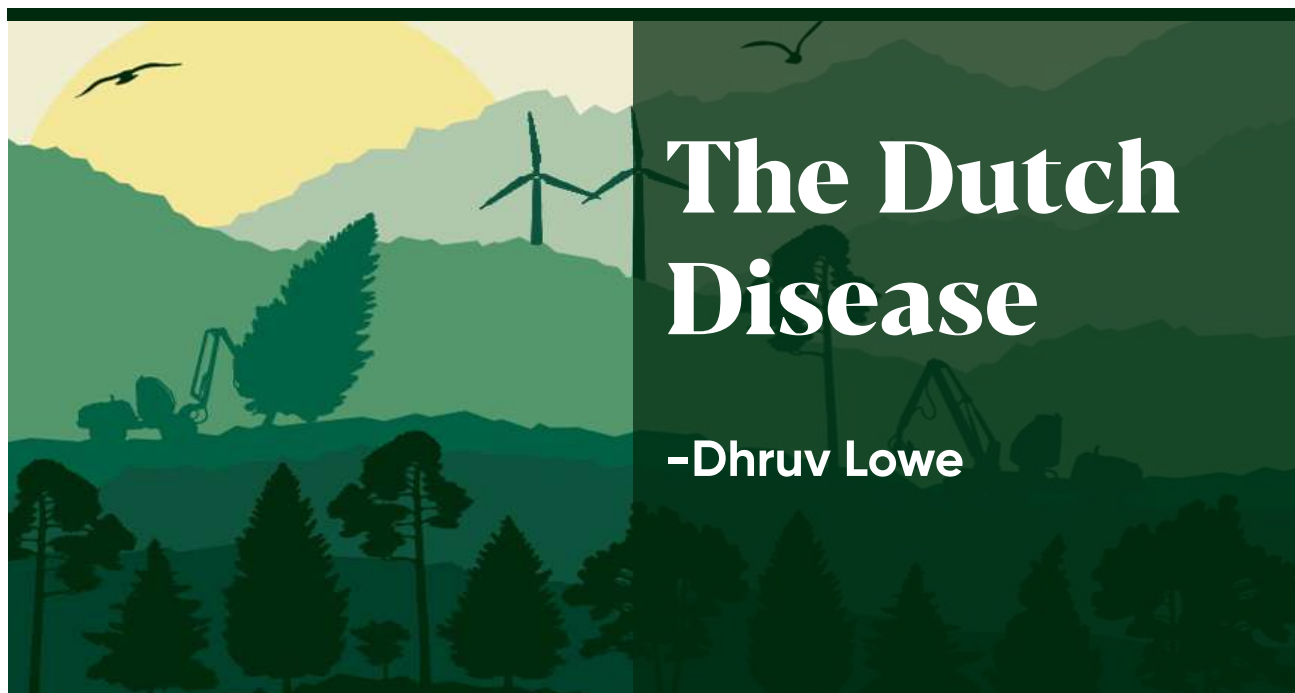
Now, the most pertinent question a rational person would ask is which one of them is better? That solely

depends on the risk appetite of the investor. Value investing is generally considered to be less risky because the companies in focus are well-established companies whose fundamental analysis is more comprehensive and accurate. Further, even if the stocks don't return to the target price that analysts or the investor predict, they may still offer some capital growth along with dividends as well. On the other hand, growth investing is majorly involved with emerging companies whose success is very much uncertain and performance is too volatile.

From the point of view of returns, it is a widely accepted 'argument' that value stocks give more returns than their growth counterparts. In fact, according to a study by Bank of America, value investing has given a return of 1,344,600% since 1923, whereas growth investing has 'only' given a return of 626,000%. However, there is one catch to this argument, the time frame talked about here is close to 100 years and it doesn't specify whether the companies targeted were large, mid or small capitalization companies. Therefore, it becomes necessary that we compare both the returns after accounting for the time horizon, the amount of volatility and the period of the market cycle in which the investing was done.

According to one study, if one takes a time horizon of about 13-15 years, then value investing is more likely to outperform growth investing in all the three capsized companies when adjusted for their risk factor and volatility. But if we halve the time period i.e. in a time period of 6-7 years, it is empirically more likely that growth investing will overpower value investing. Further, it also depends on the point of the market cycle in which one invests. Growth stocks tend to perform better in a bullish market and times of market expansion whereas value stocks perform better in a bearish market and times of economic downturn.

Therefore, there is not a single fact about one style of investing being better than others. It all depends on the risk appetite of the investor and the time at which he/she is willing to invest in the market. From a more rational investing approach, it is advised that an investor's portfolio should be a blend of growth as well as value stocks for the potential of high returns with less risk, helping him/her to, in theory, gain throughout various economic cycles.



Understanding the Natural Resource Curse

The economic discipline is replete with examples of paradoxes that defy common reasoning. One such phenomenon was first observed in the Dutch economy in 1977. The country, in 1959, had discovered large natural gas reserves in the North Sea, boosting their exports. This doesn't seem harmful by itself, right? The symptoms began to appear in the late 1960s and '70s when the total Dutch exports relative to the Dutch GDP crashed, unemployment rose from 1.1% to 5.1% between 1970 and 1977 and corporate investment was tumbling. The gas export boom had led to a massive influx of foreign exchange, increasing the demand for the Guilder (the Dutch currency at that time) and resulting in its appreciation. Not only did this make other sectors of the economy less competitive in the international market, but it also prompted some poor policy decisions by the Dutch. In order to reign in the appreciating currency, interest rates were slashed. This marked the pullout of foreign investment from the country, a development that devastated the Natural Gas extraction industry, which was capital intensive. This sharp contrast between the country's external health and internal ailments gave rise to the term 'Dutch Disease' coined by The Economist magazine, understanding the Natural Resource Curse.

Theory

The core Dutch Disease model is attributed to the works of Corden and Neary (1983) who designed a framework comprising a three-sector (Non-Tradable, Manufacturing and Resource Sectors) economy.

A resource boom, that may occur due to discoveries of new reserves such as in the Netherlands case, can impact the economy via two channels: the resource movement effect and the spending effect.

Resource Movement Effect - A rise in the prices of natural resources will increase the value of the Marginal Product of Labour, thus driving up the equilibrium wage rate. As a result, labour would shift from manufacturing and non-tradable causing a tightening in these sectors.

Consider the international price of traded goods as fixed, the higher wage in terms of traded goods will reduce traded sector profitability, competitiveness, and lead to a decline in exports.

Spending Effect - A boom in the natural resource sector increases the national income in the short run. It also leads to an increase in imports of tradables and non-tradables. This increase in wages would be spent, raising the price of non-tradables relative to tradables and therefore leading to the spending on luxury non-tradables and services disproportionately. This appreciation in the 'real exchange rate' further hurts the profitability and competitiveness of the resource sector.

The Natural Resource Curse

Countries with an abundance of natural resources may be cursed. This hypothesis is in fact based on some evidence. Countries like Nigeria, Venezuela, Angola and Ecuador have failed to prosper whereas many resource-poor Asian countries have flourished. In a recognized research paper, Sachs and Warner (1995) studied this phenomenon and found a robust negative relationship between real GDP growth per capita and the ratio of GDP to resource exports for a sample of 97 developing countries during the period 1970-89.

There are multiple reasons why matters pan out like this.

First, resource wealth gives root to rent-seeking behaviour leading to governments and private entities engaging in unproductive activities to appropriate this wealth (i.e. corruption and conflict). Martin and Subramanian (2003) call this the “institutional impact of natural resources,” and find empirical evidence that some natural resources (in particular, oil and minerals) exert a robust negative and nonlinear impact on growth via their deleterious impact on institutional quality.

Secondly, resource rents tend to be highly volatile. This in turn results in a contraction of investment due to a higher cost of capital.

The third explanation of the natural resource curse is the Dutch Disease hypothesis.

Netherlands’ gas discovery is just one of the ways a country can contract this economic illness. This disease is transmitted to countries primarily through exchange rate movements following a large inflow of foreign exchange that may be a result of a surge in commodity prices, foreign aid, remittances and investment. However, recent research has found that inequality in the distribution of natural resource rents and political instability can weaken a country’s immune response towards Dutch Disease.

Aid and Long-Term Growth

While it may sound intuitive that sending aid to low-income countries is a fair way of contributing to their economic growth and poverty eradication, economists still debate the efficacy of foreign aid in fostering development.

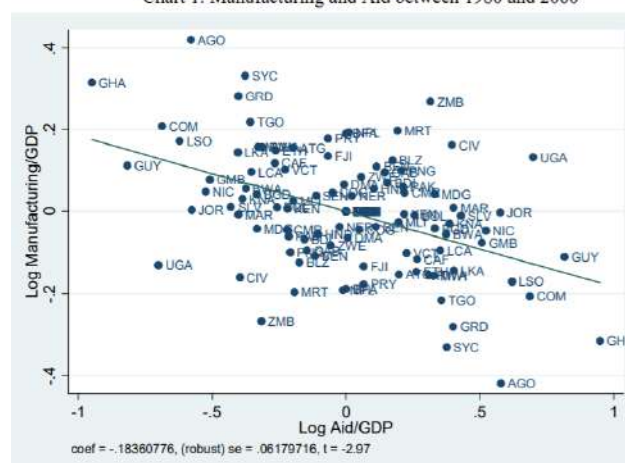
Foreign aid definitely has positive effects in the short run. However, this is offset in the long run. Aid tends

to introduce dependency and weakens the country’s tax collection mechanism. Furthermore, aid expands the government’s resource envelope, so to say, without it having to explain its actions to its citizens. This corrupting influence eventually weakens the country’s institutions on various levels.

As stated above, regular aid inflows can lead to Dutch Disease, which may manifest itself through two channels. Primarily, in a flexible exchange regime, aid inflows push up the nominal exchange rate rendering the traded goods sector uncompetitive if wages in that sector do not adjust downwards. Secondly, in a fixed exchange rate regime, when aid inflows are spent on domestic goods, they will push up the price of other critical resources that are in limited supply domestically– such as skilled workers, thus rendering industries that face international competition and depend on that resource uncompetitive.

Raghuram Rajan and Arvind Subramanian while at the IMF worked on some research that found strong evidence consistent with aid undermining the competitiveness of the labour-intensive (or traditional exporting) sectors. In particular, in countries that receive more aid, labour-intensive (or traditional exporting) sectors were found to grow slower relative to capital-intensive (or non-exporting) sectors. Due to reduced competitiveness, the employment growth in these sectors is slower, and these sectors contribute to a lower share of the economy relatively as compared to countries that get more aid. Additionally, they also discovered that aid not only reduces the relative growth rate of labour-intensive industries but also the average growth rate of the manufacturing sector.

Chart 1: Manufacturing and Aid between 1980 and 2000



The statistical analysis conducted by them reveals that aid and the relative size of tradable sectors in the economy are negatively correlated. Their study provides empirical evidence that suggests a line of causation

between aid inflows and the shrinkage of tradable sectors of the economy, and hence adverse impacts on long-run growth. Of course, not all exports are likely to be subject to adverse effects from aid. In particular, exports of extractable resources where labour intensity is low are unlikely to be affected by an overvalued real exchange rate.

Diagnosing this ailment can prove to be a tough task, even if the country in question is showing all the symptoms. To ascertain whether a country is, in fact, suffering from Dutch Disease, the relationship between resource inflows, an appreciating real exchange rate and a decline in the tradable sectors, amid several factors that influence economic performance.

The Treatment

“To ignore the past, or to only read rosy lessons from it, is to condemn oneself to relive it.” - Raghuram Rajan

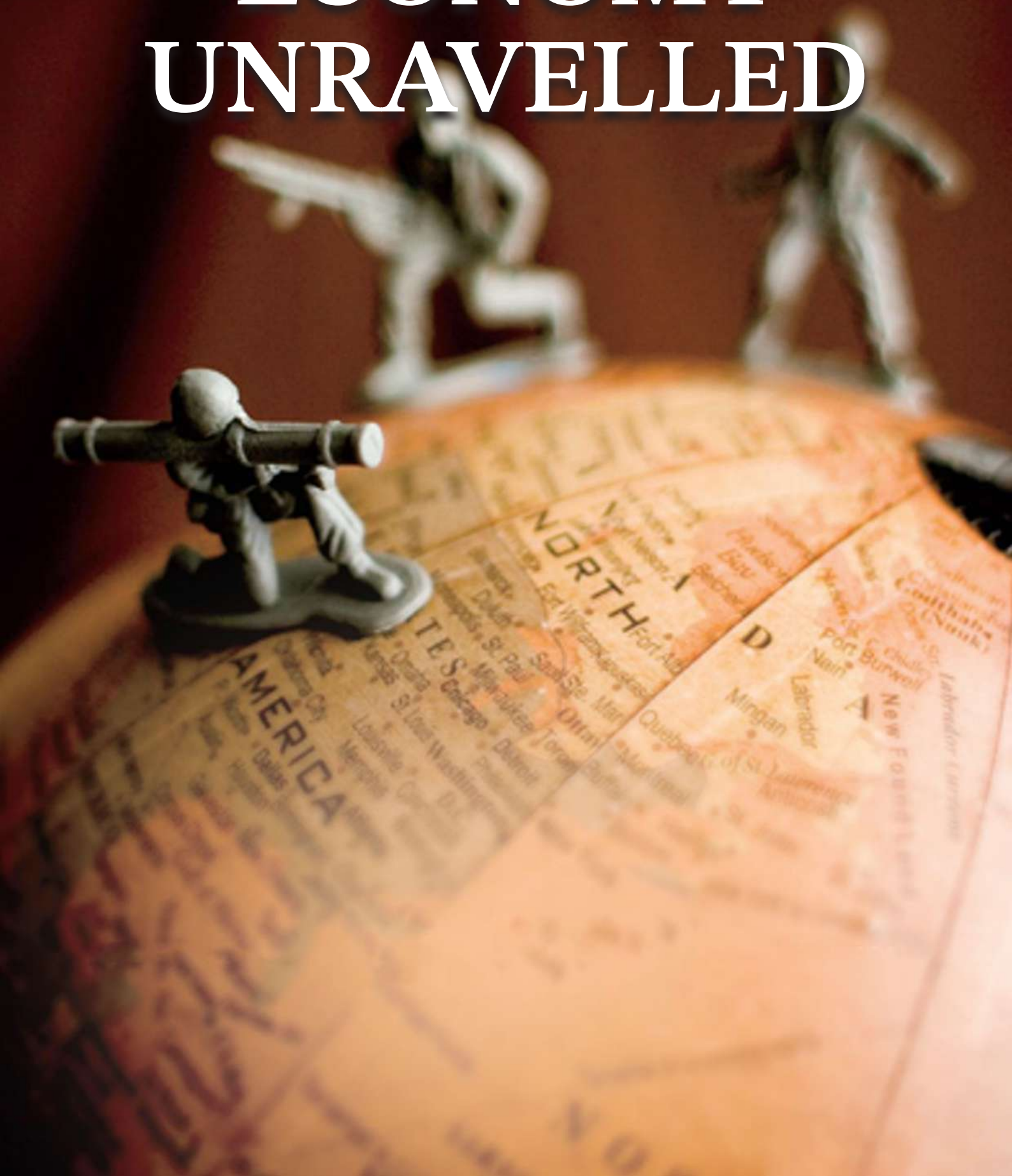
To reap benefits from foreign aid inflows or a resource boom, countries must focus on facilitating the economy's adjustment to a new long term equilibrium. This transition comes with its own set of challenges - short term unemployment, bankruptcies, sunk physical capital. One method of increasing the economy's flexibility is fostering a robust business environment by removing supply-side rigidities. Most importantly,

the country's overall competitiveness needs to improve in order to prepare for eventual export diversification.

To create an environment where the private sector can flourish, countries must learn to manage the volatility of commodity prices and foreign exchange flows through a mix of appropriate fiscal and monetary policies. The first line of defence against commodity price volatility is counter-cyclical fiscal policy. Delinking public finances from fluctuations of resource revenue are key to dealing with boom-bust cycles. Unspent resource revenue can be saved in a fund (a stabilization fund) dedicated to liquidity management or investment in offshore assets, which can be drawn down to implement a fiscal stimulus during periods of low commodity prices or in the event of sudden reversals of foreign inflows.

A prerequisite for treating the Dutch Disease is the presence of strong institutions with governance standards that promote innovation and boost productivity. There is no 'magic bullet' or panacea that can address all symptoms, but there are some basic requirements for economic growth. Making sensible macroeconomic management, fiscal discipline, opening up to international trade, investing in health and education, must be set as essential conditions for qualifying for aid from rich countries and international financial institutions. All a country needs is to develop this broad environment to chart its plan for long-term growth.

GLOBAL ECONOMY UNRAVELLED



The Double Edged Sword of Japan

-Nehal Kaul

The Japanese Economy's journey in the last 70 years has been nothing short of a rollercoaster ride

Whether you want to call it the land of the rising sun or the country which is the home to manga and anime, Japan's economic history and by its extension the present is somewhat of an interesting case. Perhaps there is no better way to analyse the economy of Japan but to start from the time when the society of Japan faced a massive change in all of its realms: political, social and economical. Post World War II, the economy of Japan was left in ruins, however over the next few decades it rose from the ruins like a phoenix. Japan's economic performance in the post war era can easily be described as miraculous and has yet not been matched by any country in modern times.

The events which led to the explosive economic growth in Japan after WWII were as follows:

After the surrender of the Japanese army, Americans established a significant presence in Japan mainly driven by the motive to prevent any Soviet expansion in the Pacific region. During this time, the allied powers introduced a series of social, political and economic reforms with the aim of establishing a democracy and a free market system as opposed to a monarchical rule and to prevent the spread of communism in Japan.



Furthermore the outbreak of the Korean War in 1950 provided Japan with an extraordinary chance to stimulate their economy. During the war, Japan's industrial production increased by nearly 70%. The country was the major base for the American army. Foreign currency earned from the US was at an all time high of \$590 million in 1951 and over \$800 million both in 1952 and in 1953. This led to a significant increase in Japan's dollar income and provided the country with an opportunity to double their scale of production by importing technologically superior plant and equipment.

The end of the Korean war (1952) marked the restoration of Japan's independence, after which the government introduced various monetary and fiscal policies to spur growth. The most famous policies among these include the Yoshida Doctrine and the Income doubling plan. The first one was aimed at economic reconstruction by saving expenses on the military, that is by leaving

defense wholly to the US army. The income doubling plan on the other hand aimed to double the income of Japanese workers and increase their standard of living. This was done by large investment in both public and private firms.

The Ministry of International Trade and Industry (MITI), was one of the most prominent governmental organisations during this time which played a significant role in the revival and growth of the Japanese economy. It identified and promoted the growth of industries that had potential of long term growth and success. These included industries like steel, ship building, chemicals and machinery which had a large and rapidly growing world market. It was thought that developing these industries would play a key role in helping Japan enter international markets. MITI achieved this objective by giving financial as well as technological aid and assistance to these industries by the method of window guidance (informally nudging the commercial banks to provide credit opportunities to specific sectors). The above factors coupled with the ability of Japanese workers to use the new technology to develop low-cost mass production facilities helped Japan get back on its feet. This helped make Japanese exports much more competitive internationally. Due to the low cost and good quality of Japanese products along with the low exchange rate, exports grew exponentially, and Japan soon became a trade surplus country.

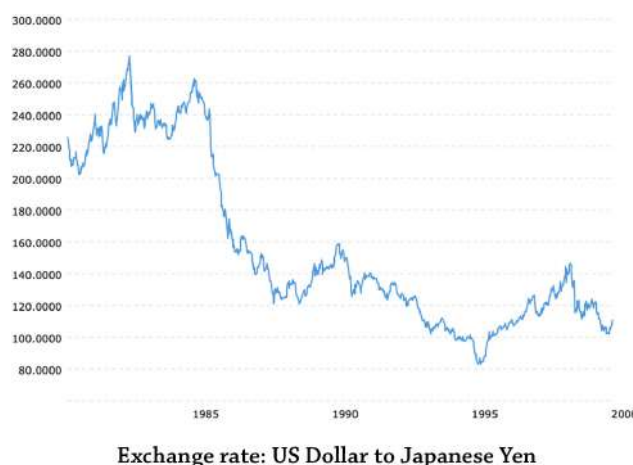
Between 1952 and 1973, the Japanese economy grew at an average of 10% per annum. Consequently, Japan's GDP was more than 6 times as large in 1973 as it was in 1952. During this period, Japan became the world's second largest economy after the USA. Japan was first in steel, ships, electronics and optics as well as automobile, semiconductor, computers and robots. Moreover by the mid-1960s after 10 years of rapid economic growth, illiteracy, poverty and unemployment were virtually non-existent.

Like all the major economies at the time, even Japan faced a slowdown in its GDP growth due to the 1973 Oil Crisis, this provided the industries with a chance to shift from high energy intensive industries to alternative sources of energy production. The dependence of Japanese industries on imported oil for its industries led to severe price inflation and marked the first time post WW2 where the Japanese economy saw a decline in industrial production. However, the adoption of new technology ensured that the Japanese economy saw a growth of 4-5% during 1970-1980s. Although this was a decline from its previous terrific performance, it was still higher than that of most developed countries. At this time the US economy grew by just 3.5%.

So, what went wrong?

Japan continued to experience a much higher economic growth as compared to other countries all throughout the 70s and first half of 80s. This coupled with the slow growth of the US economy and increase in the US trade deficit to 3.5% of its GDP led to trade friction between Japan and the US. The US went on to impose a quota on automobiles imported from Japan in 1981 which was followed by the imposition of a 45% tariff on Japanese motorcycles.

Japan would still have sailed through but to add insult to injury, all the G5 nations at the time (USA, Japan, UK, Germany and France) signed the Plaza Agreement in 1985, which led to substantial depreciation of the US dollar in comparison to the Japanese Yen and the German Mark. This was done to help the US reduce its trade deficit. However, it had profound effects on the Japanese economy and is till date considered to be the propelling reason for the Japanese Asset Price Bubble which burst in 1992.

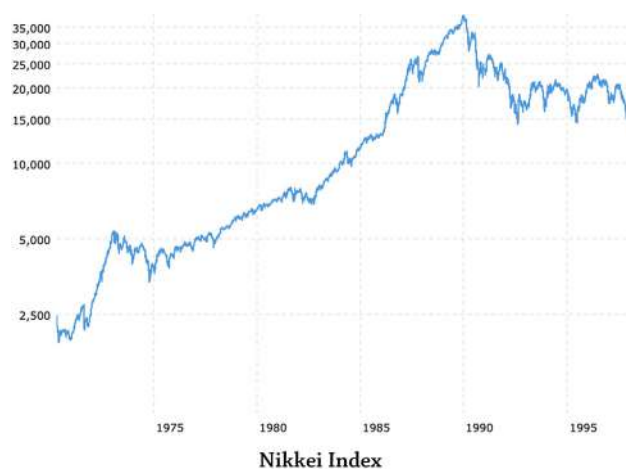


Now the question arises; what led to such a massive downfall in the Japanese economy that even today, 30 years later shows its effect. For starters, after the Plaza Agreement in just a few months, the US dollar depreciated by 50% as compared to the Japanese Yen. This led to massive short term shock for the Japanese exporters causing stagnation of GDP growth in the first half of 1986. Faced by recession and the appreciation of Yen, the Japanese authority responded by introducing significant macroeconomic stimulus. This included a huge decline in the interest rates as well as introduction of fiscal packages. The decline in interest rate led to large scale lending by the commercial banks which was subsequently utilised by families and businesses to buy real estate as well as invest in financial markets. The sudden rise in demand caused a sharp rise in real estate prices and other assets such that at one point the value of the land on which the Imperial Palace is built was enough to buy all the real estate of California.

All this led to the start of a self-perpetuating cycle, as the asset prices kept on increasing, especially the value of land, their value as collateral also increased. Subsequently, industries and families were able to take up more loans from commercial banks. Furthermore, people also began to invest heavily in stock markets, adding to the growth of this bubble.

The other key aspect which was largely responsible was the use of a financial engineering technique known as “Zaitech”. It was an unorthodox accounting practice in which the earnings of the company from speculative activities were included in the corporate earnings of the companies. This provided the companies which were not performing well in their core production activities in the wake of appreciation of Yen, the perfect opportunity to utilise the easing of credit facilities and low interest rates to take loans and invest them in stock markets. Now since almost all business conglomerates ended up utilising this technique, this led to a massive increase in the stock prices and subsequently led to massive earnings for businesses from their speculative activities, giving them more incentive to keep borrowing. As the stock market kept reaching new heights, corporations were able to report their speculative profits as increased earnings, which led to investors rushing to purchase their stock further driving the prices and earnings to new highs. At the end of the 80s, in some cases speculation dominated the company’s business. It is estimated that 40% - 50% of profit of all the major Japanese companies was generated by this method.

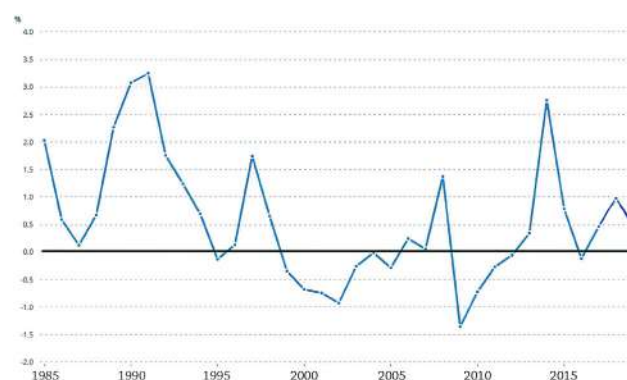
At this time, the Nikkei index, which is the stock market exchange of TSE also reached new heights, with the average price increasing from ¥ 11,000 in 1985 to ¥ 35,000 in 1990.



The Bursting of the Asset Bubble:

The unheard rise in prices of real estate as well as the financial markets worried the authorities and led to contraction of monetary and fiscal policies. However, to say that this contraction was too late, too little would be an understatement. The tightening of the monetary policy led to a sharp fall in the stock market which then also influenced the land prices. This ultimately translated to the consumers and businesses, who owed huge loans whilst the value of the underlying assets, in this case the land or real estate plummeted. The entire crisis adversely affected consumption and investment which over prolonged periods led to a massive deflationary spiral as well as a loan default crisis.

An era of low GDP growth followed and led to a stagnant economy in Japan which continued till the 2000s. This period is commonly known as the “Lost Decade”. Till date no matter what policies the Central Bank and Government have implemented, the economy has remained largely unresponsive. The country continues to remain in a constant cycle of deflation, although quantitative easing policies in the 2000s had helped, the 2008 financial crisis hit Japan more than expected. The crisis caused a higher fall in GDP as compared to the US itself. Majorly, the reason behind this has been identified as the dependence of



Annual Inflation % in Japan (1985 - 2019)

the Japanese automobile industry on exports which was hit hard in the wake of the financial crisis which weakened demand in the US and Europe.

Although multiple structural changes have been made over the years, the biggest problem is that corporates and individuals have a liquidity preference which leads to cash hoarding rather than spending it to fuel the demand in the economy.

Is the demographic responsible?

Another unusual observation about the Japanese economy is perhaps its demographic changes over the years. Japan has been experiencing the issue of a fast ageing population and a shrinking population simultaneously at an unprecedented rate. The combination of both these factors is perhaps a rare situation for any developed country in relatively peaceful and prosperous times. Many have cited the country's economic crisis as a demographic crisis.



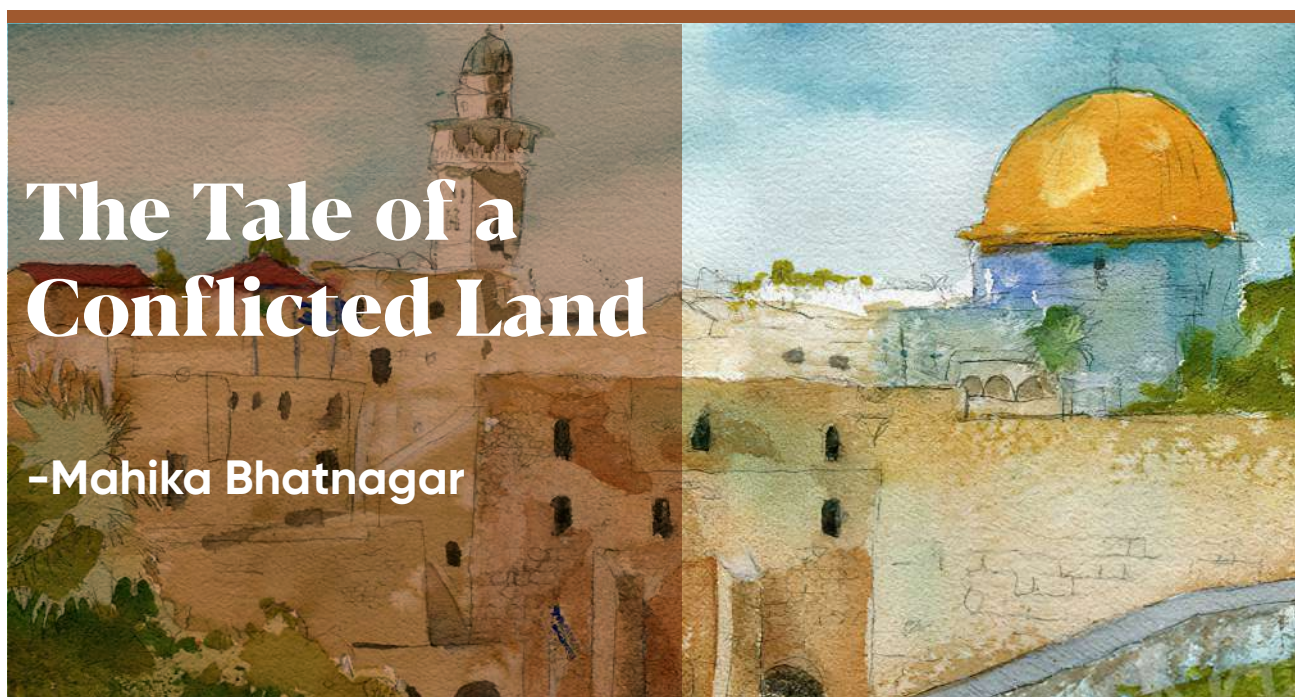
With such a turbulent economic ride the Japanese economy has been on, the societal customs have also seen quite a significant change. Over the years, people have started marrying late or not marrying at all. The main cause for this is the increase in economic insecurity in the younger population. The economic opportunities for youngsters have dwindled which has led to the prevalence of a suffocating and exhausting

work culture. The existence of long working hours and the decline in employment opportunities due to constant recessions and increase in retirement age has had negative implications.

With the median age of 48 years, Japan is the world's oldest country with 28.7% of the population aged above 65 years. The increasing life expectancy is another driving force behind the ageing population; life expectancy of 85 being one of the highest for any country in the world. This coupled with the ever declining fertility rates has led to miniscule increase in the younger age brackets.

These societal changes have directly impacted the economy for the worst. Not only has the decline in the number of young people led to a shortage of workers for industries but it has also put a dampener on production and innovation. The growing number of elderly further has challenging budgetary consequences. From an increase in expenditure on healthcare, which was 10.9% of the Japanese GDP in 2018 (according to IMF) to an increase in government allocations for pension as well as social welfare schemes.

Over the past three decades, to say that Japan has been on a rollercoaster ride would be an understatement, from almost overtaking the US in GDP growth to now being stuck with a myriad of problems. The devil in Japan's story is not one, it's more likely a combination of ill fated circumstances as well as some dubious choices.



The Tale of a Conflicted Land

-Mahika Bhatnagar

Tracing the history of Israel and the light ahead

Israel, the birthplace of the Jewish people, is home to some of the holiest sites in the world. With structures sacred to Islam, Christianity and Judaism, the nation has found itself riddled with conflicts since the day of its establishment. A country less than half of an average sized Indian state, and surrounded by hostile countries, Israel has managed to protect itself in the face of insurmountable odds. The reason Israel is constantly at war is perhaps one of the most obvious grounds for geopolitical friction - a land dispute. But this isn't just any land dispute. The origin of this controversy has both, a nationalistic and a theological background to it. To understand it better, it is imperative to look back to the circumstances that led to the formation of Israel.

History

Jews form the foundation on which this tale will play out. Simply put, they are believers in the religion of Judaism who have been subjected to discrimination and prejudice by several religions and countries - a practice termed as anti-semitism. Contrary to popular belief, Hitler did not invent anti-semitism. Infact, anti-semitism goes back many centuries and is often called history's oldest hatred. With the increasing hostility and abuses hurled towards them, the Jews felt their very existence being threatened. This gave rise to the concept of Zionism.

Zionism is a Jewish nationalist movement that began in the late 19th century. Although fundamental philosophies of Zionism have existed for centuries, modern Zionism was established in 1897 by Theodor Herzl, an Austro-Hungarian Jewish journalist, playwright, political activist and writer. Hailed as the Father of Modern Political Zionism, he formed the Zionist Organisation and promoted Jewish immigration to Palestine in an effort to form a Jewish state. Herzl is specifically mentioned in the Israeli Declaration of Independence as the 'spiritual father of the Jewish state'. Herzl felt the need for a separate habitat for Jews in Palestine. He organised the First Zionist Congress and was later chosen as the first President of the World Zionist Organisation. His efforts were highly regarded at a time when anti-semitic sentiments were at an all time high, especially after the Dreyfus Affair in 1894, when Alfred Dreyfus, a Jewish officer in the French army was falsely accused and convicted of treason.

In 1917, the British Foreign Secretary, Arthur James Balfour, through a letter to a wealthy and prominent leader in the British Jewish Community, Baron Rothschild, conveyed the British Government's support in the establishment of a Jewish homeland in Palestine. This went on to be known as the Balfour Declaration. However, in 1916, the British Government had authored a secret deal with France, known as the Sykes-Picot agreement that would divide the Arab lands under the Ottoman Empire into different spheres of influence post World War I. The Syrian coast and much of modern day Lebanon was to be taken by France. The British claimed control over central and southern Mesopotamia, around the Baghdad and

Basra provinces. Palestine would have an international administration as several countries and communities had direct interests in the region. The remaining areas would be governed by local Arab chiefs under supervision of the French in the north and British in the south. Britain and France agreed to retain the right of free passage and trade in each other's zones of influence.

Britain was unabashedly making bold promises considering they hadn't won the war yet or even defeated the Ottoman Empire. But that wasn't all. In 1915, Sir Henry MacMahon, His Majesty's High Commissioner in Egypt, promised the Sharif of Mecca, Husayn Ibn Ali, to "recognise and support the independence of the Arabs within the territories proposed by him" if Sharif Husayn led a revolt against the Ottoman Empire. The territories included the Arabian Peninsula, Syria (including Lebanon, Palestine, and Transjordan) and Iraq as "purely Arab" areas. Essentially, Britain promised Palestine (a region they had no control over) to the Meccans, the Zionists and themselves. This is what laid the foundation of the Arab-Israeli conflict.

After the Allies won the first World War, rumours of the Sykes-Picot agreement surfaced, which left Sharif Husayn and the Meccans infuriated. England discarded these rumours as "Turkish war propaganda" to create a rift between Britain and the Arabs. They further added that the British Government's support to establish a Jewish homeland could not be construed as a betrayal of its commitment to the Arabs since Palestine had not been specifically mentioned in the correspondence between MacMahon and Sharif Husayn.

Britain then decided to govern Palestine until they deemed the Palestinians fit to rule themselves. In that time, they established separate institutions for Christians, Muslims and Jews. It is important to note that not all Muslims are Arabs, not all Arabs are Palestinians and not all Palestinians are Muslims. Britain had once again managed to divide and conquer. However, Britain did attempt to honour its commitments pertaining to the Balfour Declaration and assisted the immigration of Jews.

The Jews living in Palestine started settling down, purchasing land, and in the process evicted the Palestinians. As a result, in 1936, the Palestinians led a revolt against the British. With the help of Jews, the British were able to mercilessly suppress the revolt. In order to curb the violence, Britain decided to limit the immigration of Jews and called for the establishment of a joint Arab and Jewish state in Palestine. Needless to say, no one was delighted to hear this.



With the end of the Second World War, it was estimated that nearly 6 million Jews had been killed. This pushed an even greater portion of the Jewish population towards Zionism. Britain had eventually come to realise that ruling Palestine was not worth the trouble and handed over the issue to the United Nations. In 1946, a partition plan was approved by the UN which divided the controversial territory into two states - Israel and Palestine. When the plan was announced in 1948, the Arab-Israeli War broke out. The Israelis emerged victorious with one-third more land than what they would have had under the partition plan of the UN. Meanwhile Jordan annexed the West Bank and Jerusalem, and Egypt controlled the Gaza Strip. More than 700,000 Palestinian Arabs fled and became refugees in the neighbouring Arab countries. This mass Palestinian exodus was called Nakba. The war was the beginning of a new period of struggle among the Jews and Palestinian Arabs, creating a tangled web of political, economic and diplomatic issues.

Over the next 18 years, other than a few skirmishes and isolated incidents, all remained the same. In 1967, the Six-Day War broke out between Israel and five Arab nations, namely Egypt, Jordan, Iraq, Lebanon and Syria, which as the name suggests, lasted six days. Israel won and took over the West Bank, Gaza Strip, Sinai Peninsula and the Golan Heights. Soon after, the UN proposed Resolution 242 to secure peace in the Middle East. The Israelis supported it as it sought acceptance from the Arab nations for Israel's right to

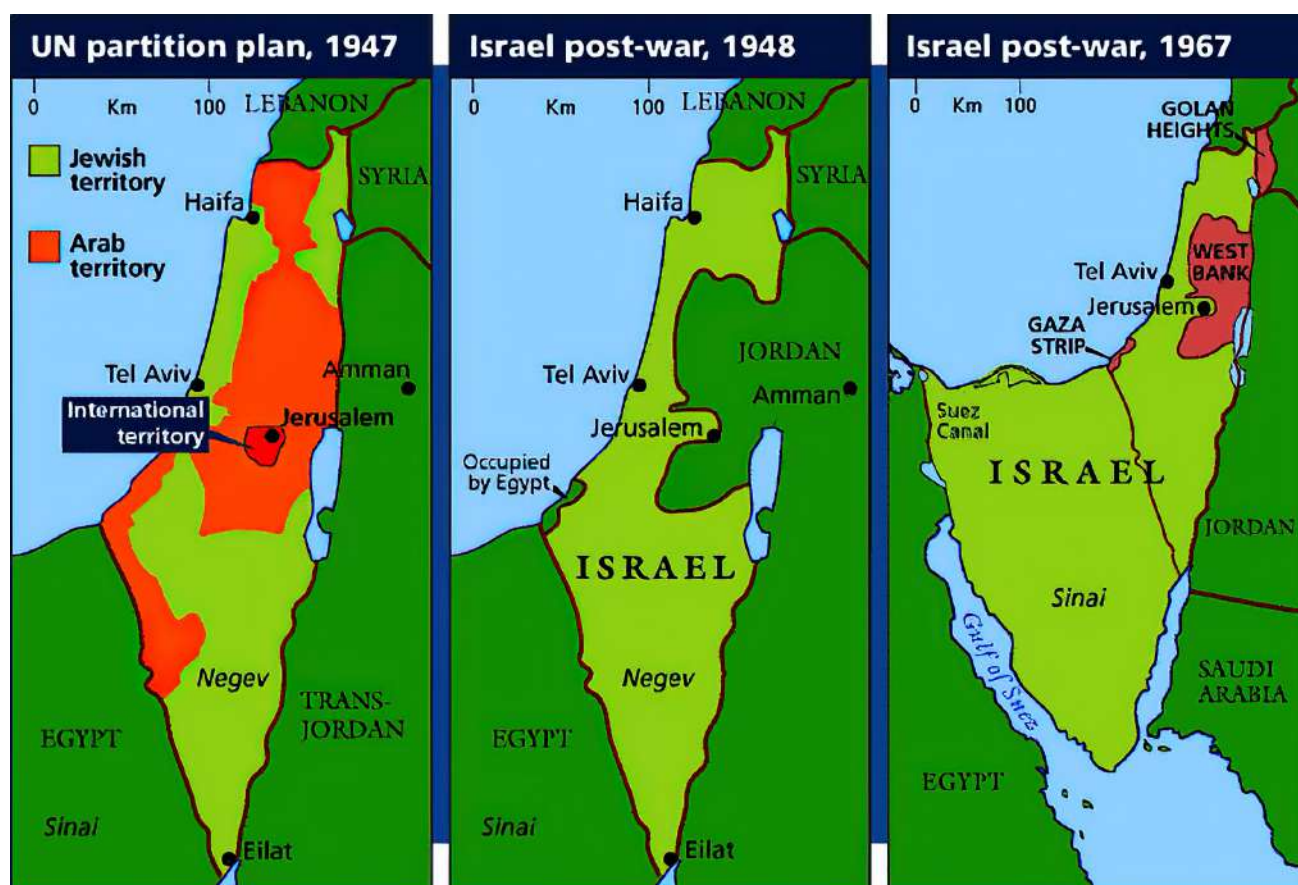
“live in peace within secure and recognised boundaries free from threats or acts of force.” As a condition of the Resolution, Israel ceded the territories it acquired in the war.

By this point of time, the Arab-Israeli conflict had evolved into the Israeli-Palestinian conflict. The Palestine Liberation Organisation (PLO), led by Yasser Arafat rejected Israel’s right to exist. Meanwhile, the Israeli government began to establish Jewish settlements in the West Bank, Gaza Strip and Jerusalem, which is considered illegal under international law as these areas had previously been declared as Palestinian territory. However, Israel claims otherwise. The PLO then used its military might to reclaim the land illegally occupied by Israel and establish a Palestinian Arab state.

For several decades, armed conflicts continued between Israel and the Palestinian Arabs. In 1987, the first intifada, or “shaking off” in Arabic, broke out which started with the Palestinians boycotting Israeli goods and services and soon turned into an armed confrontation. Hamas, a Sunni Islamist Militant group, that gained recognition during the intifada, waged a war and launched its first suicide bombing against Israel. Hundreds of casualties later, a peace process was initiated to fulfill the “right of the Palestinian people to self-determination.” Known as the Oslo Accords, the agreement laid out a plan for an interim Palestinian

Government. It was signed in 1993 by the Israeli Prime Minister Yitzhak Rabin and the PLO leader Yasser Arafat. The second instalment of the Oslo Accords laid out the process for the withdrawal of Israeli troops and the conduct of the Palestinian Legislative Council Elections. Regrettably, the Oslo accords failed to achieve the goal of peace in the Middle East. There were way too many issues like water rights, illegal Jewish settlements and the rights of the ousted Palestinians and their descendants to return home that could not be resolved. The hostility between the two States continued.

The last straw was when the Israeli Prime Ministerial candidate, Ariel Sharon visited the Temple Mount in Jerusalem with a thousand security guards, a site deemed to be the third holiest in Islam and the holiest of its kind in Judaism. Being sacred to both sides, it triggered massive protests. The incident resulted in a violent Intifada which began in September 2000. Over 3,000 Palestinians and 1,000+ Israelis were killed. In 2002, Israel started building a wall around its borders for self-defence. Palestinians viewed this as an illegal land grab and tensions soared higher. The violence lasted nearly five years and ended soon after Yasser Arafat died in November of 2004. Subsequently, Hamas won the majority in the Palestinian elections and since then, they have been at odds with the authorities with respect to governance in Palestine.



Hamas, often regarded as a terrorist organisation, has engaged in multiple deadly military skirmishes with Israel and is determined to liberate Palestine from Israeli occupation. Frequent drone strikes have been met with equally dangerous retaliatory attacks from Israel. Uncountable lives have been taken in this decades-long conflict with no end in sight.

The Road Ahead

At present, Jewish people constitute more than 70% of Israel's population. The Zionists believe that Israel is essential for the protection of persecuted minorities. The critics, on the other hand, argue that Zionism is discriminatory against non-Jews. Under Israeli law, Jews born anywhere in the world can become Israeli citizens, a right which is not granted to non-Jews. Also, some Jews are opposed to Zionism as they don't see the need for a separate country as part of their religious identity.

The Israeli-Palestinian conflict is regarded as the longest running controversy in history. With each side orchestrating frequent isolated attacks, besides full fledged armed conflicts, the inhabitants of the region are at constant risk. Israel's sustained existence can be attributed to the Israeli Defence Forces (IDF) and Mossad. The IDF is the most technologically advanced military while Mossad is Israel's intelligence organisation which is known as the deadliest counter-terrorism agency in the world. Israel spends over 5% of GDP on its military, as it should, considering the ceaseless threats it faces.

60% of the West Bank has been seized by Israeli troops. The Palestinians in this belt are assaulted, murdered and subjected to military courts that convict 99% of

the Palestinians that are brought before them. With tensions rising over the past few decades, the possibility of another intifada cannot be ruled out.

A recent protest which turned into a violent uprising saw Israeli forces launching grenades at Palestinian protesters. Countries that normalised relations with Israel in the previous year have severely criticised its actions as barbaric, bringing fragile peace treaties such as those with Jordan and Egypt into question. This hasn't stopped Benjamin Netanyahu from defending his soldiers' actions. Netanyahu explicitly believes and has declared that "the state views the development of Jewish settlement as a national value and will act to encourage and promote its establishment and consolidation." He has openly stated in the UN General Assembly that any possibility of talks with the Palestinian Authority is unrealistic.

Unsurprisingly, Israel's policy on self-defence is ironclad. Their military has one and only one objective: to protect their homeland, at whatever cost. This sentiment is unlikely to change with the change in leadership. For centuries, Jews have silently suffered the violence and prejudice meted out to them. Finding a safe haven such as Israel is something they are willing to protect at any cost.

Israel is one of the few countries in the Middle East which is known to have nuclear weapons, although they have never formally acknowledged it. The need to secure peace is paramount in light of Israel's alleged nuclear powers. The initiatives undertaken in the past to establish amicable relations have failed miserably, however efforts to achieve the same are still ongoing. Only time will tell whether this religio-nationalist saga is ever going to be resolved.

Wirtschaftswunder: Revisiting the World Wars

-Harsh Diwan and
Devansh Jajoria

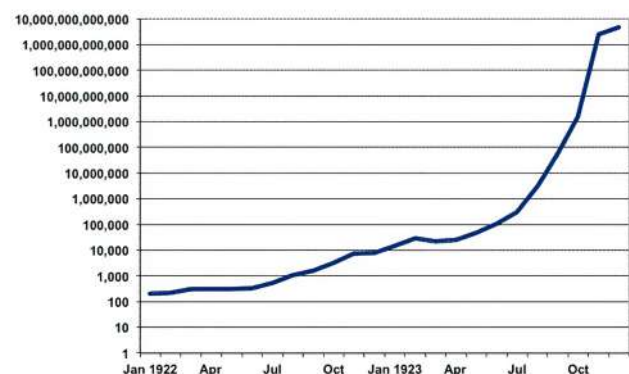
*Following the history of Germany to
understand its fall and rise*

As the First World War drew to a close, the German Empire was forced to acknowledge and accept sole responsibility for causing the war, disrupting international peace and committing crimes against humanity. Blamed by the Allied Forces, the country was asked to pay reparations not only for the damages caused by the empire but also the cost borne by the Allies to fight the war. The Germans were required to pay 121 Billion gold marks (amounting to 31.5 Billion USD). Recognizing the inevitability of the Treaty of Versailles, Kaiser renounced his crown and chose to step down as the ruler of the German republic. A new democratic Germany was to be formed, with its Constitution being adopted at an assembly in Weimar. Even though this was done due to the demand of the Allies, the Republic believed that by creating a democratic republic, they would submit to the treaty, but still preserve the Empire's reputation and honour.

The short lived Weimar Republic inherited a crumbling economy, threatened by looming hyperinflation. In 1916, the mark had been trading at 8 marks to 1 USD, by 1922 it had fallen to 2420 marks to 1 USD and the next year was even worse. In November 1923, 1 US dollar was equal to 4200 Billion marks. The currency failure was a consequence of the Weimar Republic's plan to print massive amounts of currency to pay off

the hefty war reparations. The situation deteriorated to such an extent that people couldn't even spend their daily wage on the day they had earned it. The general public's standard of living was falling by each hour of the day.

German Paper Marks per U.S. Dollar 1922 to 1923
Logarithmic Scale (Base 10) Monthly Average (Federal Reserve Board)



During the same year, i.e. 1923, the Republic also failed to pay its debt obligations to the Allies. Adding to this, France and Belgium captured the Ruhr region, a resource rich and densely populated urban industrial zone. This tipped the economy into a downward spiral with no recovery in sight. Keen on receiving its share of reparations, a committee chaired by Charles Dawes was established by the United States in late 1923, tasked with proposing a plan of action to address Germany's fiscal problems and help its economy.

The Dawes' Plan was the first of two plans that



restructured German debt. In order to stabilise the German economy, further debt worth 200 Million USD was issued. Financed by J.P. Morgan, this was heavily oversubscribed in the U.S. markets. Within 3 months, economic conditions had substantially improved. Under the new chancellor Stresemann, the Weimar republic witnessed a golden period of recovery from 1924-29. His first goal was to correct hyperinflation. He pursued this goal by first abolishing the gold mark. In its place, a new gold standard linked currency called Rentenmark was introduced, which was equivalent to one trillion gold marks and 4.2 USD at the time. Industrial activity boomed after France and Belgium relinquished control of the Ruhr region. Even though the industrial sector boomed, agriculture saw stagnation and unemployment was rampant. This flourishing State was operating under debt, and as debt dried up in U.S. markets due to the Great Depression, the shock that Germany suffered was amplified.

Somehow, Germany had managed to improve its international relations through the years. It also became a part of the League of Nations in 1926 and pacts were signed with France and Belgium to respect each others' border. However, Germany still required another debt restructuring. Owen D. Young, who was also a part of the Dawes' committee, proposed a plan wherein the total debt would be reduced by 20% and the loans would continue flowing into the German economy but at a reduced extent. A new bank, established for the sole purpose of handling international transactions, termed as "Bank of International Settlements" was recommended to be set up.

The flaw with Dawes' Plan was that it did not precisely calculate what Germany had to pay back in total. Young's Plan, on the other hand, had a definite sum in mind, which amounted to 112 Billion Gold marks or approximately 8 Billion USD. The term of repayment was set as 59 years, with 473 Million marks being paid every year. It was mandatory to pay 157 Million marks every year, the rest could be retained if it had the

potential to harm Germany's economic development.

Humiliated by their nation's loss and the terms of their surrender, the people of Germany blamed the Treaty of Versailles for their misery. The Nazi party led by Adolf Hitler, (who believed that war would bring prosperity to the German empire) took advantage of this growing resentment among the masses. The Great Depression marked the rise of the Nazi party. Hitler gained popular support by blaming the Weimar republic for submitting to the West's demands and giving away German territory.

After over a decade of financial suffering, Germany went from a ramshackle State to conquering Europe, all within the span of a few years. The economic growth that accompanied the Nazi expansionist agenda seemed shiny on the surface but was hollow at its core. On 30 January 1933, the German President, Adolf Hitler, who was serving as the Führer of the National Socialist German Workers Party, became Chancellor. Soon enough, the Weimar Republic was wiped out of existence and the Nazis took full control of the nation. Hitler's vision was to rearm and restore Germany's military in preparation for an eventual conquest of "Lebensraum" in Eastern Europe.

Initially, they stuck with economic reforms put in place by Kurt von Schleicher's government in 1932 to counteract the consequences of the Depression. Over the next few years, they invested hundreds of millions of marks into various employment schemes. Millions of Germans did indeed find work in Hitler's new arms factories and military vehicle production facilities. By 1935, unemployment had dipped and only 2 million prospective workers were left without jobs. However, this figure was later found to be manipulated to present an image of unemployment eradication. Part-time workers, forced labourers and prisoners were classified as employed. Instead of generating employment, they skewed numbers by enticing young couples to marry, providing them marriage loans. Furthermore, they would exclude these women from the workforce, creating an image of a robust workforce. They also instituted a "voluntary labour service" in which the unemployed or those on welfare were forced to "volunteer" for hard labour such as farming or clearing land for the State's huge construction projects; those who objected were sent to labor camps.

The Nazis approved the first rearmament financial package in June 1933. Calling it ambitious would be an understatement. Schacht, the Minister of Economics, proposed to spend 35 billion Reichsmarks on military buildup over the next eight years. Surprisingly, Germany's entire national income in 1933 was 43

billion Reichsmarks, indicating that the government was planning on making military manufacturing their top priority. Each and every mark was spent with the sole purpose of ensuring German victory in the wars to come; the capital invested being contingent on their success. All efforts were directed towards engineering and manufacturing war supplies, resulting in almost a complete abandonment of consumer goods. However rotten the foundation of the economy may have been,



the German economy was still expanding. Nevertheless, the growth that it was witnessing could in no manner finance the Nazi government's massive spending.

Schacht then created a secondary currency, called MEFO bills. These were promissory notes that the German government would use to pay most of its orders from German companies. These companies could then trade with one another and transact in MEFO bills, allowing them to buy resources and foreign goods from one another while avoiding any raised eyebrows. Through this intricate system, the Nazis avoided having to pay for any of the war materials they would need right away, as well as having to account for large sums of money allegedly wasted on nominal civilian economic matters, by simply keeping their largest donors/creditors (large corporations) content. Being useless for international transactions, MEFO bills only boosted internal German trade, which worked on the concept of 'Autarkie'. They bolstered the German economy's underlying corporatism as they were almost impossible to translate to the common currency and could only be used by permitted companies. Hitler praised this self-sufficient growth model, despite the fact that neither he nor German economists were misled by the German economy's ever-increasing need for capital.

The end of the Second World War marked the beginning of a new era in Germany's history, one which saw the country redefining itself as a global economic power, leaving behind the horrors of its past.



From 1949 to the present day, relations between the two Asian giants have undergone a series of massive changes

India and China are both very large countries in terms of geographical area, population and dominate Asian politics. The countries have maintained economic, cultural and political ties since pre-independence times. However, the relationship between the two Asian giants has never been the best. These countries have had such strained relations at some point that it even led to a full-fledged war in the year 1962.

India was one of the first countries to recognise the Communist Government of China after the Chinese Revolution in 1949. Cordial relations prevailed between the two countries for a brief time period wherein Chinese Premier Zhou Enlai visited India and his counterpart, Pandit Nehru also visited China. However, these relations were short-lived and conflicts started emerging between the two countries following the Chinese takeover of Tibet in 1950.

Tibet was formerly a buffer state. However, in 1950, the Chinese Army attacked and took control of the country. The Indian government was against the takeover and believed that Tibet should remain an autonomous unit. There was an armed uprising in Tibet against the

Chinese forces which was suppressed by the Chinese Army. This led to the Dalai Lama, the highest spiritual leader of Tibet, taking Political Asylum in India in 1959. This act further dampened the relations. The other major area of Conflict among the two neighbours was the Border Dispute which unfortunately continues. China refused to accept the boundaries drawn during the Colonial Rule and claimed the Aksai-Chin area of Ladakh and part of the state of Arunachal Pradesh, which India denied completely. The long discussions between the top leaders of both countries failed to solve the matter. China launched a swift and massive invasion in October 1962 on both the disputed regions. Indian forces were able to stop the Chinese invasion in the western front but in the east, they reached close to the entry point of Assam plains. After major damage, China declared a unilateral ceasefire thus ending the war. The Chinese Invasion had far fledged impacts such as distrust to temporary suspension of diplomatic and political relations. These are some of the reasons for major conflicts and non-cooperation.

The situations normalised over time which led to the smoothening of relations between the two countries. Till then China had emerged as a major economic power on the global stage. India was also on its way to economic prosperity. Economic and Trade interests among two countries supported building of deeper ties along with interdependence and prevented any major adversary from happening. Both countries emerged as each other's major trade partners after India's Economic Liberalisation in 1991. It was back in April-May 2020, that the Chinese army started gathering in large numbers in the Ladakh region close to the

Indian territory. Several rounds of dialogue among the army majors for the de-escalation failed to reduce the intensity. On the night of June 16, 2020 a major clash happened among the soldiers of both countries after the Chinese illegally entered Indian territory. The clash happened near Patrolling Point 14 between the Line of Actual control (LAC) and the junction of Galwan and Shyok rivers. The Indian Army lost 20 of its brave Soldiers in this deadly clash and while the Chinese didn't disclose any casualty figures, they are believed to be much higher than Indian side. This incident deteriorated the earlier weakening ties and thus created unfavourable sentiments amongst the people of both the countries. This incident and the public anger against China in India called for necessary actions against China and it did come in the form of banning of several Chinese apps on the grounds of data and national security. Moreover India has also taken a step ahead by partnering with like minded democracies like Japan, USA and Australia by forming an informal group popularly known as QUAD. Quad came into existence in 2007 for better diplomatic, strategic and military cooperation among these 4 countries. However the Quad started serious discussions way back in 2017 only, and it witnessed its first formal meeting of Heads of these four states on 12th March, 2021 in virtual mode. The agenda of the meeting was "A shared vision for a free and open Indo-Pacific and a rules based maritime order in the East and South China Seas" which aims at controlling the growing Chinese Power in the South China Sea and Indo-Pacific region.



Chinese Expansionism

Throughout the last 4,000 years, Chinese expansionism has been a focal element of the historical backdrop of East Asia. Since the recuperation of Chinese strength in the late twentieth century, the issues included have been of worry to China's neighbours. Historically, China has been a significant domain ever, and since its commencement, China, created from the northern

bowl of the Huaxia which is accepted to be between current Yellow and Yangtze streams, gradually turned into a significant force from antiquated period. To accomplish that, different ethnic Han Chinese lines had sustained the developments of the country, until it was bound together under the Qin dynasty. However, it was just due to the Qin tradition that China genuinely began its cycle of venture into different countries. Qin administration's expansionism ultimately prompted its first contacts with the antiquated Yue clans, and further stretched out to old Koreans, just as the Xiongnu. The Qin tradition established the framework for future regional extensions by resulting Chinese lines.

The Han tradition formed the peak of early Chinese expansionism. Under the Han administration, China figured out how to vanquish northern Korea and northern Vietnam, adding a few pieces of these regions in the process. The Han tradition additionally figured out how to remove a few traveller clans and acquired control, for once in a while, over what might be present day Xinjiang, however it was generally emblematic because of unacceptable environment circumstance and inward strife within.

Following the fall of the Han line, Korea was liberated from China, leaving just northern Vietnam staying under Chinese control, and the Three Kingdoms period briefly ended Chinese expansionism. In any case, the Cao Wei, Shu Han and Eastern Wu figured out how to broaden the regional increases in certain parts under their regional control. Once the Three Kingdoms finished and after the foundation of the Jin line, Chinese expansionism quit turning into the fundamental feature for four centuries, as China was in desperate need to solidify back its borderland following its huge populace misfortunes.

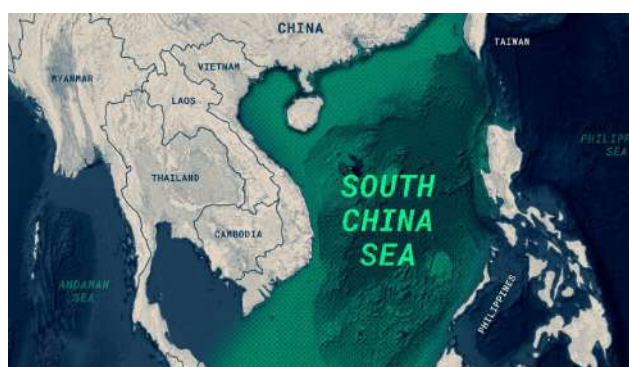
The Sui administration, which reunified China after an additional 350 years of divisions, endeavored to set out back on expansionism, yet four awful missions to Korea put the line to its end. Since the Chinese monetary change of 1978, China has figured out how to change into another financial, military and political incredible force. In measure, China has likewise extended its economy incredibly, and since 2010, is the second biggest economy on the planet. As China changed, there have been trusts that China would surrender its expansionist idea. However, since the ascent of Chinese Communist Party General Secretary Xi Jinping in power, and expanding regional struggles in which China expressed a large portion of their contested terrains have a place with China, it is broadly realized that China has kept on clinging to irredentism even today.

South China Sea Dispute

South China Sea is a vast area extending to upto 3.6 million square kilometers. China claims that the sea is both based on the law of sea convention and the “NINE DASH LINE”. In a notable choice in 2016, a global court in The Hague governed against some portion of China’s cases to the ocean for a situation brought by the Philippines. China dismissed the authority of the court and its finding for the situation.

In its decision, the Council believed the South China Sea to be a “semi-encased ocean” as characterized by the Law of the Sea Convention – a waterway firmly or to a great extent contained via land highlights. Under this law, all states reserve a privilege to 200 nautical mile “select financial zone” to abuse the assets of the ocean and seabed, as estimated from their property domains. Where these zones cover, nations are obliged to haggle with different inquirers. This still cannot seem to occur in the South China Sea, which is the wellspring of large numbers of the momentum pressures. There are three extraordinary difficulties to this.

The first is the nations asserting pieces of the South China Sea cannot concur who should claim the Paracel and Spratly islands. China states its sway depending on exceptionally questionable proof from old occasions, just as later cases from 1902-’39. Japan involved the islands during the Second World War and later perceived the case of the Republic of China, presently Taiwan, in a 1952 ceasefire. Opponent petitioners to the islands prevent the legitimacy from getting this proof. A subsequent test of one of the entertainers in this contention is Taiwan, which has been in question with China over sway issues since 1949. This question has implied Taiwan isn’t officially perceived as a state by most nations and is consequently not a signatory to the Law of the Sea Convention, nor lawfully qualified to guarantee an area. Yet, Taiwan involves one of the islands. Third, there is a discussion in global law about the sort of land in an area that can create rights to a restrictive financial zone. The Law of the Sea Convention orders the land should have the option to support human residence. Also, in 2016, the worldwide



court in The Hague discovered no islands in the Spratly bunch met this standard.

Adversary petitioners to the islands keep the legitimacy from getting this proof. Vietnam has similarly trustworthy proof from the time frame previously and during the subsequent universal conflict. At that point there is the more extensive inquiry of China’s bigger case to the waters inside the u-molded “nine-run” line. This line, which goes through the Philippines, Malaysia, Indonesia, Brunei and Vietnam, was first drawn by the Nationalist administration of China in 1947. The case had no premise in worldwide law – at that point, or now. While the show settled most global laws overseeing the ocean, it left uncertain a few issues identified with military exercises, particularly “honest entry” by warships in regional oceans. Under the Law of the Sea Convention, an unfamiliar warship can pass inside the 12 nautical miles of another state as long as it takes an immediate course and doesn’t lead military activities.

Belt Road Initiative

China’s Belt and Road Initiative (BRI), at times alluded to as the New Silk Road, is perhaps the most aggressive foundation project. Dispatched in 2013 by President Xi Jinping, the huge assortment of advancement and speculation activities would extend from East Asia to Europe, essentially growing China’s monetary and political influence.

President Xi declared the activity during his visits to Kazakhstan and Indonesia in 2013. Xi’s vision included making an immense organization of railroads, energy pipelines, roadways, and smoothed out line intersections, both towards the west—through the precipitous previous Soviet republics—and towards the south, to Pakistan, India, and the remainder of Southeast Asia. Such an organization would extend the worldwide utilization of Chinese money, the Renminbi, and “break the bottleneck in Asian availability,” as per Xi. (The Asian Development Bank assessed that the area faces a yearly foundation financing deficiency of almost \$800 billion.) Notwithstanding the actual framework, China intends to fabricate fifty extraordinary monetary zones, displayed after the Shenzhen Special Economic Zone, which China dispatched in 1980 during its monetary changes under pioneer Deng Xiaoping.

China’s general desire for the BRI is faltering. Until this point in time, in excess of sixty nations—representing 66% of the total populace—have endorsed projects or demonstrated a premium in doing as such. Experts gauge the biggest so far to be assessed as \$60 billion. China-Pakistan Economic Corridor, an assortment

of undertakings interfacing China to Pakistan's Gwadar Port on the Arabian Sea. Altogether, China has effectively spent an expected \$200 billion on such endeavors. Morgan Stanley has anticipated China's general costs over the existence of the BRI could reach \$1.2–1.3 trillion by 2027, however it appraises on complete venture changes.

Specialists consider it to be one of the primary boards of a bolder Chinese statecraft under Xi, close to the Made in China 2025 financial improvement methodology. For Xi, the BRI fills in as a pushback against the much-promoted U.S. “turn to Asia,” just as a route for China to grow new speculation openings, develop trade markets, and lift Chinese livelihoods and homegrown utilization. Under Xi, China presently effectively looks to shape worldwide standards and organizations and strongly affirms its quality on the worldwide stage,” composes CFR's Elizabeth C. Economy. Simultaneously, China is spurred to support worldwide monetary connections to its western districts, which truly have been ignored. Advancing financial advancement in the western area of Xinjiang, where dissenter savagery has been on the rise, is a significant need, as is getting long haul energy supplies from Asia and Middle East.

Impact on Neighbours

In the previous decade, China has contributed more than \$150 billion to the economies of Bangladesh, Maldives, Myanmar, Pakistan, Nepal and Sri Lanka. China is currently the biggest abroad financial backer to Maldives, Myanmar, Pakistan and Sri Lanka. Chinese entrance is the most elevated in the two economies that flank India – Myanmar and Pakistan – where Chinese cash is reinforcing governments that face worldwide segregation because of basic liberties infringement and illegal intimidation individually. Bangladesh, the most dynamic economy around there, is least reliant upon China.

China's playbook is clear: It first enters as a military provider, at that point develops and collaborates with nearby elites, furnishes current foundation with conceded installments, and digs itself in. The Chinese venture is based on hard foundations – power, streets, rail routes, extensions, ports and air terminals. As a rule, the workers hired for assembling these tasks are Chinese. Much of the time, the capital accessible to subsidize these ventures is provided by the Chinese.

Past hard framework, China is thinking of geoeconomics. It is putting resources into the monetary frameworks of these nations. Beijing has taken stakes in the Dhaka and Karachi stock trades and developed a Yuan exchange among China and Pakistan. It is setting

up China-based courts for assertion of BRI questions. Obviously, Beijing looks to make new standards, overseeing business and monetary frameworks around there – changes that could solidify its predominance around there.



Future Outlook

After the 1962 conflict, the relations between the two countries were not cordial. It required a very long time for them to draw near to typical. It was the point at which the then PM Rajiv Gandhi visited China in 1988. His visit was a milestone, which had prompted the beginning of two-sided talks over matters which caused the conflict. Then, in 1993 the notable ‘Concession to Maintenance of Peace and Tranquility along the Line of Actual Control’ on the boundary territories was agreed upon. This was an achievement step which left an unmistakable impression of harmony and solidness.

What's more, when we talk about Sino-India, the circumstances today are not the same as the 1962 conflict. Today, India is an Asian goliath and atomic force. Furthermore, the post-COVID-19 recuperation has been the quickest when contrasted with other influenced countries as referred to by OECD and IMF. The manner in which India managed the Galwan valley issue has demonstrated to the Chinese that things have changed. From the Galwan Valley incident to the prohibiting of various Chinese versatile applications and making rules stricter for Chinese firms needing to work together in India, uncovers India's solid remain over the issue. The progression taken by India, Japan and Australia to think of the ‘Store network Resilience Initiative’ to decrease reliance on China for specific items like API has been an impact of China's forcefulness. However, here it's additionally significant for India to not fail to remember that we share a 3488 km limit with China.

It seems improbable that the relations between India and China will improve soon. By and large, it will have to be accepted that the relations between India and China will be disheartening and adversarial. They will not be equivalent to how they were before 2020.



‘Dealing’ with African Arms Trade

-Devansh Jajoria

The inability of African authorities to exercise control has given the country continued flexibility to deal in the trade of illicit arms

Piracy on the coast of Guinea and Somalia and the fact that almost half of the world’s top 30 dangerous countries are in Africa is a known fact. Another aspect that makes Africa infamous is its illicit arms trade which dates back several decades and is still very much prevalent. The illicit arms trade in Africa has a market of ~\$1 Billion, which is about 10-20% of the global trade. This trade greatly affects the overall situation in Africa given that a number of African countries are nascent democracies and this trafficking of arms ends up arming a number of informal groups, which can then wreak havoc among themselves and with the setup governments.

The actual production of arms is regulated in all of Africa due to the strong constraints that are put on recognized production facilities. However, at the same time, the African black markets are flooded with arms due to production by local gunsmiths, estimated to have a production capacity of 200,000 industry-level quality guns per annum. Another way of sourcing these guns is by ambushing foreign shipments. Guns which were supplied into this continent during the cold war era continues to survive in the markets and are being used to a great extent. At the same time, the local gunsmiths have almost perfected the way of producing

them. Although the arms used in Africa are usually small arms, old automatic rifles such as the well-known Kalishnikovas have been in circulation. They come under locally produced guns.

It is interesting to note that informal groups often capture shipments and get their hands on weapons like modern Assault rifles, Grenade Launchers, Machine guns and rocket-propelled launchers as well. The primary motive to capture these is the ammunition that groups keep them going. Transport channels in these countries are developed as well, since the majority consists of small arms, they are easy to conceal and are durable. The ways to transport them are almost limitless. At a small scale, the long and unmonitored borders support trafficking in the continent and organised transport through trucks and other means with ready markets prevalent in countries like Rwanda, Congo, Sierra Leone, Ivory Coast and Liberia. Weapons in the coastal countries are majorly used for piracy and hijacking cargo that passes through these nations. Even rivers are used to transport small arms and at times great quantities of big guns like assault rifles. The kind of trade done for inter-country transfer is called “ant-trade” which means transporting a lesser number of weapons, usually less than a dozen.

Such events result in a high cost in terms of lives lost in this continent, hundreds of thousands of deaths and millions of injuries are suffered every year due to the usage of arms in these regions, 60-90% of the conflict deaths occur due to this prevalent usage of illicit arms. This has also created a “gun culture” in

many countries in Africa wherein possessing a firearm has become a sign of status. This has also resulted in the displacement of people making immigration to neighbouring nations a common practice. Based on the UNHCR report, the Central African Republic had the highest number of internally displaced persons, followed by the Democratic Republic of Congo which has more than 400,000 refugees. Gun violence in the country, however, can be attributed to the following reasons:

1. **Political Struggle:** Most African countries suffer from political instability. Whenever any major political event takes place; events such as riots, upheavals and general disturbances to public life are more than common.
2. **Control over Natural Resources:** It is well known that the whole continent of Africa is resource-rich, a number of informal groups try to take control of these resources to establish dominance and become the local economic power in their region. This results in a lot of inter-group violence and also between group(s) and the government.
3. **Radicalisation and Extremism:** The growth and spread of extremist religions have also significantly contributed to the spread of illicit arms in the hands of the general public in Africa. These appear to have a much deeper impact since their weapons are sourced by organised crime groups such as Boko Haram and Al-Qaeda and they have stronger access to not just small weapons.



The sources of these weapons are the ones that survived after the cold war between the two superpowers. Currently, armed rebellious groups of Africa and the existing black market of weapons in Africa and worldwide consists of weapons that are being locally produced by the gunsmiths, who have perfected their

trade. Other than this, a sizable supply is from the soldiers that sell their weapons to these groups. Even countries like China have allegedly provided arms to African countries such as Nigeria and Uganda.

One of the most prominent declarations has been the Bamako Declaration. It represents a common African position on the trafficking and proliferation of illicit small arms. The UN Programme of Action (UNPoA) on illicit use, trade and proliferation of small arms (2001) is also a well-known declaration. The current Arms Trade Treaty (ATT), which regulates the trade of conventional arms and plans to eradicate the illicit arms trade worldwide, has had several issues with African countries implementing and exercising its authority. The African Union, which is the continental union of 55 countries, had an objective of “Silencing the guns by 2020”. Articles 6-12 of this treaty required the state parties to create an arms management system in their country and provided the details on what should be controlled and how it should be controlled, with respect to brokering, arms record-keeping, and preventing arms diversion. At a regional level, several agreements have been made between the Regional Economic Communities. A unique feature of the Bamako Declaration is that it establishes certain National Focus Points (NFPs), which are coordination bodies responsible for devising a national arms control action plan, as well as facilitating small arms control research, monitoring, and the formulation of policy and legislation.

The problem, here, lies in the absence of government participation in the creation of stringent policies and its inability to execute the already existing accords properly with the respective nations. Despite the existence of an African Union, importance has not been given to the illicit arms trade in the continent. The country still needs to create a specific task force for it.

The obvious problem of the illicit arms trade in Africa needs to be taken under control not only for the sake of the welfare of its citizens but also to improve the status of the continent globally.



The strong ties between Russia and China, and their implications on India

There are no permanent friends, no permanent enemies, only permanent interest. The relationship of the biggest giants of Asia has changed tremendously since their last military conflict in 1969, in which Russia won the undeclared armed battle. After nearly two hours of fighting, there were 31 soldiers dead from the Russian side and 14 wounded with the number of Chinese casualties still not known. The relation between these giants has improved since then. After the cold war, both the countries reapproached each other and eventually resolved the political dispute, settled the border issues, minimized the risk of armed conflicts and formed a strategic partnership in 1996. Both the countries acknowledged their respective modernization paths and developed a closer economic relationship which would benefit them both. After the fall of the USSR, Russia had to turn to the east to find a new dancing partner with a strong economy and a large market for its weapons and China met all its needs. China was in search of high-tech weapons as the USA was using futuristic technology in the Iraq war, and after the USA, Russia was the strongest military power at the time. Moreover, in the initial post-Cold War years Beijing and Moscow were very concerned about the hegemonic position and influence of the US and strongly opposed the unipolar world order of the Western countries.

What is the current driving force of the Sino-Russia relationship now?

Russia and China share the stage in various multilateral forums such as RIC, SCO, and BRICS, through these forums they present an alternative viewpoint to the Western-dominated world. Moscow and Beijing, are both permanent members of the United Nations-Security Council and they openly coordinate with each other on various global issues.

China is the second-largest economy in the world, and it is Russia's biggest trading partner. Economic relations are the fundamental basis for the Sino-Russian relationship. The bilateral trade between them is around \$106 billion. Digging deeper, the situation seems less promising for Russia as Russia is facing a trade deficit. China surpassed Germany as the largest trade partner of Russia, accounting for around 15.5% of the total trade of Russia in 2018. Russia, in contrast, accounts for only 0.8% of China's total trade in 2018. Russia's exports to China include energy, which is strategically important, but as the trade relations are imbalanced, China stands to command more influence as a buyer than Russia as a supplier. It is clearly visible that China and Russia are not equal beneficiaries.

Defence partnership is the only field where Russia holds a qualitative edge over China. The defence partnership with Beijing has emerged as a key pillar of this Russian supremacy, which includes the export of sophisticated equipment like the S-400, early warning system and aircraft engines. Even though Russia has a competitive

edge over China in the production of high-grade defence technology, it is still unable to exploit this opportunity because China has put in place intellectual property infringement rights. China in the past had also been blamed by Russia for the reverse engineering of some of its strategic weapons.

The ailing Russian economy is also a contributing factor for this relationship as due to the economic sanctions by the USA, Russian oil and gas reserves are of no use and China is the only country that is purchasing the Russian gas in large quantities. The USA can be considered as the biggest driving force for their relationship as both the countries have a single-party system and both of them need each other to sustain the pressure of the West. Russia and China are facing sustained American containment pressure, the two countries have sought to provide support to each other's core strategic concerns, particularly in their backyard. This includes Hongkong, Indo-Pacific, Xinjiang, the Covid-19 pandemic origins, Huawei and Syria. They are cooperating with countries that have had a precarious relationship with the US like Iran, North Korea, to name a few.

What are the implications of Russia's close relationship with China on India?

A friend in need is a friend indeed. Even now, by providing India with medical supplies Russia proves its loyalty. Over the years, Moscow has been a key constant in India's strategic partnerships. Russia not only played a vital role in balancing external factors who sought to undermine India's national security but also helped in strengthening India's comprehensive national power. The Russian warship, Soviet Pacific armada steaming into the Indian Ocean during the 1971 war was one of the hallmarks of our strategic partnership.

Since the end of the Cold War, both the countries had followed a multi vectored foreign policy while maintaining vibrant bilateral ties with each other. However, today various interlinked developments have complicated the India-Russia strategic partnership. These include Russia's confrontation with the Western world and the more robust India-US partnership in the past few years, Russia's increasing interest with China and tension in the India-China relationship.

Russia-China defence deals are also a concern for India, as this privilege was earlier reserved to India only, which is adding a qualitative edge to Beijing's



military capabilities. The quadrangular relations of the USA, India, China and Russia are not in a straight line which often puts New Delhi and Moscow in a difficult situation wherein India has to choose between Russia and the USA, while Russia has to often choose between China and India. Russia's defensive stance over the Indo-Pacific area definitely helps China for its South China sea ambition.

In the recent India-China standoff, Russia was in a dilemma as Moscow had to choose between China and India. Despite the pressure from Beijing to not sell weapons to India, Russia agreed to expedite weapons export to India, this proved that India-Russia relations remain intact. It is, therefore, unlikely that Russia will provide a veto to China over its foreign policy. However, it is also true that expecting Russia's help every time would be far-fetched.

Currently, deft diplomacy is needed to firewall the bilateral relationships from their engagement with other powers. The new normal could rest on tactic silence and an agreement on each other's vital concerns. The visit of Foreign Secretary, Harsh Vardhan Shringla to Moscow in February 2021 highlights the initiative to update bilateral ties. The exclusivity of the past has dissipated the trust, yet the comfort of working with each other remains intact.

CORONAVIRUS: A FORLORN TALE





COVID-19 Unmasked

-Anirudh Gupta &
Yash Mundra

Understanding the psychology of rule-breakers and identifying the roots of the problem is imperative for reconstructing norms

Times are tough and people are terrified. How did we reach here? For a cricket loving country like India, who would have thought that a virus would take centre stage over the IPL?

India witnessed the outbreak of coronavirus in late January 2020 when several cases were detected in the country, mostly linked to people who had come from affected countries. Numbers started piling up as the rate of testing increased and the need for strict measures was felt. At the end of March 2020, a nationwide lockdown for 21 Days (which was further extended) was implemented to contain the spread of this virus. People came together in support of the decision but to what extent?

After a year into the pandemic, we were back to square one. Covid cases and deaths were at an all-time high while the health infrastructure of our country was failing. The sheer lack of planning and ignorance towards the disease showed how lightly we as a country have taken this pandemic. With events being organised at a large scale without any safety protocols, it raised the question whether safety norms have really been followed.

As per psychologists, individuals can broadly be classified into two categories. The first group comprises those who were infected but got cured. These individuals have experienced the troubles associated with COVID 19 and live with extreme fear. The second group includes those who have not been infected (including those who are/were infected without being aware of it) and have not experienced the real troubles of COVID 19. These are the people who watch, read and discuss about the virus and its catastrophic impacts without having personally felt its repercussions. Since they weren't infected after months of exposure, they unconsciously began to think that they are invincible. They believe that it's not going to affect them as they have a strong immune system and end up flouting the Covid norms.

Add to this the financial, social and personal losses that a large chunk of society is facing as a result of preventative measures such as lockdowns. Ever heard the popular adage: "Health is Wealth"? Well, in contrast to this saying, studies have revealed that on an average, people around the world are more motivated by their financial status than their health. A majority of countries have reported that citizens considered the economic repercussions of lockdown to be more serious as compared to getting infected by the virus. Thus, the fear of financial loss caused by virus containment strategies acts as a strong motivator for individuals to ignore government rules in an attempt to improve their financial well-being. This mindset of the people is perhaps the reason why India's falling GDP had received a major screen time as opposed to the trauma being caused by Covid prior to the second wave in our country.

Furthermore, if people see others not following rules, it makes them feel that their efforts are futile and this makes them more likely to give up. Thus, pictures of busy parks and markets, and celebrities flouting the rules discourages the general public from cooperating and following the restrictions. Political Rallies and events like the Kumbh Mela being held in India at a time when the country was going through a major crisis provided the masses with excuses to not follow the norms. When people at the helm of a country do not follow the basic protocols and ignore the problem at hand, the masses are likely to follow them and disregard the norms as well. Norway's Prime Minister was fined \$2,300 for having 13 guests (3 more than the legal limit) on the occasion of her 60th Birthday. The police rolled out a statement saying that they would not have issued a fine in a similar case if it had been a common man. But since the Prime Minister had been at the forefront of imposing the Government restrictions, she had to pay the penalty. This is not the case in India. The differential treatment given to the privileged in our country is likely the reason why a common person today is agitated and tends to stray from the rules laid down.

Another key factor to be considered is the idea of



individualism versus collectivism with respect to the social structure of a country. In individualist cultures like that in the United Kingdom and the United States, people tend to reject rules and ignore attempts by public health authorities which they consider as an infringement to their personal rights. Thus attempts to encourage a behavioural change by appealing to altruism, faces a perplexing backlash. For example, if the authorities emphasise that wearing a mask will help protect others, people in individualistic cultures would just care less. A common thread in such cultures is reverse psychology. Several psychologists have pointed out that when individuals' freedoms are threatened or

eliminated, they become motivated to reassert them. These individuals perceive the introduction of localised lockdowns as a further reduction of freedom and in an attempt to reclaim the same, they show less eagerness to follow the regulations put in place to prevent further spreading of infections. On the contrary, in Asian cultures which tend to be collectivist, people are more likely to do what's best for the group. The bonding in collectivist cultures is higher as compared to individualists and people rank the safety and well being of others above their own many times.

It is an undeniable fact that humans are designed for connection. This fact has been proven by psychologists; the need for family, friendship and personal connections ranks 3rd in Maslow's hierarchy of needs. The restrictions resulting from the pandemic goes against our instincts to connect in almost every possible way. This negatively affects our mental health and wellbeing. Thus people have a hard time resisting that tendency for social and group connection and end up participating in social gatherings which become common hotspots for the spread of the virus.

Keeping these psychological reasons behind citizens flouting the pandemic restrictions in mind, requests by authorities that individuals adhere to such norms should specifically target their internal motivation to act, avoiding a diffusion of responsibility. They should be formulated by focusing on mainly three factors: empathy, positive mood and social influence.

When delivering these messages to the citizens, the authorities must emphasize that adhering to these norms would serve as a way to protect their relatives, friends and colleagues. This would elicit a strong empathy-driven emotional response and result in a consequent increase in motivation to respect the regulations. In order to accompany requests to adhere to lockdown regulations by a positive language, authorities should highlight the opportunities that the new status-quo based on working-from-home and social distancing has brought (such as enriched familial relationships).

People are more prone to change their behaviour when the request to comply comes from the members of the same social group, as compared to an external source. Thus, people with leadership roles in formal groups should be encouraged to share compliance messages with their colleagues, and others should be encouraged to share such messages across their informal social circles and motivate other group members to follow public health norms. Since collectivist societies in comparison to individualistic cultures are more likely to comply more with norms which benefit the entire

society, promoting adherence to Covid norms through social influence is even more important in Asian cultures like India.

Lastly, these messages should be accompanied by clarity about the measures which have been put in place to protect people's economic situation and the potential rewards that are likely to follow.

The important thing to understand is that if everybody breaks the rules even a little bit, then it's not dissimilar

to lots of people not following the rules at all. Hence, it is imperative to understand what actually motivates the citizens to break the Covid safety norms put in place by the authorities and the psychology behind it. A deeper understanding of the same can actually prove to be beneficial for the community as a whole as it would enable the government and the respective authorities to implement measures that can promote greater adherence to such norms.



The Covid Divide

-Nikita Rajagopal

Implications of the pandemic; the widening gap between developed and developing nations

COVID-19: the infectious disease reared its daunting head at the very end of 2019. More than 16 months later, the world economy was still in its callous grip. The virus has altered the way people live their lives; social distancing and working from home becoming the norm. Though the broad policy measures to combat the ongoing pandemic have been consistent across countries, the question of how its effects vary from developed to developing economies arises. Has the virus furthered the gap between these countries, making the entire world economy move backwards by years?

The pandemic has made the concept of 'de-globalization' a prevalent trend among economies. At its very core, it means that various countries are looking at being more self-reliant and self-sufficient with the aim of reducing their dependence on other economies. With the advent of globalisation, the borders between the countries have started blurring; the world economy over the decades has steadily become larger and more cohesive. However, over the past year, various countries have started to follow the policy of "each to himself".

With people losing their jobs at an alarming rate, and financial insecurity at its peak, the pandemic has

caused rampant poverty across countries. While this dire state of affairs has been a common observation across the world economy, the severity of its impact has been greater on the developing and under-developed nations, putting them in a more vulnerable position relative to developed countries. To counteract the catastrophic effects that the COVID-19 pandemic has had and continues to have on every economy and to provide relief, central banks and governments across the globe have enacted extensive and enormous stimulus measures. Economic stimulus refers to the actions taken by governments to encourage the activities of the private sector by engaging in specific monetary and fiscal policies that are based on Keynesian ideas and principles.

The use of Keynesian ideas and principles is commonly seen during periods of recession. Examples of policy tools used to implement economic stimulus include increasing government spending, lowering interest rates, and quantitative easing, among others. The general idea behind these stimulus packages is that with an increase in government spending through policies like tax rebates, a commensurate rise in demand takes place which consequently leads to an increase in the country's employment rate, in turn increasing the income in the economy and hence boosting spending. This cycle continues till the economy recovers, helping it move out of a recession by boosting economic activity. Such packages act as an investment multiplier in the country.

Needless to say, these economic stimulus packages

are the need of the hour to help economies resume and at the very least attempt to reach their previous level. The percentage of GDP which various economies are investing in in the form of an economic stimulus plays the most crucial role in deciding the journey and outcome of the economic recovery. Here also while the developing countries are preparing themselves for a brisk recovery, the developing and underdeveloped countries have adopted a more sluggish approach. For instance, the United States and the United Kingdom have invested 26.46% and 17.82% of their GDP respectively, Canada has put in 18.55% of its GDP into economic stimulus, while India has invested only 3.2% of its GDP and most African countries have set aside less than 2% of their respective GDP.



The reason behind developed countries' economic stimulus having a greater impact on the country is that the volume of GDP is significantly higher in these nations and since the population is lower there, the stress on resources is also much lighter. This implies that the rate at which job creation has taken place and will continue to take place in developed nations is far superior and will allow them to resume normalcy much faster. In contrast, developing nations are characterized by larger populations and a greater degree of poverty, and the minimal packages that are being implemented in developing nations will increase the duration of their recovery multi-fold. Moreover, the unemployment rate which increased with the advent of COVID-19 has a greater opportunity of being brought down in countries investing a greater proportion of their GDP for recovery from COVID-19.

Another factor that clearly marks the disparity between developed and developing nations is infrastructure. To combat the virus in play, countries are in desperate need of a good health infrastructural system. Developed countries surpass developing ones in this aspect as well. The lack of good health infrastructure essentially reduces the accessibility to hospitals and

the inoculation drive, putting people in a vulnerable position for a longer period. The COVID-19 vaccination drive follows a similar pattern across nations; that is, it started with covering healthcare and frontline workers, then it scaled up to accommodate citizens above the age of 60 years and slowly expanded to cover the rest of the population. The success of an inoculation program is largely determined by the infrastructure and population of a nation. Since developing nations are mostly characterized by overpopulation and inadequate infrastructure, in terms of meeting the requirements of the population and accessibility to each and every person, the vaccination drive has not been as effective and efficient as its developed counterparts.

In the United States of America, for example, 41% of the population has been administered the first dose while 26% has been completely vaccinated, and nearly 50% of the residents of the United Kingdom have received the first dose and just over 16% have been completely vaccinated, as of April 2021. As against this, developing nations have been able to vaccinate only a fraction of their population. For instance, 8.3% of the Indian population has been administered with the first dose while only 1.3% of the entire population has been completely vaccinated and most African countries have managed to inoculate less than 1% of their population. At Duke University's Global Health Innovation Center, a team found that the higher-income countries have managed to lock up 53% of the near-term vaccine supply. They have also estimated that the world's poorest 92 countries will not be able to reach an inoculation rate of 60% of their population until 2023 or later.

Fast-growing nations like India are falling far behind. While developed countries are looking towards recovery and normal functioning, developing economies are struggling to keep up; recovery seems almost stagnant. With developed countries moving ahead and developing nations appearing almost stationary, the well-established gap between these countries is and will continue to deepen. This indicates that the rich are getting richer while the poor are getting poorer. The virus has worsened the scenario for developing nations, pushing them back by several years if not decades.



Is It a Mental Health Pandemic?

-Aarushi Doomra

Subjective Well-Being in the times of COVID-19 and the need for understanding its increased importance

The world was moving towards rapid growth and development when, due to the outbreak of the novel Coronavirus, everything came to a stop. The virus spread like wildfire and changed the outlook of the entire world. It led to a socio-economic as well as a psychological crisis worldwide. In response to this global pandemic, most of the countries imposed a lockdown and all non-essential activities, social gatherings were restricted by the Government. Such lockdowns aimed to reduce the mortality rate and control the spread of this deadly virus. As a result, all the economic activities were put on hold, businesses were shut down, unemployment rates increased leading to a severe impact on the world's economy.

The pandemic not only put the world economy on hold but also impacted the quality of life and subjective well-being (SWB). People were mentally and emotionally unprepared for such a biological disaster leading to helplessness among them. Staying at home, low level of awareness about COVID-19, not being able to gather and party with loved ones, severe impact on education and careers, pending bills along with a strict following of various hygiene practices led to psychological problems such as anxiety, stress, fear, frustration, boredom,

loneliness, depression, etc among individuals. It even worsened already existing problems like the increased consumption of alcohol. The World Health Organisation declared stigma, an important determinant of health, as the 'hidden' burden of this pandemic.

Some believe that the lockdown was the reason behind this. Though this may be partially true, the psychological impact witnessed began much before the lockdown and continued even after it was lifted. In India, this was quite evident because many people started moving towards their hometowns in the beginning of March despite the lockdown being imposed later on.

The psychological effects of the pandemic did not limit themselves to any particular age group, gender, employment, education or income. Everyone has been impacted and has suffered from some psychological issue.

The shift to online schools and colleges affected students and caused panic. Apart from COVID-19 threats, they even suffered from other health issues due to prolonged sitting, increased screen time etc. Those who were planning to go abroad for higher education had to change their plans. Adults had the burden of repaying loans and bills, jobs were disrupted etc. Initially work from home seemed attractive but after some time passed, people started missing their offices and work environment which was coupled with laziness and lack of motivation. Important life decisions like buying a house/car, marriage etc were put on hold. Elderly people could not go out, some were

separated from their children, some were forced to live with them; they were even at a greater risk to contract Covid. Increased conflicts among family members were witnessed because the normal functioning of families was disrupted and anger, frustration led to fights among the family members.

As a result, all this impacted their subjective well-being leading to some level of distress, fear, anxiety due to the pandemic, thereby requiring constant mental support.

Everyone had to take care of themselves on their own as the basic ways of coping with stress and anxiety, like talking to friends, distracting oneself by going for a movie night/dinner were not possible during this time. Some people emerged strong and discovered ways to cope up with such a situation. However, others went into depression and even started questioning the meaning of their lives.

It was observed that people belonging to the marginalised category, disadvantaged and vulnerable groups, migrants, frontline workers, children and the elderly were among the most affected and experienced greater stress due to Covid as compared to others. Women were expected to do all the household chores and did not receive enough support from the family members; migrants were forced to go back to their native place as all the workplaces were shut down and they couldn't afford the expense of staying in cities. Terms like 'hotspots', 'Covid suspects' were used to identify Covid patients but it had a deep impact on their SWB as they felt discriminated against. People belonging to the LGBTQ+ community were also amongst the most suffered because they were forced to live with their families who didn't accept them, which led to an increase in domestic violence, discrimination and ultimately leading to mental stress. Adding to this, a report indicated that the healthcare workers showed maximum symptoms of mental stress and anxiety because they witnessed the severe impact of Covid with their eyes and exactly knew how dangerous and life-threatening the virus is.

Despite the recommendation by the United Nations to consider subjective well-being (SWB) as an essential component of the response to COVID-19, the Indian Government and policymakers largely focused on the economic aspects of Covid and such psycho-social issues remained unaddressed. As a result, such ignorance even led to suicidal cases and more than 300 suicidal cases were witnessed in India during the lockdown thereby intensifying the fear among individuals.

The medical and healthcare system plays the most important role during such a pandemic and life-

threatening situation. Its duty is to ensure the availability of adequate medical personnel, ensure that enough equipment and testing facilities are available, and provide authentic and reliable data. Apart from just providing basic medical facilities, the medical institutions along with the government are expected to broaden their horizon. This may include steps like generating awareness among people, conducting certain programmes/workshops related to the risks associated with pandemic and the measures that one should take on the individual level. However, the Indian healthcare system (apart from a few) just focused on treating the Covid patients and ignored addressing the subjective well-being issues related to Covid. Not only did they ignore their duty towards generating awareness about the same but also ignored the basic purpose for which they are set up. Our medical sector witnessed various problems like non-availability of beds, delay in providing the test reports, false test results, shortage of medicines, overcharging for the basic services (especially by the private sector hospitals) etc.



But doctors and medical staff are not to be blamed for all this. The reason for all the inefficiencies are poor financing, inadequately trained human resources, lack of basic medical equipment, poor accountability etc.

Along with all this, the media also played an important role in making things worse. The role of the media is to spread information, keep people updated about the ongoing within the country and give them status updates about the steps taken by the government to control the spread of this virus. However, things didn't go this way because news channels and media kept on providing information like deaths caused due to Covid, how threatening Covid is, etc. There was a constant lack of positive news that could spread hope amongst people. Studies prove that continuous and large exposure to media can be harmful to mental health. If someone continuously reads/listens to the adverse impact of Covid or the massive number of deaths due to it, then it is quite obvious that one will witness

stress, fear and anxiety. Along with traditional media, social media led to worsening effects, especially among the youth. Talking about social media specifically, various platforms were bombarded with Covid-related information, most of which tends to be fake. As a result, in such an emotional phase of stress and anxiety people tend to believe in things they see rather than verifying the facts and figures.

All these factors aggravated people's emotion and created an atmosphere of threat and fear among them.

Mental Health and SWB have already been neglected in India's medical and political system. Our healthcare system was already struggling because before Covid almost 150 million people in India were in the need of mental help and the treatment gap for the same ranged from 70-92%; this pandemic further provoked this problem.

Few actions were initiated by the Indian Government at both the centre and state level such as mental health helplines, and various programmes to address the issue of Covid's impact on subjective well-being were arranged. However, these measures were not adequate and highly inefficient in addressing the problem. As a result, various individuals took the responsibility on their shoulders and came up with innovative ideas to address this issue.

However, this is not the responsibility of just one person; each citizen along with the Government and the policy leaders have to understand that the psycho-social impact that Covid has created needs an immediate well-planned response.

We all should consider this pandemic as an eye-opener and see it as an opportunity to bring the issues of psychological stress, anxiety and subjective well-being to the centre stage.

We all need to introspect and plan to build a robust and integrated psycho-social health care system that will continue in the post- Covid era as well. SWB should be integrated into the national healthcare policy and planning and should be included in schools, college



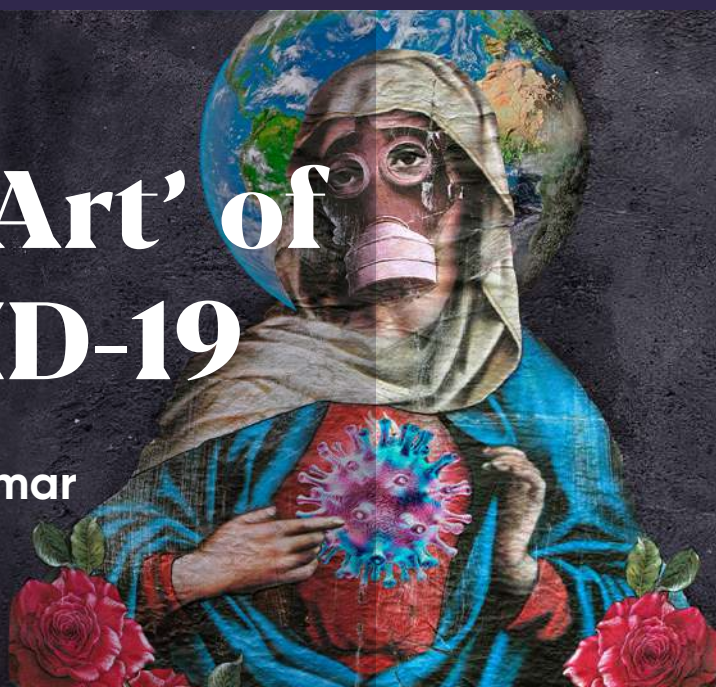
curriculums, youth committees etc. Human resources should be developed, ones spreading fake messages and news should be penalised, activities that spread hope and positivity should be encouraged, the stigma associated with mental health should end, self-care tools should be developed so that people can support themselves as well as their families.

One thing that should be kept in mind while addressing this issue is the "whole of society" approach which states that all the sectors such as Government (framing policies, plan of action and ensure overall coordination), health sector (to ensure the delivery of psycho-social and mental healthcare services), non-health sectors, research institutes, civil societies, families, individuals, society organisations etc should be involved and play a significant role towards subjective well-being.

Though devastating and destructive, COVID-19 can be seen as an opportunity to create awareness and develop subjective well-being care in India. If the right steps are taken, we can go a long way ahead and ensure a bright future for subjective well being and mental health in our country.

The 'Art' of COVID-19

-Manavi Kumar



"Great artists suffer for the people"
- Marvin Gaye

Have you ever heard a song, danced your heart out or read a book when feeling low during this pandemic? Or perhaps simply because it makes you happy? While being lost in these activities one often fails to recognise the economic, social and cultural value that they hold. Through centuries of political upheaval, change in societal dynamics and occupational trends this industry has stood strong and has acted as a catalyst of change, and most importantly has held the social fabric of the economy. Often overlooked, this industry is formally known as the 'cultural and creative industry' (CCI); the value it adds to the economy is much more than what it gets credit for. The cultural and creative industry includes advertising, architecture, performing arts like live music, dance shows, theatre performances, visual arts, the film industry, books and publishing.

The economic value of this overlooked industry can be deciphered from the fact that it globally employs 30 million people and generates about US\$ 2,250 billion dollars of revenue annually, which exceeds that of even the telecom services sector. With the rampant increase in demand of online content, this industry has also played an imperative role in driving the demand for digital and electronic devices including mobile phones, tablets, DVD players. Moreover, one interesting fact about this industry is how it forms a strong pillar

in youth employment and entrepreneurship. This sector employs more people in the age group of 15-29 than any other sector in Europe; 19% of youth is employed in CCI as compared to 18.6% in the rest of the economy. Statistics also reveal that this industry is prone to favouring employment to women over men and according to the UK Government more than 51% workforce in the music industry are women.

The COVID-19 pandemic which has left the world in shock and economies grappling to survive, has caused irrevocable damage to this versatile industry as well. Research done by UNESCO shows that 80% of world heritage properties had closed down due to the pandemic leaving the local communities and cultural professionals struggling for their livelihood. Most cultural institutions around the world like theatres, museums and alike had shut down causing employees to lose their jobs in seconds. More than one-third of the world's art galleries have cut down staffing to less than half. The global books and publishing market had shrunk by about 8%. Globally, DJ income's could fall by more than 61% in the year 2020 as compared to 2019 which is alarming and threatening for the survival of such professions. In the midst of all the debates about the losses of the automobile, agricultural, travel and tourism industries, somehow the suffering of this industry was neglected; it is time that the industry is given the due notice it deserves.

The performing arts sector, which includes live music, dance, theatre shows and opera forms a major part of the Creative and Cultural Industry. The very essence of this

sector is based on live audiences and physical presence, thus the lack of both these elements over the past year had left the artists drowning. The impact of COVID-19 on the performing arts sector can easily be analysed by taking a look at Europe and the US which are the second and third largest economy for CCI respectively. A research conducted by Bocconi University showed that 41 performing arts institutions reported that 93% of them have been severely impacted. The number of performances, the revenue and new productions all fell by more than 50% as compared to FY2019. The lack of audience even when the local restrictions were lifted greatly reduced the demand for live performances, putting the economic survival of these artists in question.

The situation in India is even grimmer. We are a country that houses millions of local and classical art forms which have been an integral part of our cultural diversity since the time immemorial. Massive part of the performing arts sector in India is informal and unorganised. From story tellers in Telangana to folk dancers and musicians in Rajasthan, who have been practicing their art for centuries, all are left helpless. Their income depends primarily on daily live performances for audiences. The pandemic has caused 16% of India's creative sector to face permanent closure, which has left many struggling to put food on the table. A whopping 22% of the sector is forecasted to lose more than 75% of its annual income in 2021.

These artists who rely on live shows have lost their livelihood because unlike most professionals they can't shift to the "New Normal". It is imperative that we come with solutions to support these artists. Are people willing to pay for these performances on an online mode? Are tourists across the country hiring them to see their traditional art form over a google meet? No. So what does this pandemic do to the future of such artists?

It is not just the question of dancers or storytellers performing regional arts but also of comedians, DJ's, new singers. All such artists are in the same boat. With very few comedy clubs in India, the stand-up comedy industry which was seeing a rise over the few years in India has hit a rough patch as the pandemic wraps the country in its fist. With no corporate shows, no commercial clubs or restaurants hiring them they are left supporting their community by their own personal savings. In 2020 an Indian comedian used his house savings to support 22 fellow artists who did not have much to sail through this dark cloud of COVID-19. The situation is the same globally as even in the UK, 49% of comedy clubs are estimated to be shut down forever. Although the UK Government offered 1.5 billion dollars as "emergency arts fund", comedy was not in that list,

leaving the community without security and despair as always. Hence, comedians and all other artists need to be acknowledged and supported just as other citizens in any other field.

Creativity and culture are always there when one needs them. Dancing, singing, listening to your favourite song, watching comedy, enjoying traditional art has kept us sane and happy despite these tough times. Artists continue to make efforts to keep things lively for each one of us while they live in the dark themselves. It is time that measures are taken to provide them with the help and opportunity they need to combat this pandemic.

In the western world, museums and performing arts centres like the John F Kennedy have adapted to the situation and are allowing virtual tours and a digital stage for performances. However Indian artists do not have any such option. There should definitely be measures taken by the government to reopen all cultural institutions and use the digital progress and power to allow virtual interaction, tours and promote the art of its people. Although the Indian Government has released Rs 5,462 lakhs for support to the creative industry, it is uncertain to whom, how and where the money has gone. It is essential that the government starts an initiative perhaps along the lines of MGNREGA for artists especially in the current scenario. It's the need of the hour that the government and national cultural institutions come together and join hands to uplift all creators and artists from different fields in our country and ensure their survival and success not only during covid but also post this pandemic.

UNESCO has recognised the problems created by the pandemic on this industry and so has started a ResiliArt movement to shed light on the importance of this industry. It has also released a guide "Culture in Crisis - Policy Guide For a Resilient Creative Sector". Indian institutions were very much part of this global movement and discussions and it is time the measures discussed are implemented. Purchasing the work of these artists is an easy way to provide them with a platform in these times and ensure a regular income. Online creative fests can be held by national institutions where talent, perseverance and work of these artists are celebrated. Society must recognize the arts and culture as essential, and we must ensure more funding for various art forms especially those that have suffered great loss of revenue in the pandemic.

Education in the Times of Pandemic

-Ankit Kumar



The 'new normal' of education; government policies and changes in the enrollment pattern due to COVID-19.

The year 2020 came as a shocker to everyone, and almost everything came to a standstill on this planet. It was inevitable that every sector of the economy was going to get impacted one way or another. In India, a complete lockdown was announced on 23rd March and it was supposed to be implemented till April 14th, but who knew that it was just the beginning of a tough journey ahead. The Government had to increase the lockdown period but it allowed some additional operations to function thereafter. Everything was steadily getting back to normal, however, there was one sector which underwent a complete transition and it was the education sector. Fearing the scary effects of coronavirus, the Government never even considered opening the institutions. So, it was time to bring an alternative to the already existing conventional methods of learning and teaching. This unprecedented period forced the Government to cancel and postpone numerous examinations. All the State Governments and the Central Government came up with the idea of online learning and virtual classes. Schools and colleges were advised to shift to online platforms. Now, it seems quite pleasing that students would not be required to visit colleges and schools physically, but the ground reality is completely different.

Implementation of digital learning in India efficiently is still a far-fetched dream, despite the fact that penetration of the internet in India has increased a lot. Approximately 73.3% of the Indian population is said to be connected by mobile phones, but, its utilization in the field of education and learning is still unexplored. As per the National Sample Survey 2017-18, only 24% of the households have an internet facility and only 8% of all the households with members aged between 5-24 years have both, a computer and an internet connection. There are some people who don't have smartphones while there are some people who can't even afford to buy a smartphone. In India, people often neglect the fact that in times of 4G and 5G there are people in this country who are still using 2G connections which apparently is not good enough to carry out the activities like online classes and others. Another issue with the digital learning concept is the addiction to smartphones. Students are required to use a device for a couple of hours and there are possibilities that they may get bored from the classes and start



exploring other features like games, movies etc., which would ultimately lead to addiction. Addiction to technology has become quite common in teenagers and giving them smartphones just acts as a stimulating factor to this. This sort of disparity has acted as a major roadblock in the wholesome education of students all over the country.

Lack of proper education is not the only problem that students are facing these days, in fact, they are dealing with mental anxiety and pressure as well. The Government has been postponing several exams which act as a future deciding factor for students and it leads to complete uncertainty over their future. Lack of required resources have forced a few students to commit suicide and these suicidal cases reflect the true and pathetic situation the country is currently going through. Not only students, but in some cases parents have committed suicide just because they couldn't buy a smartphone or a laptop for their children. There are some qualities such as personality, communication, leadership, etc which cannot be developed just by staying home and gathering knowledge. These qualities can only be sharpened by interacting with people but the absence of these stagnates the overall development of a person. Nowadays, in the corporate world, these personality traits are considered much more important than the knowledge people have. Therefore, it becomes really critical to develop these skills as it may create an adverse and long-lasting impact on future employment.

It is often said that challenge always brings opportunity along with it, similarly, this period has also brought a great opportunity for students to learn new skills. Staying at home, they can not only complete their usual studies but they can also learn new things in diverse fields to enhance their skills as they have a lot of spare time. Now that, no one knows when this pandemic is going to end, it becomes extremely important to take out the positives from it and move on. The Government has been making continuous and conscious efforts to help students by campaigning about mental and physical health. It is the need of the hours to adapt to such situations and operate accordingly. Since this kind of situation has never occurred before, it is impossible to predict how the world is going to be post the pandemic. Students need to be calm and patient and try to adapt to this "new normal" until the situation gets better.

Serving in a Pandemic

-Bhavika Goyal

Anatomy of the vulnerable hospitality sector during the Covid-19 pandemic

The hospitality industry caters to consumers' pleasure, enjoyment and leisure experiences. It embraces a wide variety of accommodation facilities like resorts, hotel complexes, homestays, food and drinks services, facilities package holiday tours as well as ocean and river cruises. Internationally, the hospitality industry has been flourishing for many decades contributing to a large share of GDP in many countries. Though traditionally hospitality was considered a luxurious sector, more economical deals and an increase in average income has widely increased its customer base. Additionally, cafes and restaurants that have become a hub for meetings have also contributed to the boom in the industry. This industry was flourishing well all over the world and the hotel industry was consistently growing, with over 700,000 hotels around the world that contributed over \$3.41 trillion to the global economy.

In November 2019, the first case of COVID-19 was reported in China which led to a global pandemic in March 2020. This pandemic has adversely affected all sectors worldwide and the fragile hospitality sector is no exception. As the news of the global pandemic spread, countries started imposing national lockdowns, and curfews suspending visas accompanied with strict travel restrictions. Many countries almost banned international passenger flights, while the exceptions had barely any tourists. According to the Mobility Market

Outlook on COVID-19 in 2020, the global revenue for the travel and tourism industry was estimated at 396.37 billion U.S.D which is a decrease of around 42.1% from the previous year. This is significantly lower than the original forecast of around 712 billion U.S.D for 2020. Moreover, India faced an opportunity loss of 1 trillion U.S.D. This sector contributes largely to the GDP and is a source of employment. According to a study conducted by Oxford Economics, this industry supported more than one in 25 U.S. jobs in 2018.

The hospitality sector was considered more vulnerable because it required the physical presence of the people, sectors like education and information technology were shifted to the online mode but no such option was available for the hospitality industry. The outbreak created a situation of panic and stress among tourists who were fearful of getting infected by the deadly virus and thus chose to remain at home as there were no vaccines available for the virus then. "These three quarters have been the worst for the tourism industry in over a century and it is expected to play out till another two quarters till a vaccine is deployed across all source and destination markets", Federation of Associations in Indian Tourism and Hospitality (FAITH) Chairman Nakul Anand stated.

The leisure and hospitality industry shed 498,000 jobs in November 2020, according to data from the U.S. Bureau of Labor Statistics. The number of unemployed people who were on temporary layoffs increased by 277,000 in December 2020 to 3 million, while the number of permanent job losses declined during the

month for the first time in eight months to 3.4 million.

Online travel booking site MakeMyTrip also suffered huge losses, earning a revenue of \$56.8 million in the quarter ended December, a decrease of nearly 60%, year-on-year.



After relief from the first wave, the company operated at 70-75% of the pre-pandemic levels for particular destinations and corporate travel was also restored to around 50%. The company expects its domestic travel business vertical to recover to pre-Covid levels by the April – June quarter of next fiscal (Q1FY22).

OYO, India's hospitality chain of leased and franchised hotels, was one of the biggest employers among internet

companies in the country in 2019. At the end of 2019, OYO's staff count touched 30,000 globally and about 10,000 in India; these numbers drastically reduced to less than 10,000 people across all its markets, including India after COVID-19. In June 2020, when the lockdown ended, OYO generated less than 25% of its pre-covid monthly revenues in India.

The income during lockdowns was mainly from hotels being converted as quarantine centres for which the Government tied up with various organisations and start-ups (especially in India) whereas in other countries it was mainly from the ultra-rich individuals who booked entire flights for their travel and entire hotels for their stays.

Unlike other sectors which are experiencing rapid growth, this sector is struggling to stay afloat, the sector has had a slow pace of recovery after the first wave which was mainly limited to tourists from within the city or state during long weekends. Vacations and international tourism did not witness much growth. Vaccination drives that are being conducted worldwide give hope for the recovery of the sector. Considering its pivotal role in the economy and employment, the sector must recuperate to its full potential at the earliest. Looking at these figures, it is evident that the hospitality industry was one of the worst hit. Steps are being taken in the right direction but there's still a long way to go to get this sector back on track.



France and Fashion during COVID-19

-Chetsi Chaudhary

Will the colours of french luxury fashion shine bright amidst the pandemic?

In a country like France, the fashion industry lives with an extravagant crown over its head. Undoubtedly, it won't be an exaggeration to say that Paris is a global hub of art, fashion and culture. With its world-renowned fashion brands and prestigious fashion weeks, France is the place to be for every fashion and art enthusiast. The Fashion Industry of France is a key contributor to its GDP and has generated almost 1 million jobs in total; more than its automobile and aeronautical sectors combined.

Similar to other industries, the French fashion industry faced massive disruptions in its functioning due to the coronavirus pandemic. The Paris Fashion Week which is the unmissable fashion rendezvous for designers as well as fashion lovers serves as a very significant revenue source for the French economy with an annual estimated generation of about 1.2 billion euros (\$1.35 billion).

2020 became a strange year for the fashion industry. Although Chanel and Louis Vuitton shows went on, many independent fashion houses like Rosie Assoulin, Agnès B and APC did not even show in February 2020. The cancellation of Hermès April 2020 Resort Show in London, considering the virus outbreak, proved to be another heartbreaker for fashion lovers.

The Paris Fashion Week went digital for the first time in July 2020 but it was hard for fashion enthusiasts and elite luxury brands to adapt to the concept of a fashion week without the brilliance and dazzle of shows. In September 2020, a hybrid Paris Fashion Week was held which combined the digital world with physical runways. However, the digital and hybrid fashion week led to decreased brand and tourist participation which massively hit the overall French earnings.

The global fashion industry has been left pondering for ways to make the best out of the situation; treating lockdowns as opportunities to bounce back brighter in the post-lockdown phase, devising plans that help cover losses during this period and ideating newer strategies facilitating adjustment to the new 'normal'. In the absence of an organized response, the fashion industry would most likely witness a frightening downturn, resulting in a massive unemployment and loss of revenue worldwide. Fortunately, several French luxury fashion brands have been at the forefront of these changes.

As the world turned online amidst the nationwide lockdowns and travel bans due to the pandemic, brands began devoting a major part of their attention towards reaching out to their customers and communicating with them in numerous innovative ways. They made use of their social media to not only conduct interactive sessions with their followers but also arranged styling games and tutorials. Chanel chose to entertain its followers with a live-streamed performance which it regards as "first of its kind". Meanwhile, Dior carried

out its 'Christian Dior: Designer of Dreams exhibition' on its YouTube and Instagram handles. The event saw a massive turnout with the audience enjoying sketches by Christian Dior himself while relishing in the 70-year history of the French luxury house. This way the brands were able to establish a healthy long-term relationship with the consumers, giving an impetus to its future sales.

In addition to this, fashion brands stepped up to play their part during the crisis by way of donation. In the initial phase, LVMH came forward with a donation of 2.2 (£1.78) million \$ to The Red Cross China. Louis Vuitton and Dior started making free medical masks for the frontline health workers.

Supply chains were another aspect of businesses which was hit hard during the pandemic. With a limited number of physical distribution channels and a huge loss of tourist shoppers in France, fashion brands called for a major transition in their online marketing platforms as well. As online purchases of luxury surged, brands ensured greater investments in their online shopping websites; better look, better offers and better deliveries. It is undeniably difficult for the retailers to accommodate the 'new normal' but many have come up with ways to set them apart. Smaller brands have discovered ingenious paths to discover more people globally with showroom appointments just a Zoom call away. It has been found that 14% of consumers in the US and 17% in China bought fashion online for the first time because of the pandemic.

A global quarantine in itself proposed many fashion trends. From sporty comfort to romantic minimalism, people in the US and Europe, found some unique ways of dressing up and adorning themselves. Puff sleeves, beige and khaki colours and ribbed knit became the talk of the internet and leggings and fitness shorts were labelled as essentials because 'getting fit in quarantine' was gaining popularity. On the other hand, Chinese shoppers gave paramount preference to clothes of bold and bright colours like red, yellow and orange. Undoubtedly, it became a thing of immense significance for French brands to keep up with these trends and styles.

French brands like Louis Vuitton, Chanel and Hermès carry a breath-taking heritage; LV founded in 1854, Chanel in 1910 and Hermès in 1837. No wonder these luxury brands are able to justify the value of their goods to the consumers and hence, are getting back on their feet faster than the high street retailers. Mass production and bulk buying of raw materials helps these brands to reduce costs. Also, with the gradual flow of time, they have developed strategies to acquire the

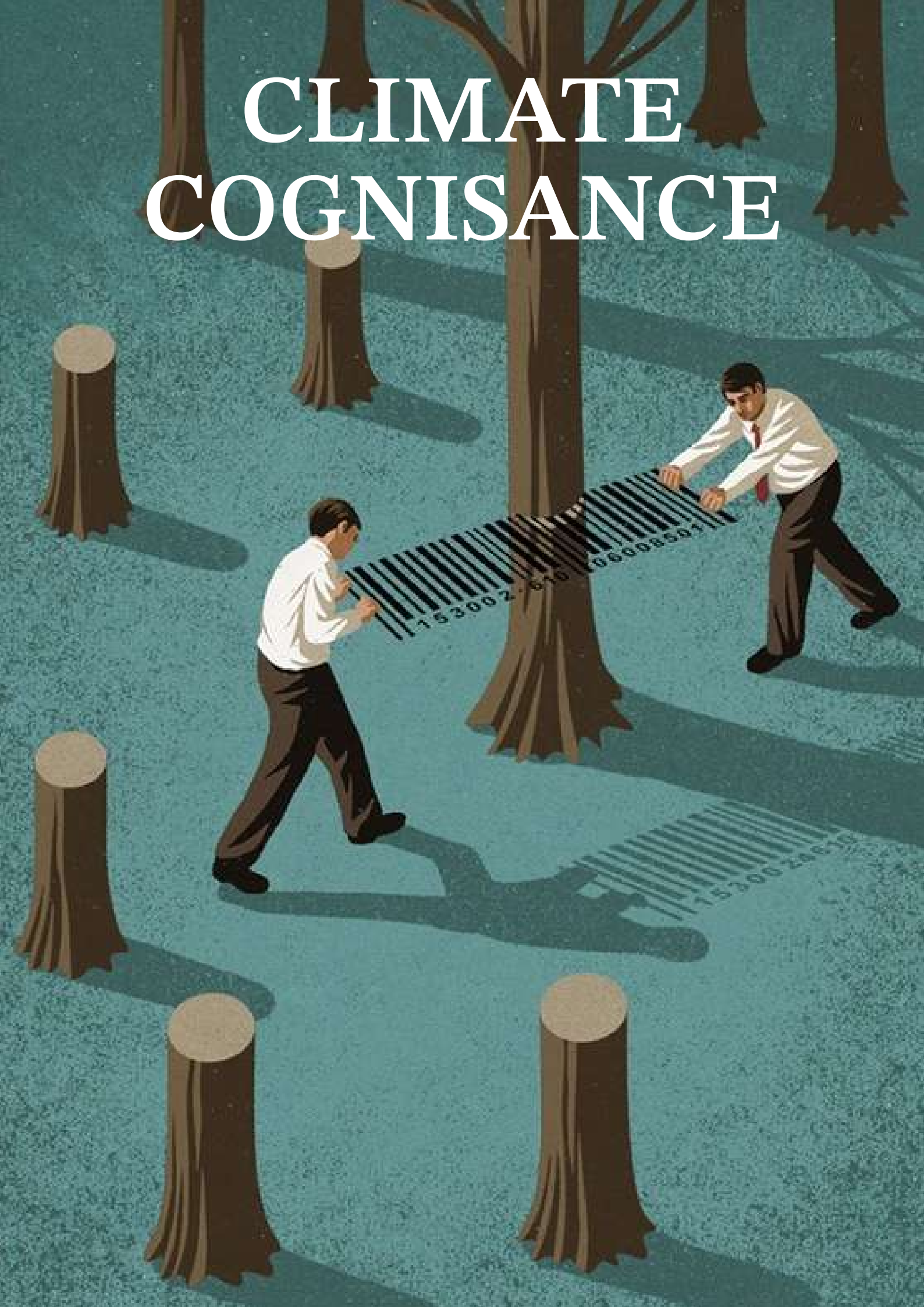


companies in their supply chains. This helps them to set their own prices for inputs of production like labour and raw material. Louis Vuitton and Dior had a strong collection of products designed before the pandemic and had to decide upon the marketing process alone. They chose Asia and the consumers there responded.

Louis Vuitton was selling extensively to American consumers. The rich class in nations like the US recovered from the pandemic at a faster rate which was a boon for the French luxury brands like Chanel and Dior. In the beginning of 2021, shoppers in countries like China, US and Japan made a higher number of online fashion purchases as compared to earlier in the pandemic. A growth of 14.3% was reported by LVMH in its fashion and leather goods division in January 2021.

For a nation like France, fashion is of paramount importance. Although the COVID-19 pandemic has posed setbacks for businesses and industries across the globe, the decadent French fashion industry has the potential to raise the standards of the fashion game. The revamped version of the fashion industry would indeed be a breathtaking sight when the world sets its foot out of the crisis.

CLIMATE COGNISANCE



Mining Deep Into Carbon Trading

-Ishita Jain &
Nehal Kaul



Exploring the concept of carbon trading, its use, mechanism and implementation

Coming home after toiling in the heat for the better part of day with just enough earnings to feed your family was just how an average day went for the masses prior to industrialization. Industrialization not only enabled the conversion of farms, villages and feudalism to the exuberance of modern society, but it also changed the whole underlying structure of society. However, nothing comes for free; the humongous cost of this economical and social transformation has given rise to the new subdomain of Climate Finance.

Climate finance focuses heavily on finding sources of finance at local, national as well as international levels from public as well as private sources with the main intention of financing mitigation and adaptation of actions to combat climate change. The idea of climate finance has originated from the acceptance of decade long debates on the imminent need of the countries to tackle the problem of climate change and global warming which has perpetuated and aggravated exponentially over the last few decades. It has been acknowledged that developed countries have a greater responsibility as compared to developing and underdeveloped nations towards climate financing on the basis that they are historically more responsible for the current levels of greenhouse gases in the atmosphere. Under the UNFCCC till date, 2 major international treaties have been introduced; the earliest being the Kyoto Protocol.

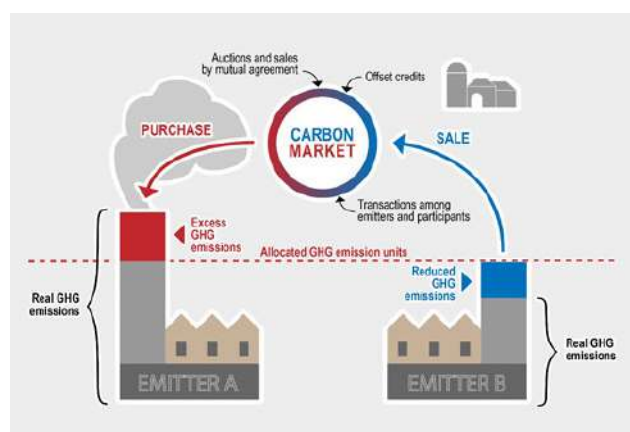
The Kyoto protocol was adopted in 1997; however it was implemented from 2005. Having 192 member countries currently, Kyoto protocol introduced an intriguing concept of “Emission Trading”, nowadays better known as the “Cap and Trade Mechanism”. Perhaps the most pivotal element of the Kyoto Protocol, the Cap and Trade Mechanism is a market based approach at controlling and eventually reducing carbon emissions in the long run.

How does the Cap and Trade work?

The government starts by fixing the amount of carbon emission it wants to permit, therefore, setting a cap to the maximum amount which can be emitted by industries in a year. Then while keeping this amount in mind, a set number of carbon permits, which give the companies the “right to pollute” are either auctioned or given for free. The cap on emission limits the amount and with the cap getting stricter over time, the emissions can be reduced.

The companies are thus left with two options; either they must have enough permits to cover their emissions or they reduce their emissions. The free market system of this scheme also provides the companies with the opportunity to buy and sell the carbon permits among themselves. Not only does this help in reducing the overall emissions in an economical way but it also provides the market with flexibility to do so in a way which costs the least. This market based approach has gained a humongous traction over the years, so much so that the Paris Agreement proclaims it as the primary

way countries can meet their goals to lower carbon emissions.



Apart from the above mentioned free market system, to ensure that the system was economically beneficial, a flexibility mechanism was also put in place.

This includes the Clean Development Mechanism and the Joint Implementation Mechanism. Both these mechanisms allow the countries with binding emission targets to increase their caps by either off-setting via investment in sustainable green projects which reduce emissions in developing/developed countries or by purchasing it from developing countries which don't have a binding emission target. The latter helps to provide an economical incentive to developing nations to invest in sustainable projects.

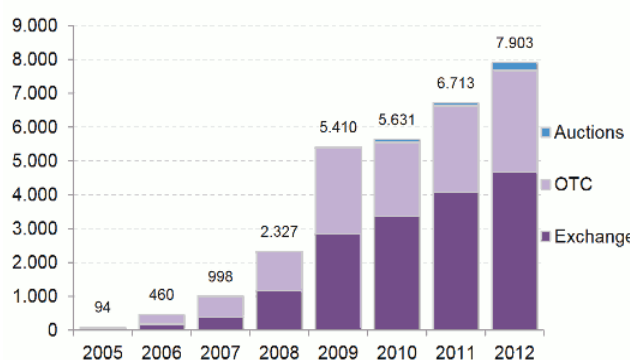
Real life Carbon Market

The European Union Emission Trading Scheme (EU ETS) has served as a cornerstone of the EU's policy to combat climate change and has proved instrumental in reducing greenhouse gas emissions cost-effectively. It is the world's first major carbon market. Tracing back to 1992, the EU ETS originated when the then 15 member states were faced by the need to reduce Greenhouse Gases Emission by 8% from 1990 to 2008-12 under the Kyoto Protocol. Absolute quantitative emission targets for industrialised countries along with the inclusion of a set of flexible mechanisms which permitted the exchange of emission units between countries via an International Emissions Trading system to tackle emissions from key economic sectors were seen as the way forward.

The first phase was a three year pilot from 2005-2007 that focussed on 'learning by doing' approach. It covered only CO₂ emissions from energy intensive industries and power generators. Allowances were given to businesses free of cost. A €40 per tonne penalty was imposed upon non-compliance. The first phase

succeeded in establishing a price for carbon, permitted free trade in emission allowances across Europe and incorporated infrastructure required to monitor and verify emissions.

Phase 2 from 2008-2012 set a lower cap on allowances. Businesses were permitted to purchase international credits totalling to around 1.4 billion tonnes of CO₂-equivalent. The EU ETS continued to be the main driver of the International Carbon Market in Phase 2. In 2010, EU allowances accounted for about 84% of the total global carbon market value.



Phase 3, however, developed on a shaky foundation. A surplus of emission allowances accumulated in the EU ETS since 2009. This was majorly propelled by the economic crisis of 2008 that reduced emissions more than anticipation, and by higher international credit imports. This plummeted carbon prices and weakened the incentive to reduce emissions. The countries were now faced with the problem of making ETS more resilient to demand-supply imbalances so as to enable the facilitation of an orderly market.

As a short term measure, 'Back-loading' was introduced. It suggested reduction of allowances in the market via near-term auctions, reintroducing the quantity removed later on. This measure is capable of rebalancing supply and demand and reducing price volatility without resulting in a loss of the competitive edge. From the perspective of the long term measure, the Market Stability Reserve (MSR) was introduced and became operational from January 2019. MSR permitted shifting allowance allocation in the future but within the bounds of the predetermined cap wherein the original design was primitively cap-preserving. Allowance auction was adjusted in response to changes in unused inventory of allowances, also referred to as the bank of allowances. Both of these long and short term measures were complementary to each other.

Phase 4 (2021-2028) further strengthens the objective to achieve climate neutrality in the EU by 2050,

including the preliminary target of at least 55% net reduction in greenhouse gas emissions by 2030. Taking inspiration from this market, China launched the world's largest carbon market for its thermal power industry at the start of 2021. The sector accounts for 40% of China's emissions, equivalent to double of the emissions covered by the EU's carbon market.

Between 2002 to 2013, various countries opted ETS to be the primary vehicle to drive carbon pollution reduction and accelerate the growth of renewables. Many reports have revealed a trend effect that ETS has had on the establishment of renewable energy production. In most cases the energy sector moved output away from coal power stations to cleaner, natural gas powered-electricity production that emits less CO₂. In 2019, emissions fell 8.7%, the largest decline since 2009.

Is this system really flawless?

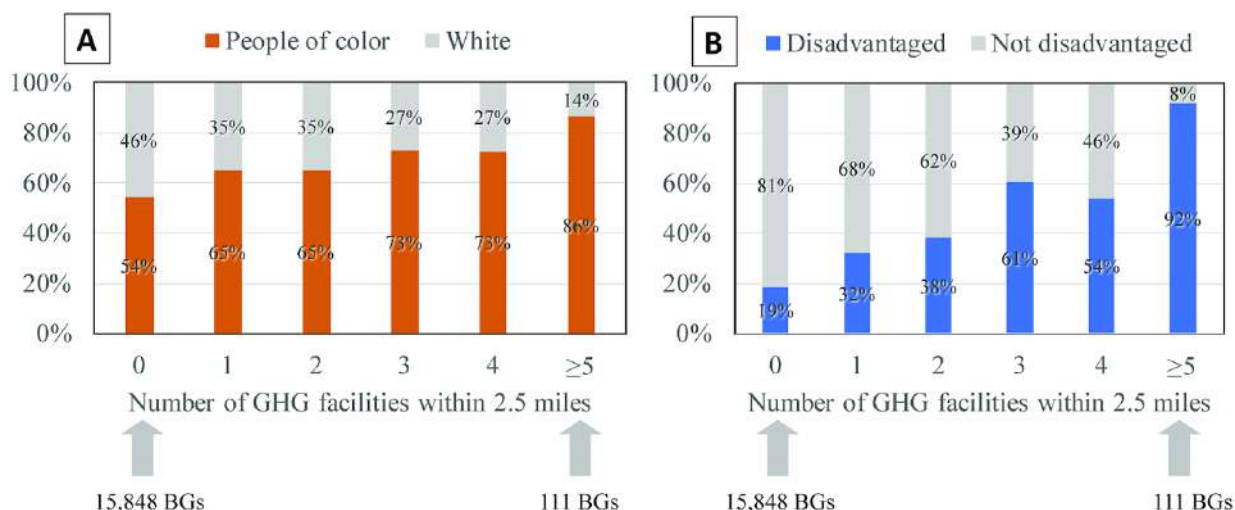
All that glitters is not gold; similarly this system is also not without its flaws. The very basis of the carbon pricing strategy is that it considers climate change as a negative externality and therefore works on the assumption that we can deal with it by charging the producers so as to reflect the actual cost of production of carbon-intensive goods and services. However, if we observe closely, climate change is much more than just a negative externality. The current society is greatly entrained to function in a way which requires high emissions of carbon and other GHGs. Whether we consider the very basic societal functions of heating or mobility, we are largely and deeply stuck in technologies, infrastructure, regulations and lifestyle which have over many decades become interconnected in a fossil fuel requiring intensive system. Therefore, it becomes all the more necessary to not only reduce the carbon emission but do it in a way that strategically moves us away from the existing system, which is currently absent under the cap and trade mechanism.

Another problem is that the global carbon markets operate on the assumption that a carbon credit has the same value irrespective of the place and time. However, recent scientific studies have refuted this belief that the place where the carbon emission takes place doesn't matter because ultimately carbon dioxide mixes into the atmosphere. One research has found that carbon dioxide emitted in a particular place can form a "dome" that can trap emissions and lead to increase in surface temperature, high concentration of harmful gases and destruction of the local ozone layer.

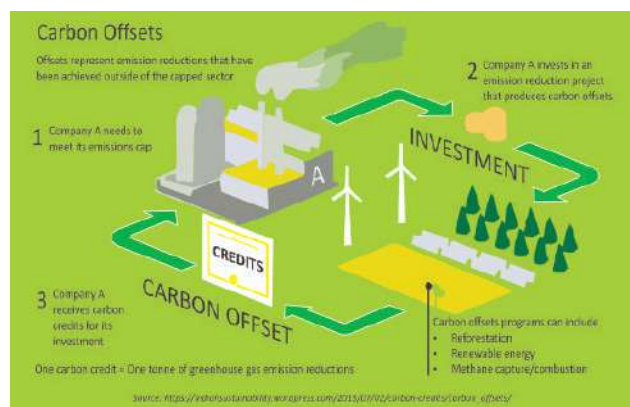
The existence of the flexibility mechanism further adds fuel to fire. What developed countries often do is that they implement emission reduction projects in developing countries where it is relatively cheaper to do so. Now, in the longer run, when these developing countries come under the gambit of emission controls they would have to invest in more expensive options to earn CDM credits. Thus, the very fabric of climate finance which places emphasis on a greater financial responsibility of developed nations goes for a toss. Although the Kyoto protocol emphasised on the need to reduce the emissions domestically, the protocol didn't quantify it and hence allows for easy exploitation.

Lastly, although dealing with global warming is of utmost priority, it is necessary to ensure that this is done in an equitable way. According to a study conducted with respect to the California Cap and Trade program, it was pointed out that the ability to purchase these carbon permits helped major polluters to continue emitting large scale carbon emissions. The problematic element here is that in most instances these big polluters are present in areas where marginalised communities live. Thus, even though the statewide targets are met, these marginalised communities experience an overwhelmingly deteriorated air quality.

What's in it for investors?



Ever imagined diversifying your portfolio with carbon? Well, fret not! The EU carbon market also caught the eyes of traders and hedge funds as a lucrative venture. Whereas OPEC is the regulatory body for a third of the global oil, the EU supervises all carbon allowances within its emission trading system. With the EU's vision to gradually increase the price of carbon units, these are seen as attractive long term investment options.



“Carbon will be the world’s biggest commodity market, and it could become the world’s biggest market over all”
– Louis Redshaw

The lack of correlation between the mainstream market trends and carbon credits is what entices the investors at large. There are a number of underlying investment propositions, but the high level one from an investor’s perspective is that this is a return stream whose returns are not going to be correlated with anything else you’ve got in your portfolio, unless you happen to have very long carbon credits. From an institutional perspective,

"fitting alongside equities, bonds, and other hedge funds, it will be a very uncorrelated asset", quotes Nick Wood, head of a group developing environmental strategies and products at Man. Furthermore, it is the ‘green’ factor that greatly drives institutional investors to demonstrate environmentally conscious decision-making to their stakeholders wherein they deploy capital in socially responsible schemes.

This approach towards the carbon credits market permits running a fund that collaborates aspects of a hedge fund with that of infrastructure and private equity, an amalgamation of the trio alternative assets that have attracted the investors greatly in the past 5 years.

The bottom line:

Carbon trading serves as an ideal example of variation of theory from the practical; there are many more dimensions to it than apparent on paper. The ideology behind the concept often gets blurred in its flawed implementation. Solving the predicament of climate change and global warming needs the adoption of much more inclusive policies and schemes which are not singularly focused on reduction of carbon emission but also work towards solving the multi-faceted dependence of society on fossil fuel intensive technologies. Additionally, it is of paramount importance that the solutions which are executed ensure an equitable distribution of responsibility among the nations on the basis of their capabilities to make tangible impact.



Keeping it 'Big' for Climate Change

-Anushka Jain & Chetsi Chaudhary

"Infinite growth of material consumption in a finite world is impossible"

With numerous talks about climate change being a real phenomenon and not just a state of mind of a few active people who pay heed to the concept of sustainability, it is a serious threat faced by all living beings which is in turn creating a grave domino effect. Earth's climate, an average of regional climates, is ever-changing since time immemorial.

Warming of Earth's climate, as claimed by scientists, is a consequence of various anthropogenic activities resulting in melting of glaciers, rising of sea level, health hazards, disruption in the growth process of various species eventually leading to biodiversity loss, uneven rainfall, higher probabilities of occurrence of natural disasters - to name a few.

In the present day, climate change has posed several challenges for businesses and companies. It has led to the creation of the potential liability for emitting greenhouse gases (GHG) along with multiple business risks like increased operational costs in case of extreme weather-related events. Many companies around the world have been facing legal charges for bringing out the destructive side of climate change. 2019 undeniably witnessed one of the biggest climate protests to date when around 6 million people in more than 180 countries demanded a cut in greenhouse gas emissions.

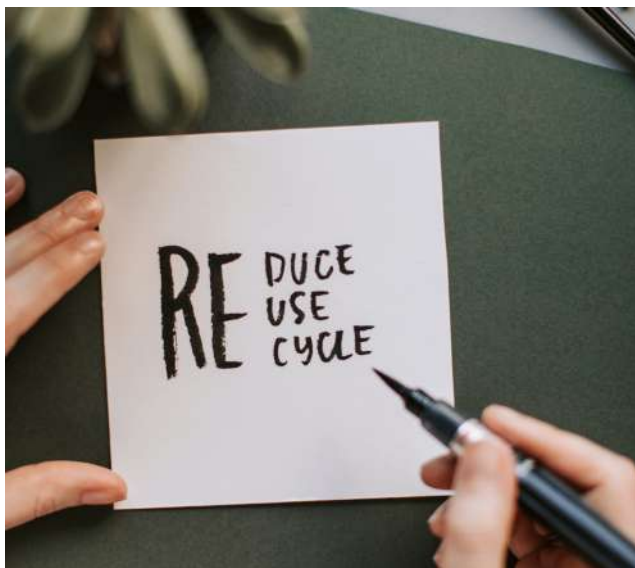
In an atmosphere of mounting public awareness, large companies around the globe are under great pressure to act on climate change. Conventionally seen as damage creators, some companies are playing the role of damage controllers, unlike others. They are not only framing business strategies that help them tackle challenges but, also exploring all the opportunities that climate change can offer them.

Becoming carbon-negative by 2030 as a part of Sustainable Development Goals is a target that companies like Unilever and Microsoft are determined to achieve. Unilever, the UK-based company representing multiple consumer brands like Ben & Jerry's and Dove, has been showing impressive levels of commitment towards its climate-related aspirations. In comparison with the levels of 2008, the present levels suggest a reduction in CO₂ emissions by 65 percent and in total waste sent for disposal by 96 percent. On the other hand, Microsoft, the tech industry leader, will increase its internal carbon emissions fee to \$40 per metric ton of emissions with effect from 2021.

Companies are focused on eliminating single-use plastic packaging and are ready to opt for more sustainable and eco-friendly approaches. HP is dedicated to eliminating 75 percent of its single-use packaging by 2050 and Unilever, with its partnership with Loop, sells single-use products in refillable glass and stainless steel packaging which promotes reuse. Unilever has also decided to halve its use of virgin plastic by 2050 and Dove does not miss any chances of using 100 percent recycled bottles. By 2017, Johnson & Johnson too reformulated their products to remove plastic microbeads from their

cosmetic and personal care products. Their recycling resource site, CareToRecycle.com, provides 75+ recycling tips on how to, where, and when to recycle. A new initiative, Acuvue Contact Lens Recycle Program, was launched in the UK which allows people to recycle contact lenses along with their packaging. The company is also working towards reducing the use of water and energy.

Companies like HP have been giving paramount importance to investment in energy-efficient equipment and services. Furthermore, the development of renewable energy generation technologies is being boosted and Google's parent company, Alphabet, is an extraordinary illustration for this. Its plan to become the first major company to operate on carbon-free energy by 2030 has gained considerable attention. Hands down the first company of its size to match its total electricity consumption with renewable energy and the world's largest corporate buyer of renewable energy with more than 50 projects totaling 5.5 GW of renewable energy projects under contract worldwide; Alphabet just keeps getting better with its contribution towards the climate. Likewise, a gradual shift to 100 percent renewable energy is like a virtual hug to the environment and Microsoft is willing to do so within a period of 4 months. It plans to power all of its new buildings on renewable energy alone accompanied by a 100 percent zero-waste corporate base. Currently being powered by 35% renewable energy, aiming to increase it to 100% by 2050, Johnson & Johnson has evolved its focus to pursue its climate-related ambitions as well.



HP Sustainable Forest Collaborative, Unilever's Sustainable Agriculture Code of 2018, and Nike Grind Recycling Program are initiatives that highly heighten how large companies are understanding their responsibility with reference to climate change. From forest restoration to sourcing raw materials from global suppliers in ecologically sustainable ways to minimizing

the negative environmental impact of farming, these initiatives have been directed to transform the role of companies in climate change. Unlike the general notion of a fast-growing footwear company having a mere goal of profit maximization, Nike is atypical. 'To protect the planet, we don't wait for solutions, we create them. In order to protect the future of the sport, our Planet work is focused on carbon, waste, water, and chemistry' - with this goal in mind, the company's actions center on producing better quality products that aim at minimizing wastages, reducing carbon footprint, and using safer chemicals. Nike Grind has recycled 30 million pairs of sports shoes over its operation of 25 years. Nike Air products contain at least 50% recycled materials and over 75% of all Nike products sold include some recycled materials. HP follows a similar attitude by increasing the usage of recycled products in its products. It seeks to increase the amount of recycled plastic by 30% by 2025 in its products. Not to forget the efforts of Tesla, the electric vehicle manufacturing giant, which claims to have prevented nearly 4 million tons of CO₂ from entering the atmosphere, provides financial assistance for disaster relief, focuses on renewable sources of energy, and is indeed bringing a magnanimous change in the whole world, quite literally, for it is under the leadership of an unmatched mastermind.

One recent development is the rise of plant-based meat alternatives like burgers, hot dogs, sausages, tofu, etc which are capable of deceiving even regular meat-eaters or to put it differently providing them with the desired utility. By providing customers with a more environment-friendly array, companies like Beyond Meat, Impossible Foods, Lightlife, and others are increasingly working towards providing a perfect substitute of animal protein to ensure sustainability. For instance, Beyond Meat makes use of ingredients like water, pea protein isolate, expeller pressed canola oil, refined coconut oil, rice proteins, and a few other fruit extracts to emulate patties. It focuses on reducing the usage of resources like water, land, energy and eventually reducing emissions.

In the words of Jan Gehl - "First life, then spaces, then buildings - the other way around never works". In pursuit of technological advancement, the rush and humdrum of life, and in the race of being the 'fittest' for ensuring survival, one may be oblivious of what's ephemeral and what's perennial. Protection of what we have been bestowed with should be the foremost priority of every individual and institution. Investing in renewable resources and a healthier environment reaps results not only in terms of sustainability but also financially, evidently observed in the performance of many Fortune 500 Companies. But, is everybody doing their bit?

Fukushima Water Release

-Arjit Singla

The implications of the decision of the Japanese Government to release radioactive water

In March 2011, there was a nuclear disaster at Fukushima Daiichi nuclear plant as the reactor cooling systems got disabled by the tsunami. The disaster has been described as the worst since the 1986 disaster of the Chernobyl plant. Due to the high release of radioactivity following the disaster, a 30km evacuation zone had to be declared by the government.

Japan has recently stated that it is planning to release around 1.3 million tonnes of radioactive water in the Pacific Ocean which was used to cool down the reactors during the Fukushima Daiichi disaster. This is due to the shortage of water storage capacity in the existing tanks. According to the Government, the decision to release the water is the most feasible among all the options. The process will be initiated after two years and is anticipated to last for several decades and cost \$200 billion. The Japanese government and Tokyo Electric Power Company (TEPCO) stated that the release will be in accordance with the international standards and the technology used will be available to remove all the radioactive elements except tritium, a radioactive isotope of hydrogen.

The announcement, however, saw widespread protests in Japan as well as South Korea and China. The fishing communities protested. They stated that this decision will severely affect the reputation of their

produce. Various environmental associations including Greenpeace have raised concerns regarding the process as well. The governments of South Korea and China also criticized the decision.

The impact of this release can be severe on the fishing communities in Japan and its neighbouring countries. The population of Japan, South Korea, Russia and China consume a high proportion of seafood and the fishing communities play an important role in this regard. Japan, China, South Korea and Russia are among the top 10 seafood consumers in the world.

Japan alone consumes 7.5 billion tons of fish a year, which is about 10% of the world's catch. It is also home to a \$14 billion commercial fishing industry. Fish and a variety of other sea creatures are caught by local fishermen, imported or raised in aqua farms. 66% of the fish consumed in Japan is domestically caught. Japan exported seafood worth 227.6 billion yen in 2020 as against 173.63 billion yen in 2011. As per a report by the Organisation for Economic Co-operation and Development (OECD), around 2 lakh households with a total of 7.3 lakh members are dependent on fishing activities as a direct source of income. Furthermore, around 2.1 lakh people are in the fish processing industry. If we consider the aggregate of direct and indirect dependence on fishing activities, the number amounts to around 1.5 to 2 million people.

With respect to China, the total production of captured fisheries and aquaculture reached approximately 82 million metric tonnes (MMT) in 2018. Around 9 million people are active as fishermen and 5 million as

fish farmers. The fishery industry contributes 3% of its GDP. Russia has also invested heavily in its seafood infrastructure. In 2018, the country exported \$4 billion worth of seafood and had the goal of doubling it. South Korea exported seafood worth \$2 billion.

Due to the water release, consumer confidence in seafood may decline and as a result, impact the fishing communities in the above-mentioned countries. The impact will be high on the fishing community in the Fukushima region as well. As an aftermath of the 2011 disaster, various countries banned the import of fish from the Fukushima region. The Fukushima fishing community had to run several tests in order to prove the safety of the seafood. With the release, however, the situation may repeat, leading to high economic losses for the Japanese fishing community, specifically Fukushima.

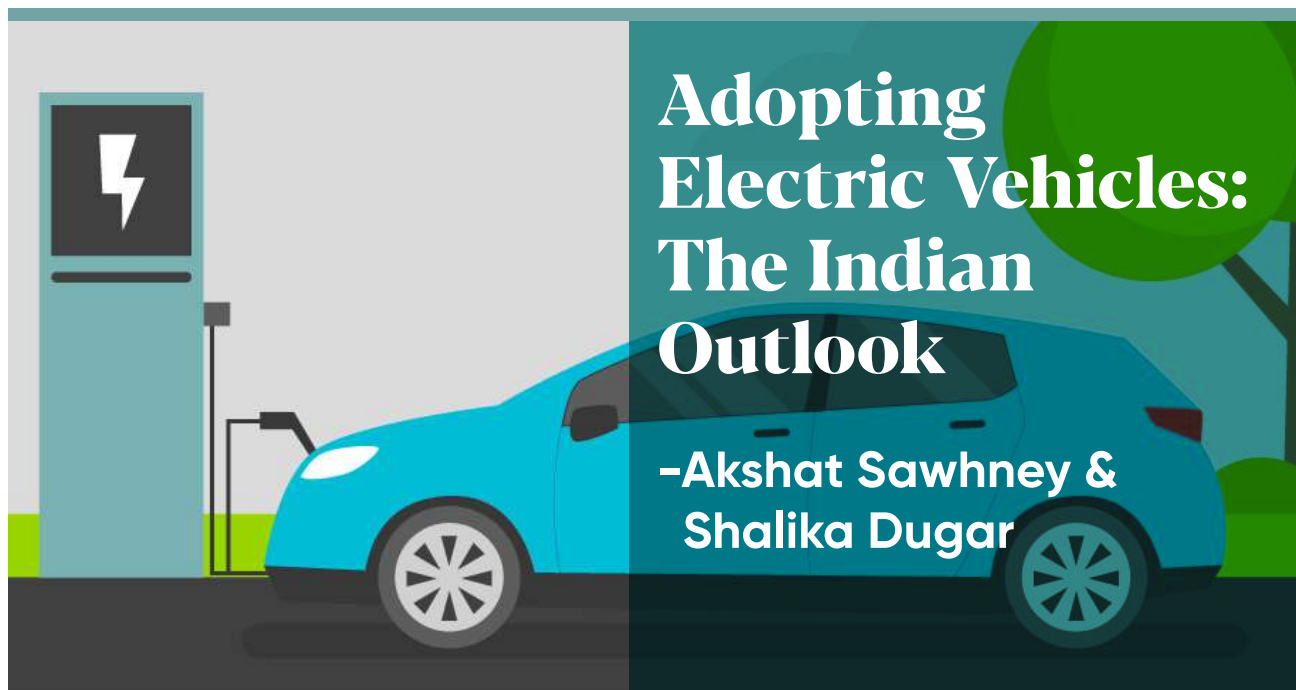
The radioactive water is alleged to contain radionuclides such as caesium-137, carbon-14, tritium (some of which will form the more dangerous “organically bound tritium”), strontium-90, cobalt-60, iodine-129, plutonium-239, and more than 50 other hazardous radionuclides. While some of them have been treated and removed, elements such as radioactive tritium, strontium-90, and C-14 have not been removed. These elements may cause cancers and settle on the bones in fish as well as humans. Some scientists fear that the release of radioactive water will enhance the process of bioaccumulation in marine animals. Through the food chain, these elements will reach humans and if they are present in large enough quantities, may have health effects. The long-term effects of bioaccumulation lead to a variety of illnesses such as cancer, brain damage and kidney failure. Minamata Bay disease serves as an important precedent in this regard as the bioaccumulation of mercury in shellfish and fish resulted in a neurological disease among humans with an official death toll of 2300. Though scientists believe that diluted radioactive water has low risks of such fatal diseases, the chances are not zero. Over the years, the credibility of TEPCO has also been questioned, as earlier, it claimed to have removed most of the radioactive materials from water but later on admitted to the prevalence of radioactive carbon-14. C-14 has a half-life of 5,730 years and is known to accumulate in marine ecosystems and cause cellular and genetic impairment. Fukushima C-14 will be added to the already elevated radioactive C-14 load present in the oceans from nuclear weapons tests — “bomb carbon” — from the last century, now found in organisms even in the deepest part of the ocean, the Mariana Trench. The initial impact will be mainly on high seafood consumption nations as tritium can be ingested which can also impact the whole world as

increased globalization has led to interdependence among the operations of all countries.

However, some scientists are of the opinion that the release may not be harmful. The advocates of the water release claim that all the international standards will be adhered to. A report by BBC states, “Scientists argue that the elements remaining in the water are only harmful to humans in large doses. With dilution, the treated water poses no scientifically detectable risk, they say. While the tritium is radioactive, it has a half-life of around 12 years, meaning it will disappear from the environment over a period of decades rather than centuries. Radiation from tritium can be ingested, however, which is why fishing industry groups are concerned about the risk of it getting into the food chain and being consumed through seafood. The risk of this happening is not zero, but the scientific consensus is that it does not pose a threat to human health. Scientists also point out that vastly more radiation has been released into the Pacific by nuclear weapons tests carried out by the US, UK and France during the 1940s, 50s and 60s.” According to the Korean Nuclear Society, the radioactive doses South Koreans receive would be 1/300,000,000 of the maximum level acceptable to the human body.

Even if this situation is considered, there will continue to be fear among the consumers who will respond by reducing or omitting their seafood consumption during the initial years. As a result, the fisheries community will be impacted in the short run. But if no harmful effects are discovered, the demand may swing back and the fisheries industry may witness a U-shaped recovery.

Thus, it can be concluded that Japan’s decision of releasing radioactive water is anticipated to harm the fisheries industry of Japan and neighbouring countries. If the release does not result in adverse effects, the impact on the fisheries industry will be short-lived. However, if it does, the impact will be far-reaching and may affect the whole global economy and hence, it justifies the concerns raised by various stakeholders such as the fishing communities and the neighbouring countries. In order to ensure the credibility of the operations, the Japanese government & TEPCO should appoint an external, independent agency of international recognition which would evaluate the whole operation. Another course of action should be to create a contingent fund specifically for the stakeholders in order to mitigate the impact. Furthermore, the radioactive water should be stored for a sufficient period of time in order to reduce the half-life of these elements before releasing it into the water.



In-depth analysis into the electric car market and industry in India and its future possibilities.

The worst impact of climate change is yet to come, and not more than a decade is left to change the way humans use their energy resources. Air pollution is one of the leading factors causing global warming. Combustion from gasoline along with the running of diesel car engines is identified as the primary cause of fine particulate matter pollution (PM 2.5). This combustion also produces several greenhouse gases that contribute to climate change.

Apart from the industrial waste produced while manufacturing vehicles, air pollutants from gasoline and diesel-powered vehicles cause asthma, bronchitis, cancer, and premature death. As the COVID-19 pandemic — a respiratory disease — continues to spread, a study by Harvard University found a striking association between long-term exposure to harmful fine particulate matter and COVID-19 mortality.

Introduction:

Instead of an internal combustion engine that generates power by burning a mix of fuel and gases, an electric vehicle (EV) is one that operates on an electric motor. The rising carbon footprints have drawn a great deal of interest in the usage of electric vehicles (EV), particularly in the last decade.

Electric vehicles fall into three main categories:

- Battery electric vehicles utilise the electricity in the battery pack.
- Plug-in hybrids, as the name suggests, is a combination that uses a gasoline or diesel engine along with a large rechargeable battery and an electric motor.
- Fuel cell vehicles split electrons from hydrogen molecules to produce electricity to run the motor.

2010 was a revolutionary period, as, during this period in India, the first concrete decision to incentivise electric vehicles was taken. A Rs 95-crore scheme was approved by the Ministry of New and Renewable Energy (MNRE) effective from November 2010, envisaging incentives of up to 20 per cent on ex-factory prices of vehicles, subject to a maximum limit. After the withdrawal of the subsidy scheme by MNRE in March 2012, for the growth and manufacturing of EVs in India, Faster Adoption and Manufacturing of Electric Vehicles (FAME) was introduced by Mr Arun Jaitley, the finance minister of India back in 2015-16, while presenting the union budget, having an initial outlay of Rs. 75 crores. It was announced to incentivise clean-fuel technology vehicles to boost the Indian market.

India has shown continued interest to move to 100 % electric vehicles by 2030 as proposed by the transport minister of India, back in 2017. Unfortunately, the raised plan brought in concerns by the automobile industry and the plan was subsequently diluted from 100 % to 30%.

In February 2019, a Rs. 1000 crore programme was cleared under the FAME-2 scheme by the Union Cabinet. Its main objective was to encourage faster adoption of electric and hybrid vehicles by offering upfront incentives on the purchase of electric vehicles. Along with this, the setting up of adequate charging infrastructure for the EVs was also proposed.

Are Electric Vehicles Really Pollution Free?

According to an International Conference on Communication Technology (ICCT) report on life cycle analysis of EVs and their battery production, studies indicate that battery production is associated with 56 to 494 kg of carbon dioxide per kilowatt-hour of battery capacity (kg CO₂/kWh) for electric vehicles. 1-2g CO₂ per kilometre per kWh of battery capacity is estimated for the equivalent amount of emissions per kilometre driven over the vehicle's lifetime. The battery capacities used in electric vehicles can range from 17 kWh to 100 kWh. In comparison, Internal Combustion Engine (ICE) vehicles release CO₂ averaging 120-140g per kilometre.

On an average, twice as much energy used in producing a combustion engine car and twice as much as global warming potential is generated while producing an EV.

According to Alekhya Datta, fellow, electricity & fuels division, The Energy and Resources Institute (TERI), "Battery production uses a lot of energy, from the extraction of raw materials to the electricity consumed in manufacture. The bigger the electric car and its range, the more battery cells are needed to power it, and consequently the more carbon produced,"

Key Developments in Battery production:

A lithium-ion battery or Li-ion battery is a type of rechargeable battery.

An increasing number of government initiatives support the usage of Lithium-Ion batteries in the country. In 2020, incentives worth \$4.6 billion were provided by the government to the companies setting up advanced battery manufacturing facilities. It was done with an aim to minimise dependence on oil and encourage the use of electric vehicles. The high price of Li-Ion batteries due to high capital expenditure related to their manufacturing, is one of the biggest factors that are likely to hamper the market's demand. In addition to this, the dependency on imports from other countries for the key components used for their manufacturing is a major market challenge. They constitute 40% of the total price of the electric vehicle,

which in turn, has resulted in high prices of EVs.

The demand for Li-Ion batteries is not just limited to EVs; the telecom service providers seeking environmentally friendly and sustainable solutions to power telecom towers are also leading their demand. As a direct consequence, many medium to large scale companies like Goldstar Power Limited and Bharat Power Solutions have been drawn in. As a result, the telecom industry is expected to have considerable growth in demand. For instance, GYFP4875T Li-Ion battery of 75Ah as well as 100Ah, produced by Epower can be used in access network equipment, transmission equipment, mobile telecom equipment, satellite ground stations, and other devices. This Li-ion battery is small in volume and is comparatively lighter.

In 2020, Amperex Technology Limited acquired 180 acres of industrial land in Haryana to build a manufacturing unit for lithium-ion polymer batteries. The company further plans to invest Rs. 7,000 Crore to supply batteries to various industries such as smartphone, two and three-wheeler EV manufacturers in India. Inverted Energy launched a new range of lithium-ion batteries for solar plants, electric vehicles, and home usage in India, the production of which will be done at their New Delhi facility.

At present, automakers use energy-extensive chemistry to produce batteries such as lithium, nickel, cobalt, aluminium oxide or lithium-ion phosphate, giving the batteries a longer life span, higher energy density and increased thermal stability and safety. Today's Li-ion batteries are made using a 'slurry casting' process, whereby the active materials are mixed in a wet slurry and coated onto thin foils of aluminium or copper and then dried and compressed. The cost of this process is exceedingly high as it is developed empirically through trial and error and is only effective and efficient for mass production.

The Indian market:

The Indian Electric Vehicle Market is expected to reach USD 47 billion by 2026 as compared to the current market of USD 5 billion. It has been adversely impacted by the outbreak of COVID-19 due to the supply chain disruptions and the halt of manufacturing units with continuous lockdowns and travel restrictions across the country. However, the market is still in its nascent stage in India.

Implementation of FAME has resulted in the gaining of significant momentum for the EV market in India. In the wake of international policy commitments and environmental challenges, India aims to shift towards

e-mobility. India offers the world's largest untapped market, especially in the electric two-wheeler segment and as 100 per cent foreign direct investment is allowed in this sector under the automatic route, the market is expected to gain momentum in the future.

The two-wheeler EV industry in India is an eye-catching domain as in the current scenario, transportation is still a big challenge for India. In particular, the jump from Bharat Stage V (BS V) to BS VI emission standards is expected to benefit the Indian electric scooter and motorcycle market, by raising the prices of petrol-driven two-wheelers by 7–15%. These stringent policies were launched to curb vehicular emissions and fight surging pollution. From 1st April 2020 onward, only BS IV- compliant vehicles were allowed to enter the market. This policy again favours the electric variants.

E-Commerce companies (Amazon, for example) are also launching initiatives to use e-Mobility for last-mile deliveries to reduce their carbon footprint. India has also started inter-city electric buses among the major cities, to test the e-mobility for public transport. For instance, Kerala aims to put one million EV units on the road by



2022 and 6,000 e-buses in public transport by 2025. Telangana aims to have an EV sales targets for 2025 to achieve 80% two and three-wheelers (motorcycles, scooters, auto-rickshaws), 70% commercial cars (ride-hailing companies, such as Ola and Uber), 40% buses, 30% private cars and 15% electrification of all vehicles.

India's first inter-city electric bus service, manufactured by Mitra Mobility Solution, having a range of 300km on a full charge, was launched by the Union transport minister back in February 2020.

China is also trying to take advantage of the rising electric bus demand in India, as it is trying to enter this sphere of business by partnering with local bus manufacturers. For instance, in 2019, Foton PMI announced that it was planning to invest around INR 500 crore in a joint venture with Beiqi Foton Motor Co. of China to manufacture electric buses in India. The company has already given five electric buses to one of the airlines for internal operations.

Original Equipment Manufacturers (OEMs) are trying to take full advantage of the growing Indian EV market by expanding their facilities to gain maximum profits. For instance, in January 2020, Ather Energy Pvt. Ltd., which operates one manufacturing plant in Bangalore, having a capacity of 25000 units, declared its plan to set up a 4,00,000 square foot factory in Hosur, Tamil Nadu which will have an annual output of 1,00,000 units. This was done in order to meet the rising EV demand in the country. In the same vein, Okinawa AutoTech Pvt. Ltd. invested in its second manufacturing plant in 2019. The investment which stood at Rs. 200 crores is expected to deliver results in the development of an electric two-wheeler in Rajasthan and was scheduled to be commissioned in early 2020-21. The plant is expected to produce an annual output of 10 lakh units.

The Indian Electric Vehicle (EV) Market is expected to grow at a CAGR of more than 20% over the next 5 years. The total sales of EVs in India stood at 3,65,920 units in 2018 and is expected to grow at a CAGR of 36% by 2026. The EV battery market is also forecasted to grow at a CAGR of 30% till 2026, where the current standing of the battery market is roughly around \$520 million. The total MWh addition in 2018 hit 4.75 GWh and is expected to grow to 28.0 GWh by 2026. In the Business as Usual (BAU) scenario, it is predicted that the market will grow at a similar pace as it has been growing today. 2023-24 is being viewed as the breakout year for electric vehicles, as it is expected to reach cost parity with Internal Combustion Engine (ICE) vehicles leading to a greater market share for EVs.

With the introduction of schemes such as FAME-2

and National Electric Mobility Mission Plan 2020 (NEMMP2020), the National Electric Vehicle (NEV) scenario predicts the rapid growth of the EV market. Subsequent adaptation of policies such as banning of sales of ICE two wheeler & three wheeler in highly polluted cities, scrapping of old policies, stringent emission norms and many more will also act as a major factor in boosting the sales of such vehicles. The targets defined under EV policies shall be applied over the state and central government too, which shall also facilitate the deployment of EVs.

Unfortunately, most OEMs in the current scenario fail to make a profit through the sales of EVs. As a matter of fact, an EV's production cost is approximately \$12,000 more than comparable vehicles powered by ICEs. Carmakers often struggle to regain these costs through pricing alone. The outcome is that except for a few premium models, OEMs suffer a loss on almost every EV sold.

Aggressively reducing cost through 'decontenting', optimizing range for urban mobility, partnering with other automakers to reduce R&D and capital expenditures, targeting specific customer segments, and exploring battery leasing can be viewed as some options to lower down the costs which will in turn speed up the profits from both product and business-model perspectives.

Partnership during the transition:

Partnering and collaborating with competitors can be seen as an alternative by the automakers struggling to make any profits despite the industry transitions towards electrification.

At a time when OEMs face the possibility of retooling numerous models and platforms for electrification, collaborating with other OEMs can reduce the fixed-cost burden of R&D, tooling, and plants. Sharing EV platforms and manufacturing plants can enable high returns and benefits for the OEM's, which can still enable the production of multiple model variants. These collaborations can reach new heights if they enable higher-volume procurement of the same battery cells and power electronics. In fact, some automakers have already announced a range of different global partnerships focused on reducing the cost of designing and producing EVs. In an analysis, two OEMs co-developing a dedicated EV platform which could lead to an increase in production to two or three times spread across a similar fixed-cost base—reducing costs by \$1,500 to \$2,000 per vehicle.

India's demand for electricity currently is around 200-

300 GWh according to Jitendra Nalwaya, vice president of BSES Rajdhani Power. Assuming that India will have 1-2 lakh electric vehicles by 2030, only 1% to 2% of the total supply will be required to power them.

Citing India's EV ambitions, Nalwaya said that India will have 3-5% of total electricity demand. He added, "However, the only time when there might be additional demand is when there is a peak or load on the transformer. When there is overloading in a network or a particular time zone, where the consumption of electricity is more, that's when there might be a chance of a demand issue."

Electric two-wheelers are powered by 10K EV chargers on 20kWh electricity. The consumption of electricity by these two-wheelers may increase as much as 10% in case of overloading. So the question arises how will the producers and suppliers of electricity meet this excess demand for electricity?

The time of use of such activities and adapting demand-side management (DSM) can be explored for such situations. To encourage the degree and pattern of electricity consumption is one of the main aims because of which DSM is able to implement such monitoring activities of electric utilities.

The Need Of The Hour: EV Infrastructure

Infrastructure is the foundation on which the successful adoption of EVs in the country as well as new consumer growth is dependent. For this, the cost should be kept under a constant check in terms of the localisation of chargers.

Varun Chaturvedi, founder and CEO of charging solutions provider Tvesas Electric Solutions (Volttic), says that the distribution companies need to provide electricity connections at a faster rate and reduce installation charges. Volttic has set up more than 55 electric vehicle charging stations across India, and by 2025, the company plans to take the number to 600+ starting with the major cities.

According to Maxson Lewis, co-founder and managing director of integrated EV charging solutions provider Magenta Power, India's challenges are quite different compared to international markets. Moreover, the electricity supply is not consistent across the country and keeps fluctuating in many regions.

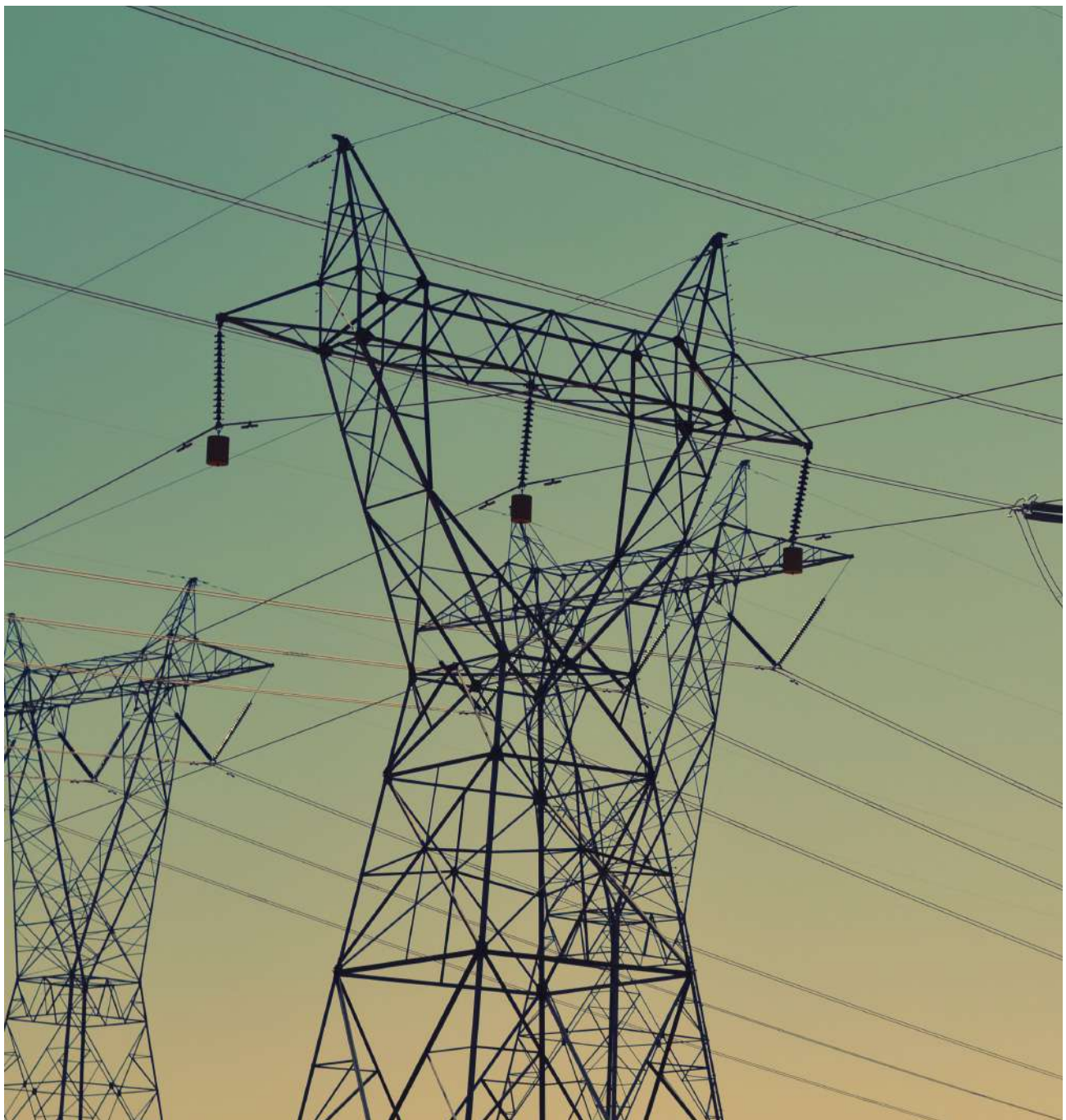
The EV market in India is in its initial stages and adequate charging system is not developed. Back in 2018, the first charging station was established in Delhi

and since then, there has just been a marginal increase in the charging points to 55.

The state government is planning to expand the number of charging stations, aiming to establish a widespread network of EV charging stations in Delhi. For a full charge including the cost of electricity and other overheads, a person might have to pay Rs 160-200 out of his pocket at a public charging station.

Therefore, it can be seen that the adoption of electric vehicles poses various technological and economic

challenges. Also, they are not completely pollution free due to the production process involved and the sources of energy used for electricity generation. Yet, the present difficulties cannot discount the potential for a better future which can be achieved with gradual, continuous improvements. Hence, it's rightly said, "Electric vehicles will save the climate — and our lives."





The Digitisation Paradox

-Disha Agarwal

The dilemma behind the fast-paced technological world

In this technological era, it's hard to imagine a life without smartphones, apps, Google, online banking, route planners with GPS and a huge selection of music and movies within the easy reach of human beings, nearly everywhere, around the clock. All of these make life so much easier. The difference between the physical and digital environment is blurring day by day. However, it's not only in day-to-day life that digitisation has become indispensable, digital technologies are also playing an increasingly important role in agriculture and industry, in the transition to renewable energies and in the future of smart cities. Each and every search query, streamed song and email sent, multiplied by the billions of people globally, add on to an ever-increasing demand for electricity, and to rising carbon dioxide emissions too. Digitisation has an environmental impact that has become impossible to ignore. This poses a very important question - Will the increasing reliance on digitisation ultimately prove to be a catalyst for climate change and the destruction of the planet?

The data that is sent and received all over the globe may not be physically visible or tangible but it actually carries a heavy baggage. Its energy consumption is constantly growing. The smart devices in use are often produced under environmentally harmful conditions and, at the end of their lives, they end up becoming toxic electronic waste. Every time simple daily activities

like browsing a website, sending and receiving an email, using a smartphone app or saving a file to the cloud drives are performed, data gets transferred between the devices used and the servers that the websites or software are hosted on. The more data that is sent and stored, the more is the electricity and energy needed. It may appear relatively small at the individual level but when seen from the global point of view, it adds up to a large amount. According to experts, digital technologies produce more carbon dioxide emissions than the aviation industry. Each query on google produces 1.45g of carbon dioxide. If 100 queries per day are made, that means 52kg of carbon dioxide emission will be produced per year. Google has itself stated that it produces 2.9 million tonnes of carbon dioxide emissions and consumes 6.2 terawatt-hours of electricity in a year.

"Query Searching" is not the problem, the problem is the music and video streaming channels on the internet. 80% of all the data flows through the means of moving images. Online videos available on different platforms viewed without being downloaded account for 60% of all global data transfer. Transfer of this data requires the system to be constantly engaged and keeps the electric current flowing which has a domino effect. The higher the resolution, the more bits and bytes are sent and received. Experts believe that the carbon dioxide emitted from the online video streaming industry is 300 million tons which is equal to the carbon dioxide produced by Spain in a year. The growth of technology is exploiting resources at a very fast pace. Precious metals like gold, silver etc. are being used rapidly to develop technology. While coal, which is used to generate electricity for technology, in turn,

increases carbon dioxide emissions in the environment. Trees and water are getting contaminated due to the production of harmful chemicals which are a by-product of technological development. The internet is responsible for 2% of global carbon emissions and 2% of global power consumption each year. The software technology used also has a drastic impact on digital energy consumption. For example, a less efficient word processor needs much more energy to process the same document as an efficient one. Even cryptocurrencies consume large amounts of energy. According to calculations by the Bitcoin Energy Consumption Index, a single Bitcoin transaction consumes around 819 kWh of energy. This is the same amount of energy needed to operate a 150-watt refrigerator for about eight months.

With this immense digital infrastructure, where an individual counts for little or nothing in the overall scheme of things, one of the best ways to improve a website's energy efficiency is by optimising its programming and design. A page with a clean code and a balanced design will load more quickly than a site full of banners, pop-ups, large photos and external programmes that slow it down. The simple steps that can be taken to ensure a smaller carbon footprint is by ensuring that the equipment one buys is appropriate to fulfil one's needs but does not exceed them. In order to optimise energy use always switch off the device once the work is done. It is important to be mindful and aware of the data that one uses and saves while deleting emails that are not required to prevent them from being stored unnecessarily. This is a good method to reduce one's carbon footprint. It is also wise to unsubscribe from email newsletters that one never

reads and delete rarely used apps from the devices. One must delete redundant screenshots and photos from iCloud or other cloud drives. In fact, using a phone for quick Google searches, instead of a laptop uses less energy.

At the same time, digitisation offers innovative solutions for tackling climate change and conserving the environment. Digital technologies can help in sustainable development by enabling people to share resources online and allowing innovative, resource-efficient production processes. Digital platforms and apps can also help promote more environment-friendly consumption and lifestyle options, for example by sharing tips on sustainable behaviour or simplifying access to environment-friendly public transportation. Sensors and satellites can help to highlight and locate environmental destruction and allow for rapid, targeted action.

However, digitisation comes with a huge carbon footprint that cannot be ignored. Sustainable digitisation can only be achieved if one learns to use digital resources in moderation and in the right places. It is of paramount importance to look at the issue of sustainability throughout the entire life cycle too, continue working on optimising energy use and energy sources, and look more often for alternatives to the big players of this digitised world.



The COVID-19 Effect

-Naman Sharwan

While the world was busy looking for a green economy and a sustainable lifestyle, life itself was hit hard in a way that has forced people to choose between lives and livelihood. The global outbreak of coronavirus has affected every part of human life, including the physical world. The world has been in havoc which has brought about pain and misery and has also robbed many livelihoods. Despite the terrible effects of COVID-19, the measures taken to control the spread of the virus and the slowdown of economic activities have had a significant impact on the environment. The measures taken to control the spread of the virus have helped in improving the air quality in different cities around the world, as there has been a decline in unnecessary movement. Further, it has led to a reduction in the emission of greenhouse gases, helped in reducing water and noise pollution and was even curtailed the pressure on tourist destinations.

All these positive impacts on the environment are the outcome of lockdowns imposed worldwide and other social distancing mechanisms adopted by different countries. However, it would be wrong to say that the COVID-19 outbreak has not brought any harm to the environment. In fact, there has been an enormous increase in medical waste which cannot be treated easily. Besides this, the haphazard use and disposal

of disinfectants continue to pose a threat to the environment.

COVID-19 has not directly affected the natural surroundings but the social distancing mechanisms adopted by different countries have helped the environment heal significantly. Humanity has retreated indoors and the liberated non-human natural world rumbles out. Notoriously dirty, the waterways and rivers in the world look cleaner, air feels fresher, smog invisible, haze has dispersed and wildlife fills the open spaces. While the main aim of lockdowns has been to reduce the rate of infection, it has also hampered the economic growth and progress of countries. Millions of people throughout the globe have lost their jobs, unemployment has risen and according to the IMF, the global economy has shrunk by 4.4% in the year 2020. While the pandemic acted as a stimulus for nature to rejuvenate itself, governments of major economies including Japan, the USA, India and Singapore have had to announce stimulus programmes to help the economy grow and to boost the supply side of it. But these could not help the economic conditions, rather the negative externality of the virus has actually caused the economy to adjust itself by shrinking. Perhaps, the adjustments that needed to be made in the economy due to pollution have now highlighted themselves.

Are economic progress and the betterment of the environment inversely related? Will there always be a trade-off between them?

The World Health Organization (WHO) has estimated

that outdoor air pollution kills around 7 million people every year worldwide and more than 80% of the urban population is exposed to unhealthy air. As people have been staying at home during the lockdown, there has been a significant improvement in air quality, especially in hard-hit areas like Wuhan, Northern Italy and a number of metropolitan areas in the USA. In China, the emission of harmful gases and other pollutants dropped by 25% at the beginning of the year 2020 and the quality of air improved up to 11.4% with respect to the initial phase of the last year, in 337 cities across China. WHO estimated that this change has saved 50,000 lives in China.

In particular, the concentration of nitrogen dioxide in the air dropped significantly. Nitrogen dioxide is a toxic gas emitted from engines of cars, buses, trucks and factories. According to WHO, if nitrogen dioxide concentration is more than 200 micrograms per cubic meter, then it can cause enormous inflammation in the breathing pipe which can cause diseases like Asthma.

PM 2.5 (Particulate Matter 2.5 μ m) is also one of the most harmful forms of air pollution. It has been a matter of concern for the governments of many countries for decades. This pollutant is so small and deadly that it can enter into one's bloodstreams through the lungs and cause not only respiratory problems but also heart problems and premature death. Due to lockdown, PM 2.5 levels have also fallen worldwide. The decrease in the level of PM 2.5 concentration is one of the major reasons behind the clear sky in metropolitan cities. The results are not limited to mere facts on paper, the mortality rates have also decreased in different parts of the world due to a drop in the concentration of such pollutants in the air.

Due to the COVID-19 induced lockdowns, not only the air quality but also the water quality of rivers and water bodies has improved. The reduction in the discharge of industrial effluents and other wastes into water has led to a positive effect on the quality of water. Clean rivers and other water bodies have also proved to be a blessing for aquatic life. Many species are returning to their natural habitats since the start of lockdowns. The closure of factories and commercial establishments has dipped the pollution level across the globe. Not only have the terrestrial animals been seen returning but even the sea creatures seemed to have enjoyed a break from the filthy conditions they were forced to live in.

Ganga, the holy river of India was considered one of the most polluted rivers in the world. During the lockdown, its water quality improved significantly. According to the National Green Tribunal (NGT), crores of rupees have been spent in order to make Ganga clean but

unfortunately, this could not be achieved even after years of government spending. Experts from IIT Roorkee have even said that the water of Ganga has become fit for drinking as it fell under the 'A' category defined by the Central Pollution Control Board, for the first time after decades. In fact, these results are not limited to India; people of Venice have claimed that water is much cleaner and aquatic life has been visible after the 2-month lockdown was introduced.

The pandemic was one of the biggest global health emergencies that impacted both the environment and the economy. The pandemic has made humans witness a different world, a world that is admired by everyone but one that has left an economy aspired by none in its wake.

COVID-19 is a direct threat to mankind, but the other thing that people often do not talk about is climate change which is an indirect threat to mankind. Despite millions of dollars being spent to save the planet, how has a 2-month lockdown been able to have a more significant impact on the environment?



The lockdown might have had a positive impact on the environment but there is a catch to it. As soon as these lockdowns were relaxed, emissions of greenhouse gases began to rise again. In China, which implemented the lockdown much earlier and started lifting it off earlier as well, air pollution levels reached pre-covid levels

after the relaxation. Initially, there had been hope that the slowdown in the world economy would be good for the planet but what is being witnessed is far from positive after the lockdown. Treating millions of people affected with COVID-19 takes a lot of medical care and asking billions to wear masks is putting a mighty toll on the planet. One of the biggest side effects of battling coronavirus was the piling up of plastic waste. It's not like the world was not already drowning in the plastic waste ocean but the pandemic has made the situation worse. The United Nations warns that the rising levels of one-time use items such as gloves, masks and gowns could lead to more challenging problems.

Restricting the use of plastic bags and single-use beverage containers were stopped to help stop the spread of the virus. The increase in takeout orders and online deliveries has added immensely to the amount of cardboard used, produced and discarded.

Even though vehicular and air traffic as well as industrial activity was reduced sharply in most parts of the world, this has not been the case with electricity. 64% of the global electrical energy mix comes from fossil fuels. Production of electricity using fossil fuels harms the environment and according to the World Energy Outlook, electricity usage significantly increased during the lockdown period.

COVID-19 had some decidedly negative effects on the environment like the increase of deforestation in the Amazon basin and poaching in Africa. It was argued that the level of greenhouse gases would decrease because more people would be working from home rather than driving to their respective workplaces. Even though the levels dropped during the lockdown, it was not significant enough, contradictory to the prediction made. Work from home strategy mainly applies to white-collar office workers in developed and developing nations. Some workers who do have to commute to the places of work will have to shift from public transport to private transport if they have resources for the same because of the fear of exposure to the virus. Fewer trips will be offset by longer trips, as those who can, will move far away from city centres.

In the long term, the temporary shifts in behaviour caused by COVID-19 will not change the current trajectory. People will still face the enormous threat of climate change and global warming will continue to raise the planet's temperature.

It seems like humans are still on the same path when it comes to the planet which still remains at risk due to its deteriorating condition. As for the pandemic's effect on the environment, there was a short-lived positive effect but the overall effect has been negative. Piling up of one time used plastic waste, pollution levels reaching pre-covid levels after the lifting up of the lockdown, increase in demand for private vehicles etc. are again negatively affecting the planet's health at a faster pace.

However, there exists hope as governments around the world are working on their economic recovery plans and there is an opportunity to enact climate-friendly policies such as investing in low carbon technologies which could avert the worst effects of global warming. Big businesses are recognizing the potential of this opportunity to formulate environment-friendly recovery models. Almost 200 CEOs from around the world have signed the 'Science-Based Target Initiative' calling upon others as well to reimagine a better future grounded on bold climate action and to base their recovery plans on divesting from the usage of fossil fuels and innovating low carbon resilient solutions. Countries like Germany are working aggressively on their plans to end greenhouse emissions while the UN has also urged countries to phase out the use of coal by 2030.

The opportunity is present and one can help, having witnessed the incredible recovery of nature by its own mechanism in just 2-3 months. The recovery of a lost environment is an indicator that the environmental degradation caused by humans is reversible and that too not necessarily at its own "discretion" as it has shown how it manages to heal itself if humans prevent it from doing so. But when it does, it does not think of the economy and the global development goals.

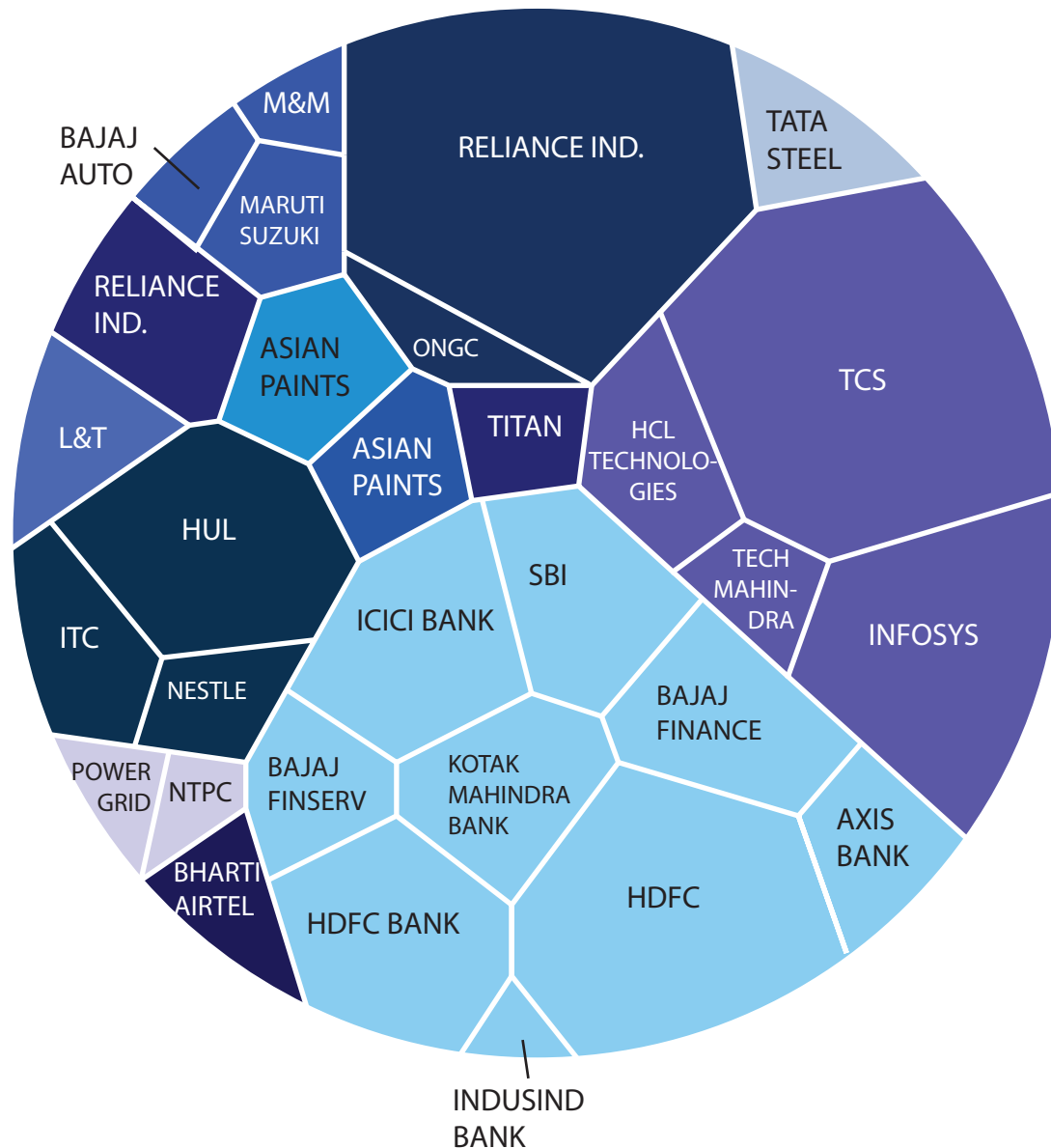
INFOGRAPHIC INSIGHTS



Sensex Crackdown

What constitutes Sensex

DATA TRUE AS ON 17TH AUGUST 2021



(In percentage)

Oil exploration & Production	Automobile	Telecommunications	Steel	IT Services & Consulting	Consumer Durables
13.08642129	3.557539446	2.667217077	1.422055568	19.65739653	1.383035802

Paints	FMCG	Engineering & Construction	Finance	Pharmaceuticals	Cement	Power generation /Distribution
2.667217077	27.1065114	1.918797218	21.53634111	1.612361799	1.875341678	1.730439143

Source: BSE India

Battle of IPOs

Biggest IPOs of all time

The New India Assurance Co. Ltd. | The company listed on the exchanges in November 2017 with an issue size of Rs 9600 crore. It listed with a premium of -6 percent at Rs 374.45 on its issue price of Rs 800.

General Insurance Corporation of India Ltd. | The company listed on the exchanges in October 2017 with an issue size of Rs 11373 crore. It listed with a discount of 7% at Rs 425.00 on its issue price of Rs 912.

HDFC Life Insurance Co Ltd. | The company listed on the exchanges in November 2017 with an issue size of Rs 8695 crore. It listed with a premium of 7 percent at Rs 311.00 on its issue price of Rs 290.

SBI Cards And Payment Services Ltd. | The company listed on the exchanges in March 2020 with an issue size of Rs 7,571 crore. It listed with a premium of -13 percent at Rs 658.00 on its issue price of Rs 755.



DLF Ltd. | The company listed on the exchanges in July 2007 with an issue size of Rs 9188 crore . It listed with a premium of 11 percent at Rs 582.00 on its issue price of Rs 525.



Reliance Power Ltd . | The company listed on the exchanges in February 2008 with an issue size of Rs 11700 crore . It listed with a premium of 22 percent at Rs 342.38 on its issue price of Rs 450.



NHPC Ltd. | The company listed on the exchanges in September 2009 with an issue size of Rs 6,039 crore. It listed with a premium of 8 percent at Rs 39.00 on its issue price of Rs 36.



Coal India | The company listed on the exchanges in November 2010 with an issue size of Rs 15,475 crore . It listed with a premium of 17 percent at Rs 287.75 on its issue price of Rs 245



ICICI Prudential Life Insurance Company Ltd. | The company listed on the exchanges in September 2016 with an issue size of Rs 6,057 crore. It listed with a premium of -1 percent at Rs 329.00 on its issue price of Rs 334.



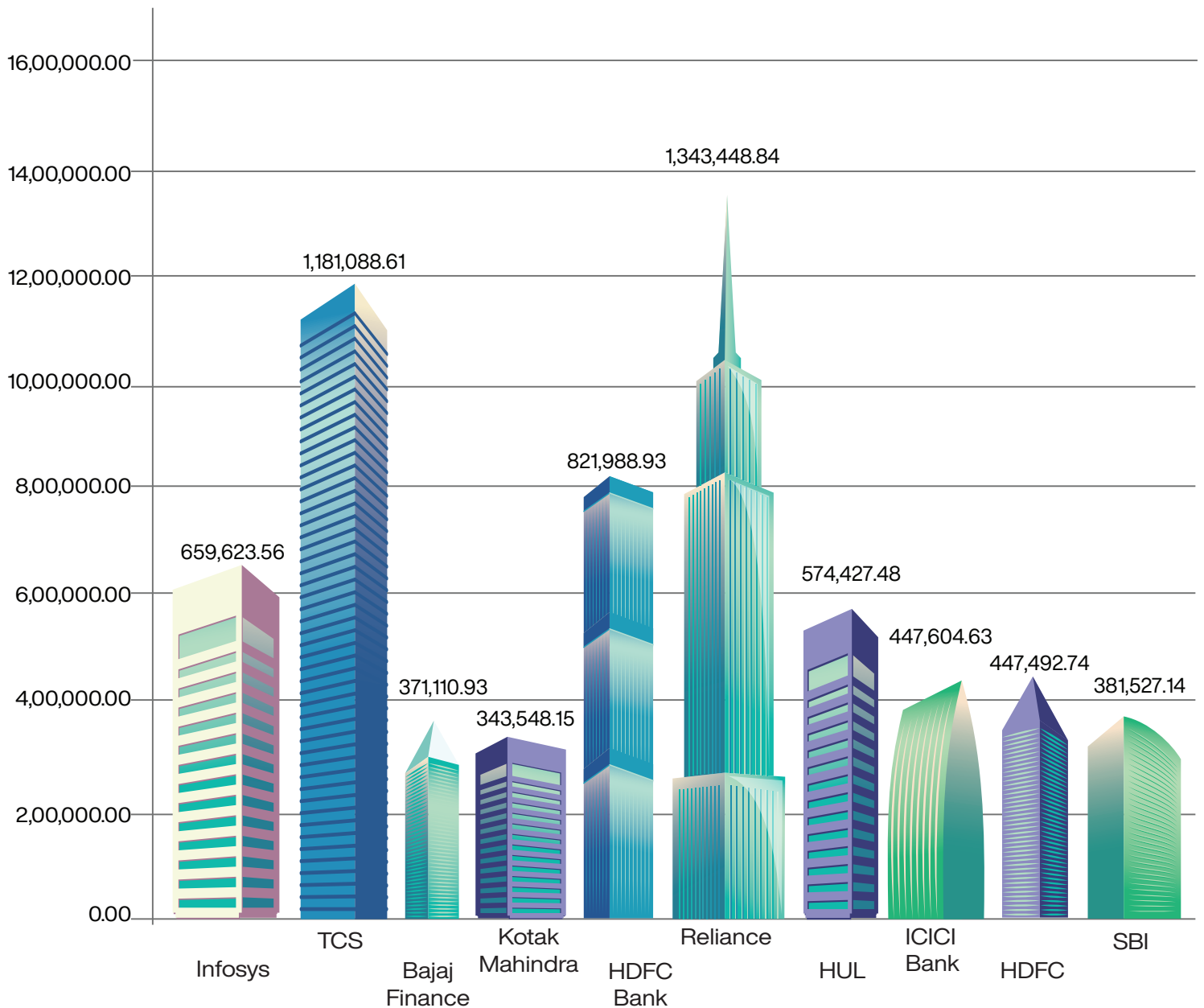
SBI Life Insurance Company Ltd. | The company listed on the exchanges in October 2017 with an issue size of Rs 8,400 crore. It listed with a premium of 5 percent at Rs 733.30 on its issue price of Rs 700.

Source: Money Control

Market Dominants

Top 10 companies based on market capitalisation

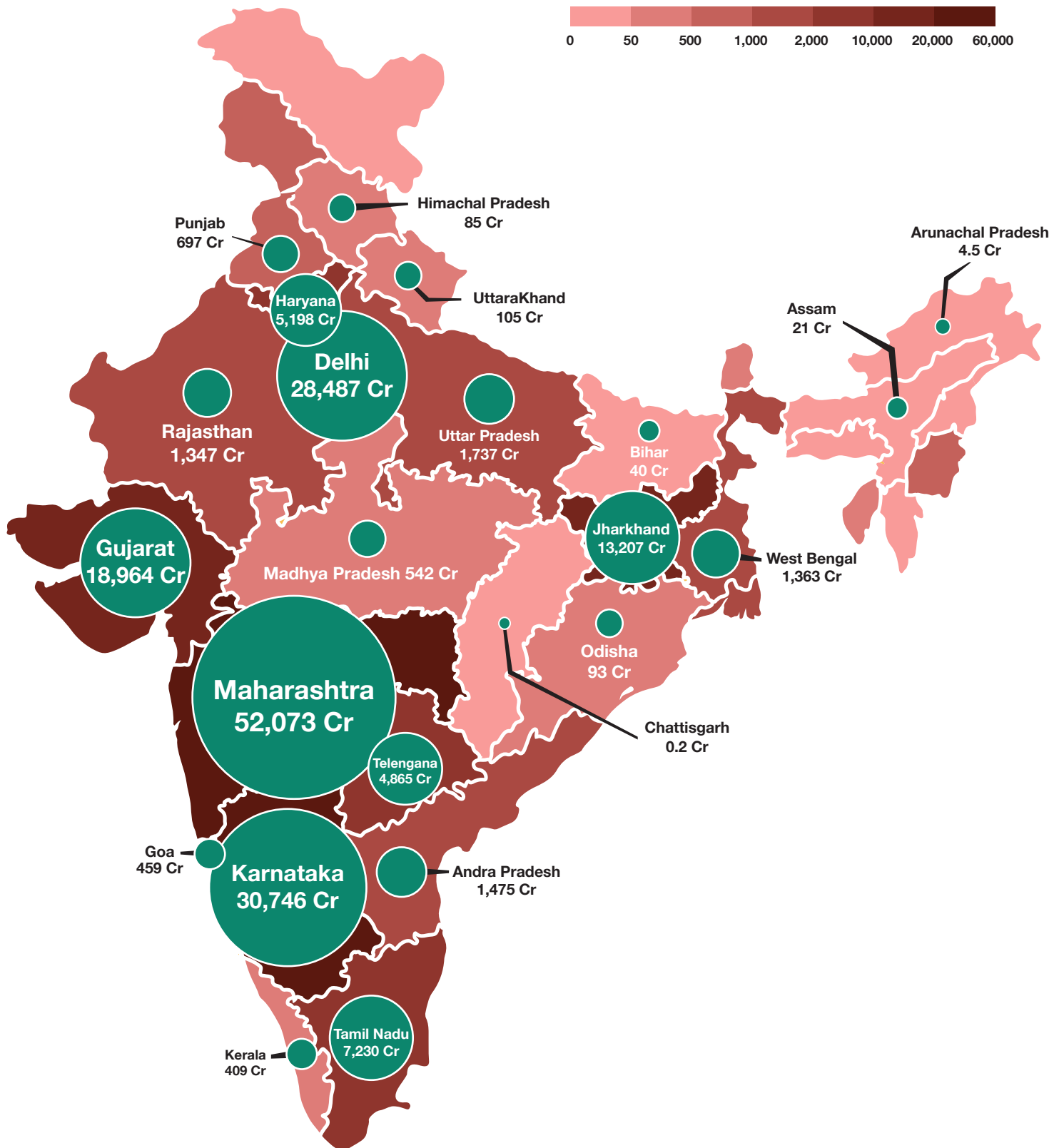
Market Capitalisation
(Rs. Crore)



Source: Moneycontrol

Geographical Spread of FDI

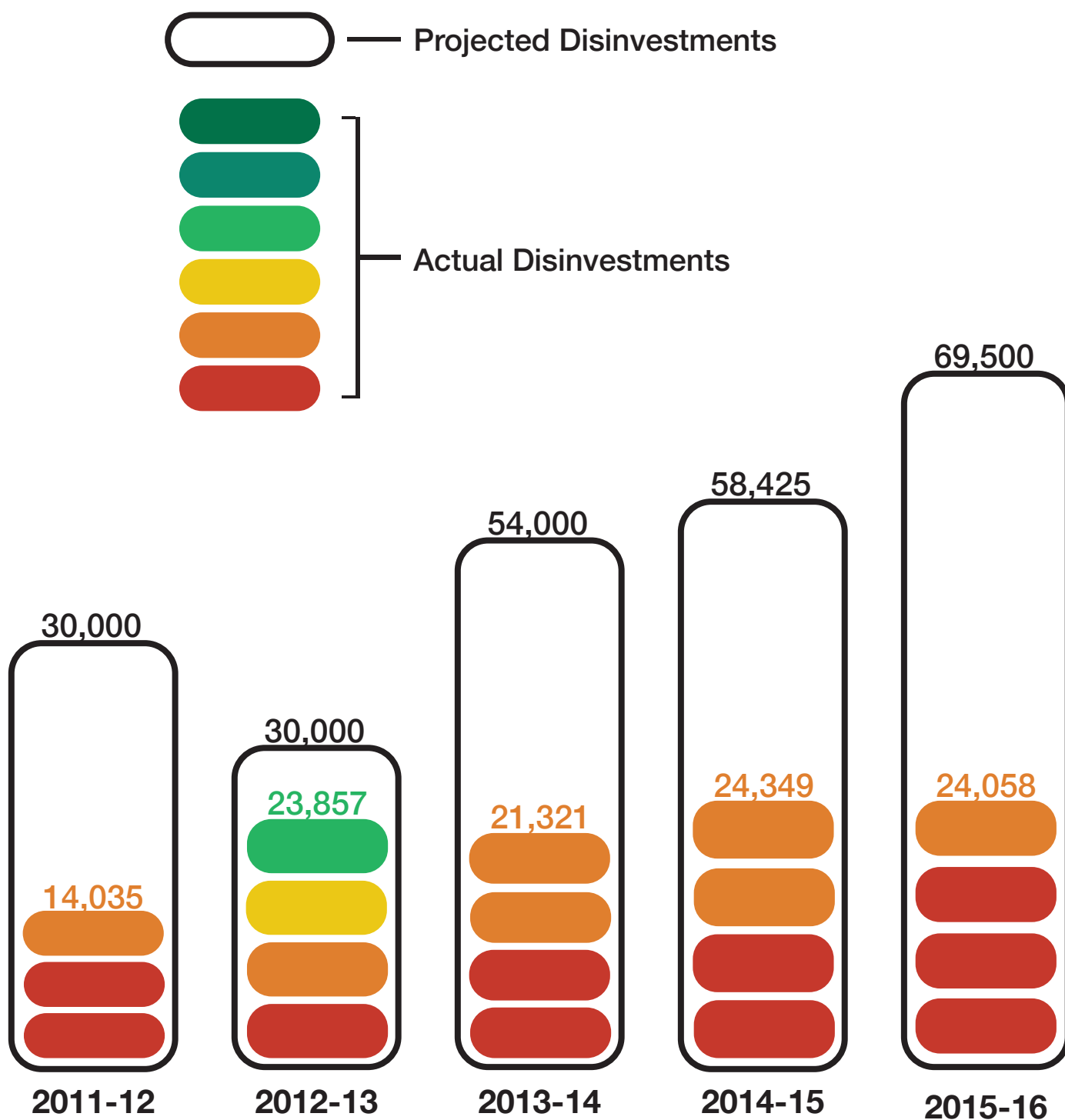
FDI across Indian states for 2019-2020

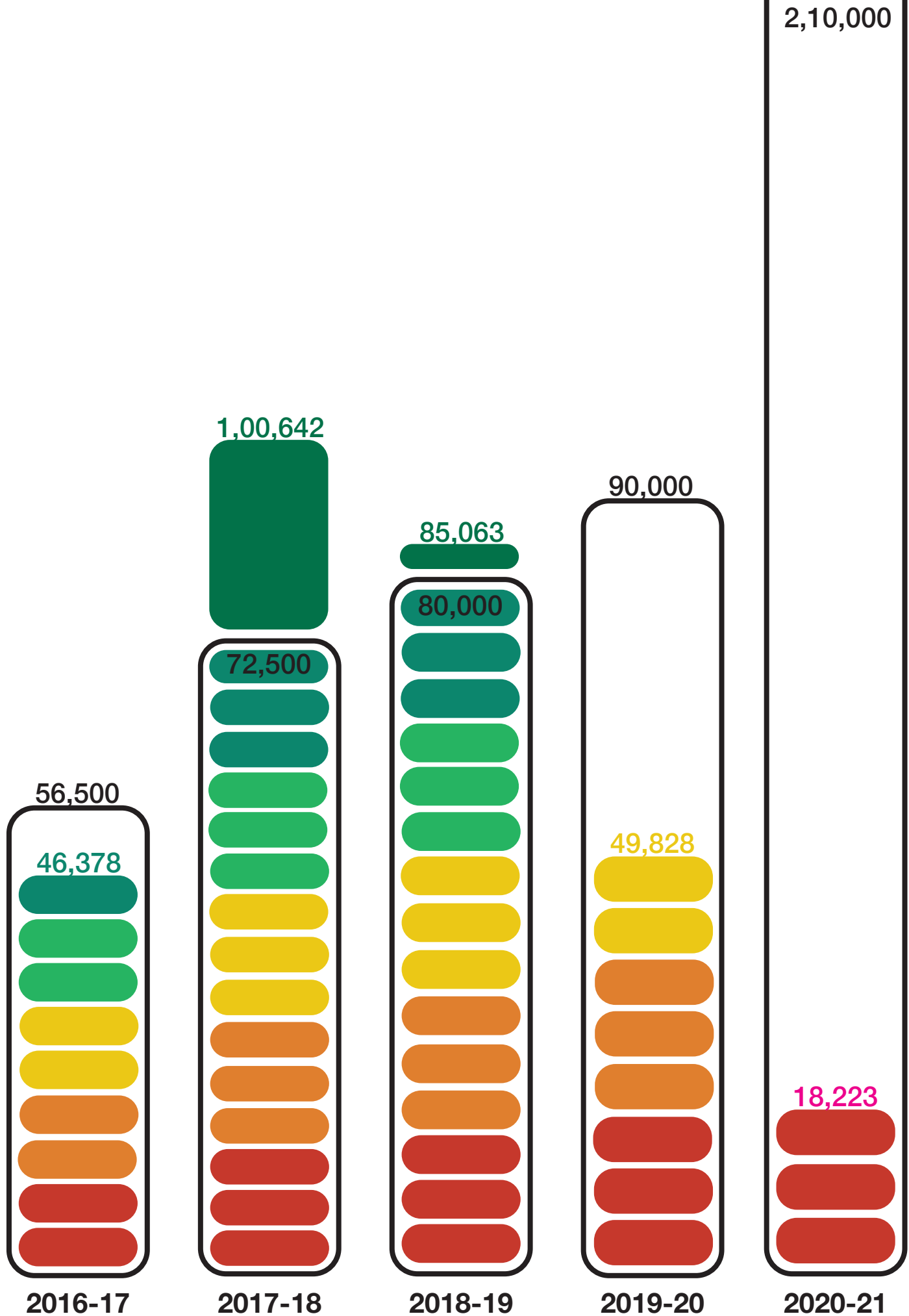


Source: <https://dpiit.gov.in/publications/fdi-statistics>

The Disinvestment Journey

Actual vs Projected Disinvestments in the past decade

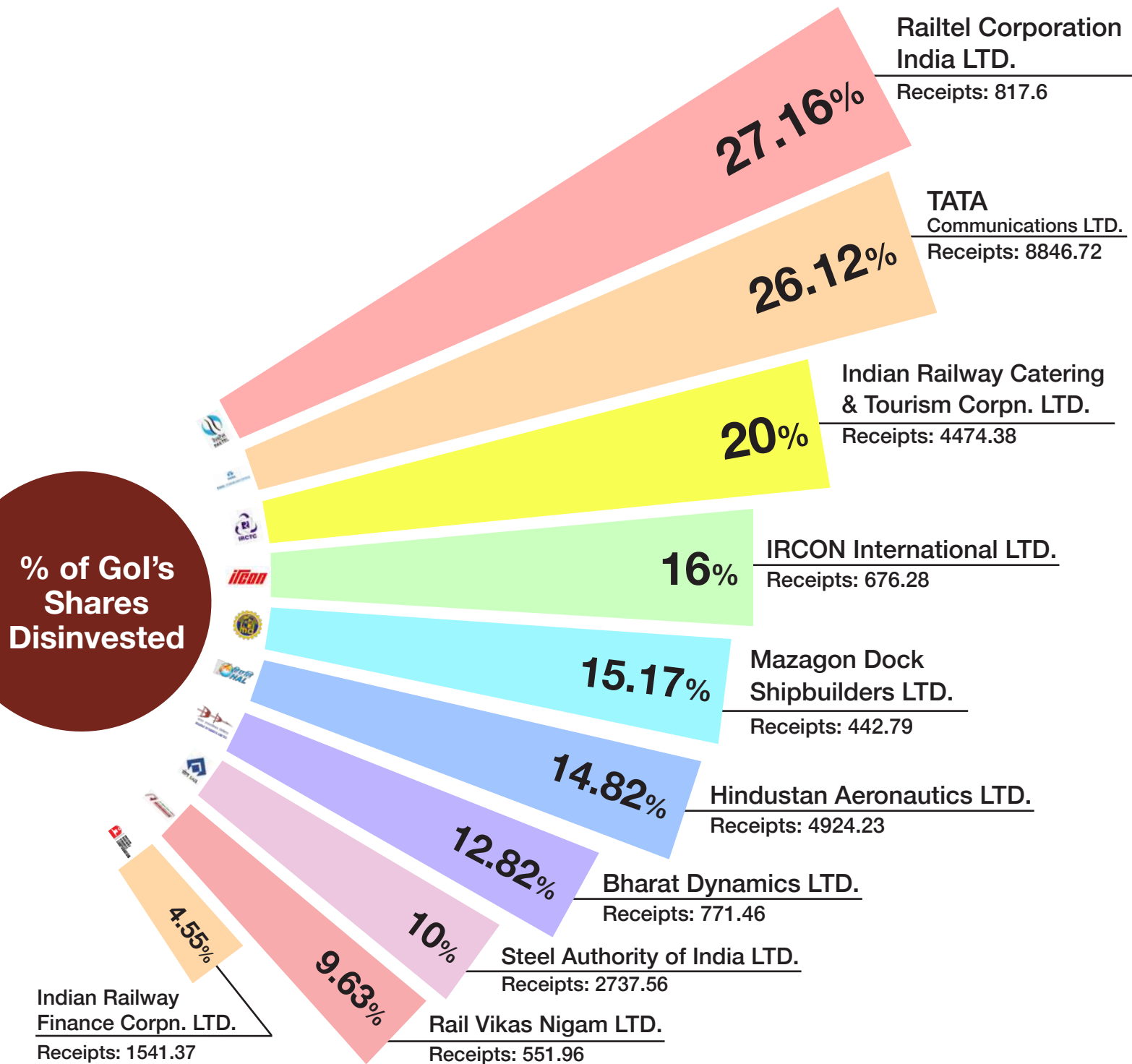




Source: <https://factly.in/data-the-history-of-disinvestment-in-india-political-trends/>

Decrypting Disinvestments

Disinvestments for the year 2020-21



Source: <https://dipam.gov.in/past-disinvestment>



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THE EXPERTS SPEAK



The Microfinance Ecosystem: A Strategy for Survival



Aloysius P Fernandez

Padma Shri Awarded Economist,
Chairman of NABARD Financial
Services Ltd.

If people have problems to survive they will beg, borrow or steal. So far our people have chosen the most honorable of the three -- they borrow, to meet basic needs and their aspirations for their children. An overview of the micro finance ecosystem as it has functioned over the past 15 years shows that it has responded very well to the needs of the poor and vulnerable to survive from day to day. It has provided immediate support to these families who struggle for the basic needs of food, shelter, clothing, water, health, and to keep their tiny businesses going. As long as the income of these families does not meet these basic needs and their aspirations for their children, they will borrow. Living in debt has become accepted as the "normal" for this group. As these loans are generally not invested in productive assets/activities, and not large enough to earn an income beyond providing for some survival need, they require other sources of income to repay and to be eligible for another loan. The Micro finance institutions which service this sector also have to borrow from banks and other financial institutions at comparatively higher costs than banks pay to service deposits. Both depend on other sources - one for work to repay, which makes it vulnerable to external factors, the other for a high cost line of credit which makes interest levied on the borrower too high for investment in larger and non traditional activities.

Financial institutions like banks which focused on microfinance, in other countries were allowed to hold people's "savings"; many introduced compulsory savings which were deducted from the loan before it was advanced. It did not take too long for this amount to equal the size of the loan portfolio; this not only

lowered the cost of finance for these institutions but also gave them control of the capital required; they were self financing. It was claimed that this model had indeed helped the poor to pull themselves out of poverty by their bootstraps. There are very few, however, who lowered the rates of interest to the borrowers or provided a package of practices to support them to risk investment in larger and non traditional livelihood activities.

The Government which had managed the priority sector for marginalised sections of society, never succeeded in making it profitable. What better solution could be found than to allow the private sector to fill this gap and to do it successfully and enthusiastically? This NBFC/MFI model also pleased the neo-liberal hearts and was aggressively sold worldwide by several financial institutions, with ACCION International being the most visible; its leaders believed that the profit motive can lift many more people out of poverty than charity alone can ever do. Those espousing the Not for Profit model were marginalized. Not for Profits, however, do not exclude making a reasonable profit to sustain the institution and to grow in response to need. History shows that For-Profit expanded rapidly; making a profit soon turned into a licence to maximise profit, or profiteer. In the process they made a profit large enough to occupy offices in prime locations, pay salaries of top staff comparable to those in the sunrise sectors and expand rapidly, mainly due to organisational compulsions to achieve scale. They presented a healthy picture of their balance sheets; many did this by topping up or greening and by their ability to make large and regular provisioning for write offs.

This trajectory was not unexpected. In 2002, I wrote an article entitled “Is Micro Credit Leading to a Macro mess?”. It did not in public perception, as the For Profit sector thrived. But, as I anticipated, the Not For Profits were relegated to the realm of do-gooders with the associated features of inefficiency and inability to take risks and consequently low on the priority list of financial institutions which provide a line of credit to this sector. The For profits did face challenges; the major ones were the intervention in Andhra by the State Government, loan waivers (and promises) in several states by political parties and sudden demonetisation. The first wave of the corona pandemic added to its problems to mobilise credit; the second wave, gathering steam at the time of writing, will surely impact growth and profits for a longer time, given its impact on weakening demand resulting from job losses, reduced and delayed wages. This will have a rebound on borrower’s ability to repay. The sector overcame these hurdles in the past and will emerge from the second wave probably later than sooner, though badly scarred. But if one applies the commonly accepted parameters of success, there is no doubt that its performance till now, ticks most of the boxes.

The MFI/NBFC sector has provided employment to 1.52 lakhs as on March 2020 according to the Bharat Microfinance Report which does not cover all institutions. The growth rate of the micro finance sector has outstripped that of private sector industries and other financial institutions. According to Microfinance Institutions Network (MFIN) the number of clients as on December 2020 was 58.3 million with a loan portfolio outstanding of USD 31 billion (Rs 2,32,648 crs.); this excludes bank loans to SHG; it indicates a 10% growth Y-o-Y. The shares of those; Institutions which went public did far better than those of traditional sectors. The sector has delivered a high return - over 20% on equity (ROE). Even though they advanced unsecured loans, without any guarantee or collateral, investors came forward with capital, occasionally patient but mostly waiting for the right time to pull out with a healthy profit. What started as a charitable movement has become a global enterprise with 140 million borrowers and \$ 124 billion in debt, according to Micro Finance Barometer.

These are surely signs of success which aspiring young entrepreneurs understand and in which they want to share. In fact the micro credit sector was viewed by young aspiring professionals during 2000-2010 as a sector in which one can both have a cake and eat it too. It provided an opportunity to assist the poor which appeals to the young and at the same time the promise of a good life, better than what one can legitimately obtain in Govt. and even in the private sector. It also attracts publicity. This enthusiasm has since

subsided; the number of new entrants has decreased; major NBFC/MFIs have morphed into Small Finance Banks which are showing better results because of diversification and low cost capital garnered through deposits. Most CEOs of NBFC/MFIs see this as the path to follow.

Some in the sector, including this writer, are calling for a review of the model. Can the CEOs of some NBFC/MFIs also promote a broader strategy that moves beyond financial inclusion to inclusion in growth? I do not find any evidence of initiatives to critically review the NBFC/MFI model from within, to assess whether it can be carried forward to promote and expand a broad range of sustainable livelihood activities which would integrate the borrower in the process of growth. This would require among other changes, larger size loans than the present average of Rs 35,000/ (Sa Dhan report 2020), with flexible repayment rates. It would require investment to provide a package of services to tiny borrowers in the informal sector, and their institutions like Farmer Producer Organisations in rural areas and counterparts in the urban areas; this package would enable them to increase productivity and quality and to respond in time to changing demands. In turn this will enable them to relate and cope with the requirements of the formal systems; in other words, this package of services will create a more level playing field.

Who will provide this package of services? There are Krishi Vigyan Kendras and champions who have resigned from city-based jobs and carried technology and marketing to rural areas; there are progressive farmers whose number has increased during recent times; there are voluntary organisations with technical and marketing skills. The urban and semi urban areas have several private institutions which can provide these support services. The National Urban Livelihoods Mission (NULM) laid emphasis on entrepreneurship and self employment. The private providers of course have to be paid; many will come forward provided their costs are met. This support to be effective requires formal institutions which can ensure a constant flow of resources and which have a stake in the success of these tiny borrowers. Those which have built a relationship with them through extending survival credit regularly to individuals will have the advantage.

The best suited candidates for this role are the NBFC/MFIs who have pursued financial inclusion only, so far. It is the only link in the chain of financial transactions which has proved to be profitable in the short run, and they have remained comfortable with it. The NBFC/MFIs have adequate profits to invest in a package of support services to provide agripreneurs and their institutions in the rural areas like Farmer Producer Organisations and collectives with the management

and technical skills they require to go beyond financial inclusion and enter the growth process. They have the resources to mobilise support for tiny entrepreneurs in urban and semi urban areas to improve quality, design and management and to link them with e-platforms of large marketing corporates like Amazon which are expected to source from within India.

Can the NBFC/MFIs broaden their vision and craft a new strategy to support some among the marginalized who have the aspirations and the family support required to invest in larger as well as non traditional livelihood activities? Provision of credit alone will not suffice; it has to be supplemented by a package of practices. These support services were provided by the Government in the rural areas in the past, especially in agriculture and animal husbandry; but agricultural extension has collapsed and animal husbandry is eclipsed by milk unions which focus on marketing, leaving all other domestic animals to fend for themselves.

Over all, there is need for a strategy, which can well be pursued through a vertical of NBFC/MFIs which can cope with the flexibility required to be relevant in the informal sector; this sector is diverse, with a lumpy cash flow, due to the erratic weather, unpredictable markets and lack of adequate and appropriate infrastructure. This strategy has to provide a cushion for stability and the management skills and appropriate technology required to add value, ensure quality and time schedules for integration into a wider market. Putting money in the accounts of borrowers as fast as possible and with minimum hassle, benefits the NBFC/MFIs; is only one of the features required for tiny entrepreneurs and agripreneurs to break out from being locked down in the survival zone. Who are these tiny agripreneurs and entrepreneurs?

To gather some insights which could help to answer this query, I looked at the loan portfolio during the period January 2020 to February 2021 of Sanghamithra, the Not-For-Profit MFI which I promoted in 1996. The loans are all in rural areas. I found about 15,000 loans over Rs 50,000/ to individuals. Most were between Rs 60,000/ and Rs 80,000/ and a few over Rs 90,000. This is the group from which agripreneurs could emerge; they would be able to take the risk to invest time and resources in increasing agricultural productivity provided there is support in technology and management skills; they would also require post loan support to add value and to market agricultural products. This group also comprises a large number in rural areas who borrowed to start tiny non agricultural businesses which the lower interests rates of Sanghamithra (and of other NBFC/MFIs when compared to the rates of moneylenders), made possible; they used resources

and skills available locally. Examples are production and trade in arecanuts, agarbatthis (joss sticks), in quarrying, provision of tools for artisans and carpenters, leasing of land, manufacturing of bricks, setting up flour mills, car/bike servicing centers, small hotels and shops (specialized like footwear, handloom, oil -- not general stores). Non agricultural purposes are more common in northern Karnataka and Tamilnadu where rainfall is scarce, uncertain and soils of poorer quality. Among these borrowers there will surely be a significant number who will be able to take the risk of enhancing and diversifying production, provided a package of services including technical support is provided all down the line from production to market. What does this package of services include?

Every model providing small loans for livelihood assets to the poor during the past seventy years - and this includes subsidized programs launched by the Government (the major, but not the only one, being the Integrated Rural Development Program) - has some strengths and weaknesses; one can learn from them to put together a package of services. I will identify them in greater detail. My appeal here is addressed to all leaders in the sector. It is too much to ask for a significant and concerted effort to learn from all these models? Can they give us some insights which may help the NBF/MFI sector to innovate in order to be even more relevant to emerging sectors like tiny agripreneurs and entrepreneurs?

Which are the models which could give us some insights? The first is that of the money lenders; they have existed for centuries and have survived efforts to banish them. The second is the Self Help Group model together with the SHG-Bank Linkage program which flourished between 1985 and 2000; from 1992 the Banks extended one bulk loan directly to the group (after the group had saved over a period of 6 months and invested savings in a group common fund), allowing it to decide on loans to individual members. The SHGs managed the last mile. The third is the MBFC/MFI model, with the focus on technology; it extends loans directly to the individual. The staff of the NBFC/MFIs manage the last mile. The fourth are Government programs - long since extinct -- which provided small loans and subsidies to the poor together with extension services especially in the rural sector.

Both money lenders and the NBFC/MFIs share two critical features which keep them in business. They are quick to respond; in the ecosystem of survival, speed is essential. Both extend unsecured loans. But in the repayment process they differ, and perhaps the money lender's model has something from which we can learn. This model of management which governs the repayment process is flexible and may well be a major

reason why they are still around. Several interactions with people which I had in late 1980s and 90s, as the concept of the SHGs emerged, showed clearly that the people trusted the moneylender more than the Banks or Cooperatives. My sense is that this relation of trust still continues. NBFC/MFIs did not exist at that time.

The money lenders model is far more flexible than the MFI/NBFC's. It is in sync with an informal economy where risk, diversity and sudden collapse of markets dominate, resulting in uneven cash flows. External and internal factors disrupt survival strategies of poor families; examples are sickness, droughts, floods and untimely rains. The money lenders model of repayment is related to the borrowers situation at the time of repayment which translates into cash flow. There are no fixed installments; the period of repayment is also extended when required. In many cases the repayment amount does not include both the capital and interest but what the family can afford to repay, thus reducing the burden of the borrower in the short run- when he/she needs to survive. This increases the indebtedness of the family and works out to a high rate of interest in the long run; but the family is still able to survive. It is a state of being in constant debt but with regular affordable repayments which keeps the relationship alive, though it takes advantage of their vulnerabilities. In the short run, they are able to live; in the long run as J.M. Keynes said they are dead and the debt is taken over by the children. On the other hand, the borrowers from NBFC/MFIs repay installments comprising both interest and capital; the installments are fixed irrespective of the asset or impact of external or internal factors; those who delay repayment are classified as Non Paying Assets and not eligible for another loan from any formal source. They are also in regular debt since loans are topped up or rescheduled or a new one issued as soon as the previous one is repaid.

The SHG model as practised up to 2000, also shared this flexibility of the money lender in repayment though to a more limited extent.. When a member was unable to repay due to genuine circumstances, the SHG advanced the repayment amount to the bank from its common fund. It also allowed a member to take a loan when the previous one was not completely repaid provide the circumstances warranted it. The SHGs could take these decisions because they knew the life situation of every member's family. The SHG was the Facebook of the 80s and 90s. The money lender too knows the families well as he/she lives in the village. Relations of trust exist between them. The NBFC/MFI model does not build these healthy, human relations. Interaction with the borrowers and staff is restricted largely to repayments which can border on harassment; this is not a healthy basis to generate relationships of mutual trust and transparency which are required to cope with

flexibility required in the informal sector.

The feature which has served the SHG model well is ownership of the model by the members. This ownership was based on regular savings which the members deposited in the group's common fund. Within three to four years it amounted to one third of the group's fund; about one quarter was as made up of interest earned from loans as they added a small surcharge of 2% to 4% over the interest levied by the bank (average 11%). Together this amounted to equity of the SHGs which remained in their control; it was not transferred to the lending bank. The remainder comprised loans from the bank, donations and fines. This sense of ownership is lacking in the present NBFC/MFI model and needs to be introduced in some manner in the future when larger loans are given to agripreneurs or entrepreneurs; it will reduce risk by sharing it with all stakeholders. Collateral security as practised in the Gold Loan model has reduced risk but is out of reach of the poor.

One feature of the SHG model up to 2000 which can be considered, was that the repayment schedule was linked to the asset. For example, if the loan was for a few sheep, repayment was made as a lumpsum only when the sheep were sold after a few months. This is in contrast to the NBFC/MFI model where repayment schedules and installments are uniform for all types of loans and the first installment is after a month or so in all cases. Another feature was that the SHG Bank Linkage program provided loans to the SHGs at interest rates which were lower than what the NBFC/MFIs levy today (average 20%), since they borrow from banks. The SHG-Bank linkage is fading away as the Banks have become too large to consider small loans. Who will fill this gap?

The need for a package of services: the Government programs in the past like the Integrated Rural Development Program provided a package of services, especially in the agriculture and animal husbandry sectors which have almost vanished today; some services in horticulture and fisheries have been revived in certain states. The money lender is often the middleman (arthiya) who collects the borrowers produce at farm gate (or at agreed centers near roads in case of vegetables); he pays in cash on the spot as the farmer needs ready cash to invest in the next crop, and transports it to the mandis or markets; he meets urgent expenditures of the farmer during the year. The money lender therefore provides not just credit, but a bundle of services linked with the repayment process and with the farmer's life; in the process, relations of trust grow between the two; this gives the farmer a degree of security.

Unless these initiatives are taken, the NBFC/MFI model will continue to be dominated by borrowers who need to survive from day to day; it will also not provide an opportunity to those who want to go beyond survival due to prevailing high interest rates and a uniform/inflexible pattern of repayment. Those MFIs who have graduated to banks are rapidly reducing the level of micro finance in their portfolio after surviving on this vertical for the first few years, as the external risks increase and with the fault lines of the model coming to the surface especially the features of unsecured loans and the high cost of managing the last mile.

Sanghamithra has worked on a concept and strategy to incorporate many of the lessons learnt from these models, in a pilot project. Its implementation was delayed due to the lockdown. Obviously it will require patient capital as well as grants for a longer period to

break even, when compared to the NBFC/MFI model. But did microfinance not start out as a charitable initiative? Besides under the present Corporate Social Responsibility requirements, NBFC/MFIs are investing profits in water, sanitation, health, etc. Are we saying that the poor, apart from pulling themselves up by their bootstraps are also funding the infrastructure required to provide them with basic needs which is the Government's responsibility? Cannot part of this profit be invested in helping the poor to be included in growth beyond "financial inclusion"?

Note: The Author was Director of the NGO Myrada, First Chairman of NABFINS, member of the Dr C. Rangarajan Committee on Financial Inclusion; he is known as the founder of the SHG concept. He was awarded the Padmashree in 2000. He also worked with the World Bank and CIDA.

Stabilization Policies In India: A Critical Outlook



Prof. Partha Sen

Economist, Professor at institutes
such as SRCC, LSE, DSE, ISI

Mainstream macroeconomic theory and policy in the OECD countries was very Keynesian until the first oil price shock in the mid-1970s. This was the period referred to as the “Golden Age” of Western capitalism. Fiscal and monetary policies kept output at full employment, and incomes policies kept a lid on inflation. Keynesian policies, it turned out, were not equipped to handle a supply shock that the massive increase in oil prices represented.

Milton Friedman (and Edmund Phelps) had already flagged supply side considerations in the concept of “the Natural Rate of Unemployment”. This long run market determined level was impervious to macroeconomic policies. Policy makers could try and opt for a lower level of unemployment at their own peril—namely accelerating inflation.

Over the succeeding decades this became the mainstream view with added sophistication of game theory and rational expectations.

I

Friedman, therefore, preached laissez-faire, with the authorities maintaining predictable policies. Friedman’s prescription of a constant rate of money growth is no longer fashionable, but the rest of his analysis is. In particular, fiscal policy cannot change output, therefore the governments should not run deficits. They should balance their books, so the market (real) interest rate is kept low for private borrowers. Monetary policy is to be directed towards controlling inflation only.

II

Another important point that is not mentioned in the recent discussion of macroeconomic policy also goes back to the 1950s and 1960s. This view due to James Meade, among others, wanted the countries to try and attain both “internal balance” (i.e. full employment, low inflation) and “external balance” (balanced trade). Over time in the developed OECD countries, the capital account of the balance of payments was fully liberalized, and thus there was no “external balance” constraint, only an “internal balance” condition. But for the developing countries the external constraint remained binding—they cannot run large current account deficits without penalty, i.e. they face credit rationing in the international markets.

*This is about policy framework in place prior to Covid-19. The pandemic has necessitated a reworking of policy.

III

India has adopted Friedman’s thinking wholeheartedly. The FRBM Act seeks to limit government borrowing. The inflation targeting framework adopts an updated version of Friedman’s prescription that the Reserve Bank of India should be concerned with inflation alone. This assumes some price-stickiness (via the so-called Calvo New-Keynesian Phillips Curve), because full price flexibility flies in the face of the empirical evidence.

The functioning of India’s (flexible) inflation targeting

works as follows: whenever the target rate of the consumer price index (CPI) inflation exceeds (falls short of) the target range, the RBI raises (lowers) its interest rate—this rise is more(less) than the increase (decrease) in the CPI inflation rate so as to raise (lower) the real rate of interest. This is the so-called Taylor Rule.

What are the shortcomings of this framework? Without getting into the nitty-gritty details, let me flag two. First, inflation targeting is ill-suited to deal with supply shocks. Suppose there is wheat crop failure this year. The GDP will fall and inflation would rise. The RBI would react by raising interest rates, and reduce the GDP even more. This is also true for an increase in the world price of imports, including oil. There is an alternative called nominal GDP targeting that is better than inflation targeting, at least on this score. The second drawback is, going back to Meade's analysis, about external balance. If the RBI raises interest rates, and causes an appreciation of the currency, the trade balance, usually in deficit, will get worsened. There is no mention of how the RBI approaches the exchange rate. It is not determined by the "market" as in the OECD countries—the RBI regularly intervenes to keep the exchange rate from appreciating too much. The RBI's policy, called sterilized intervention, happens in two stages. First, the capital inflows (into e.g. the stock market) results in supplying rupees for, say, US dollars (the RBI buys dollars). Then the RBI, takes back the excess rupees by selling government bonds (a contractionary open market operation). Thus, the RBI gains foreign exchange while giving government bonds.

This is a costly operation because the domestic bonds pay more than what is received on the foreign exchange reserves. Note, also, that this foreign exchange reserves could disappear in a day if there is a reversal of capital flows. Yet in a world where we are hung up on a rules-based policy regime, a query about what determines the RBI's exchange rate policy is met with silence.

A third criticism that I do not pursue is that exclusive focus on inflation (with a sideways glance at output) may lead to building up of asset bubbles. The European Central Bank has been accused of this.

Thus, while we may delude ourselves into believing that we have a state-of-the-art framework for conducting macroeconomic policy, we have just picked up what is on offer in the OECD countries, without thinking of the differences in economic structures.

This is about the short run role of macroeconomic policies. There is the bigger problem of economic development or structural transformation. India needs to industrialize by moving zero marginal productivity workers from agriculture. Does macroeconomic policy have a role to play in this? Not if you believe that a budget deficit is the height of folly, and that monetary policy is just about price stability. East Asian and South Asian countries used industrial policy, backed up by macroeconomic policies—the exchange rate was a major tool—in moving labour from agriculture (and poverty).

What is insurance & at what age you should consider to buy it?



Rikhil Shah
CFO, SBI General Insurance

General Insurance and its importance

We have gone through some extraordinary times over the last year and a half. COVID-19 has transformed lives and businesses across the globe. The way people look at financial security has undergone a distinct shift. While the situation brought some vulnerabilities to the fore, it underlined the importance of securing them through insurance.

Most importantly, this period has taught us that illnesses, accidents, natural calamities and other unwanted situations not only take a toll on our emotional well-being but can also completely drain us financially. Hence, it is essential to revisit our financial choices, especially our insurance related planning.

The simplest and the best way to stay protected financially is through insurance, which is broadly categorized into two types – Life insurance and General insurance.

1. How is life insurance different from general insurance?

Life insurance guarantees to compensate an insured person upon the untimely death of the insured and various other uncertainties of life. Life insurance, therefore, assures life risks. On the other hand, any risk other than life belongs under the umbrella of general insurance. General Insurance helps you cover your and your family's health, home, vehicles, travel risks, businesses amongst others.

2. What are the types of general insurance policies?

A simple way to explain the types of General Insurance is by the way of evaluating your and your family's everyday risks. For instance, if you trace a regular day in your life from the time you wake up to the time you go to bed, you will come across most touchpoints that require to be covered by general insurance like your health, home and the vehicle that you ride to college. You can also cover various aspects of your holiday through travel insurance.

There are several general insurance products that cover people's businesses including employees, assets and third party liabilities. While there are several products which can be useful to both urban and rural dwellers, there are special covers that may be tailored to meet the needs of rural segment such as cattle, crop, farming equipment etc.

One of the key features of general insurance products is customization. You can start with basic, standard insurance plans and later add on or buy complimenting policies to make your coverage more comprehensive and adequate based on your and family's requirement.

3. Why is general insurance important?

General insurance works as a contingency for any unforeseen event/s leading to financial losses. Accidents cannot be predicted, but the financial loss resulting from them can be prevented, or managed, through general insurance. A right insurance for the

right product can protect you, your family, employees and assets from any kind of financial losses arising from potentially dangerous or unforeseen scenarios. This can be achieved via various kinds of non-life insurance products viz base policy, comprehensive, add-on and top-up plans.

4. What is the right age to consider insurance?

Ideally, insurance should be an important part of your financial dealings like other investments. Talking about Health Insurance, you should consider purchasing insurance around the age of 18 to 21 yrs, as this lets your insurance benefits collectively pool in for every claim-free year, thus enabling higher coverage in the future. Buying a health insurance at early age will also ensure lower premium for the coverage. You should also make it a point to renew your health insurance policies on time to ensure continuity of coverage which can be life long.

A two-wheeler is most commonly a best friend at younger age, which also requires a good insurance protection. While by law, all newly purchased vehicles need to have third party motor insurance cover to ply on roads. It is advisable to renew this motor insurance on regular basis to avoid any lapses and have continued benefits of risk coverage.

Home insurance is another segment of insurance, however, most commonly ignored. There are two types of segments under Home Insurance viz structure coverage and contents (valuables etc.) coverage. One should certainly opt for content coverage, considering the valuable electronics or artifacts are being a part of our lifestyles.

Today, the insurance industry has evolved quite a lot, and so has its offerings / products. Considering the wide-spread usage of internet and the risks around cyber frauds, cyber insurance has been introduced by insurance companies. It's advisable to opt for a suitable coverage with an adequate coverage to ensure any unforeseen risks are covered.

5. With a salary between Rs 25,000 to Rs 35,000, is it viable to delay the purchase of health insurance?

Considering the rise in healthcare costs, with a salary at this range, it might become tough to avail of the best possible healthcare when needed, as that would burn a hole in your pocket! A health insurance would be the best way to protect yourself and protect your finances in case of any accidents or unforeseen situations!

Secondly, health insurance also offers tax benefits. A salary of Rs. 25,000 to Rs. 35,000 a month falls under the 5% tax rate in the new income tax regime, which amounts to taxes of Rs. 15,000 to Rs. 21,000. By investing in health insurance, one can save upto Rs. 25000 under Sec 80D, as defined by income tax laws.

6. Where and how can I buy an insurance policy?

Insurance industry has evolved a lot in past 5-7 years, and hence, today we can buy insurance from various touch points. Most prominent ones are mentioned below:

- an individual agent
- a corporate agent such as the banks
- an aggregator website or
- directly from insurance companies through their websites, mobile or branch offices

Make sure that you purchase your insurance from authorized channels. It is essential to bear in mind that an agent or broker must hold an IRDAI license.

7. During the ongoing pandemic, what kind of insurance policies should I consider, given that there are several segments of insurance policies available?

With the current pandemic we have learnt many lessons, especially related to health. And one of the important lessons prominently visible is opting for a health insurance. A comprehensive base health insurance is a must in today's time, which will not only cover the COVID related hospital expenses but will also cover any other medical emergency expenses leading to hospitalization.

Aside from life and health insurance, home and cyber insurance should be considered based on usage. The WFH scenario has increased cyber risks as well as over-use of gadgets and appliances at home; these 2 products can hence be useful.

The lockdown has also impacted businesses immensely, which has led much importance on business / SME insurance.

8. As a youngster, what should I look for in an insurance policy, especially health and vehicle?

As explained earlier, insurance works as Plan B for any contingencies in times of unforeseen events. Hence, it is of utmost importance to have adequate insurance for everything related to your day-to-day life. Health

and vehicle insurance are the most reliable insurance cover, essential for you all. A significant fact that we all usually overlook is that health is very important for all of us, and no one can guarantee that nothing will go wrong with our health. Which means, it is also partly uncertain, hence, a health insurance works well for any uncertainty to be managed. It is advisable to start a health insurance at an early age, which has significant benefits like lower premium and policy is issued without any medical tests (unless there is a major medical history).

Talking about a vehicle insurance, it is always advisable to opt for a comprehensive motor insurance for your vehicle, as it can cover majority of the expenses, in case of any damage or total loss to your vehicle.

Below are certain things, that one should check while buying a health insurance:

- Coverage for hospitalization expenses approx. in the sum insured range of Rs. 1 Lac to Rs. 5 Lacs
- Cashless Facilities
- Lifelong renewability feature
- Pre and Post Hospitalization Coverage
- Add-ons and top-up coverage are good to include over and above your base policy

Below are certain things, that one should check while buying a motor insurance for one's vehicle:

- Third party /liability cover (this is also a mandate insurance part required as per govt.)
- Potential liabilities concerning property damage and physical injury claims
- Losses to vehicular damage (both collision and non-collision)
- Personal accident coverage
- Insured Declared Value

The COVID-19 Impact: Edtech and Stocks



Pratik Bajaj
CA, CFA, Valuationary
founder

1. Given the pandemic and the fact that people have had to move from physical resources to the online mode, most Ed Tech companies have managed to gather quite a crowd. Do you think this culture is sustainable post pandemic as well? How do you plan on functioning in a more normalised structure?

Funny as it may sound but if a doctor and a teacher from 1921 were to time travel to 2021, the doctor would find himself totally redundant and flabbergasted by the amount of advancements in the medical field. But the teacher would just pick up a chalk and start teaching. The foundational field of education has witnessed only cosmetic changes over centuries. Valuationary is trying to revolutionize education as we know it through its on-demand courses focusing on building practical skills required in the real financial world. To add to our advantage, current immobility has brought acceptability to online learning as formal education. Edtech companies are making quality education accessible to all, overcoming financial & geographical bottlenecks. If I were given a choice between experiential learning from the best of the world and physical classroom pedagogy, I would have definitely chosen the former. Wouldn't you? So nonetheless the world is getting back to normal, I believe Edtech space will continue to thrive, as is.

2. The Ed tech sector in India is looking at becoming one of the biggest sectors by 2030. With this sector looking at growing at such a rapid rate, what are your thoughts on the competition in this sector and how will Valuationary maintain its competitive edge?

We completely understand that the online course market & online job market are already very big but they are exclusive & thus inefficient w.r.t. our model. At Valuationary, candidates are not only upskilled with practical knowledge through self-paced courses curated by industry experts but are also placed with the hiring partners in various finance roles. So we not only certify candidates for technical skills, we also prepare them for the interviews and help them with their résumés so that they bag their dream jobs, on a success-based fee model. And that's not all. Every candidate is part of our "Valued" community of finance professionals with whom he/she can always interact. Valuationary is making financial leaders of tomorrow by giving them the right opportunities today.

3. As we have seen over the past few months, the Indian stock market has been growing at an unimaginable scale. Do you think that the stock markets will sustain in the future months or years to come as well?

Stock market always discounts the future. It's almost about predicting the future, and hence uncertain. In current scheme of things, investors are betting big on earnings revival and flushing a lot of capital into the market in anticipation of continued-V-shaped recovery, which is more so bolstered by the over-the-top liquidity, particularly coming in from FII flows. The growing participation of retail investors is welcomed but equally alarming. Herding and FOMO are rampant in the investing community today. The only two possibilities from here is- earnings resurface with a sharp uptick and things continue to move forward with

same momentum, or the other gory possibility is that the music stops, the forecasted earnings turns out to be mirages and bubble pops. The best part about the stock market is, no one can really say for sure which one of the possibilities has a higher probability, only time will tell.

4. What is your opinion on crypto currency and do you think it's worth including in a person's portfolio?

Unlike its name, cryptocurrency is more of a new asset class than a currency. Because for anything to be a currency, it essentially needs to be a store of value, a medium of exchange and a unit of account. It fails to be majority of those things but as it achieves network effect, as more and more people have it in bits and pieces, it will effectively become easy to transact and move towards dominating the world as a currency. And that is what people are betting for, or against. Few people think cryptos are a necessary invention while others vehemently differ or don't understand why it even exists. In my previous roles, I've managed over INR 100 crores and I can tell you with certainty that lending advice without knowing the investor is absolutely criminal. Every investor is unique and so is her risk appetite. As a rule of thumb, no one should either give or take a blanket investment recommendation. What I can tell you is- I believe in the tech and its future applicability. Moreover, its almost zero correlation with other asset classes ups its case as a diversifiable asset. I've parked 2% of my personal investment portfolio in cryptos, majorly into ethereum.

5. In your opinion, should cryptocurrency be a part of the curriculum in colleges and Universities?

It's no surprise that the current education system needs an overhaul. With outdated curriculum, misplaced emphasis on degree and resistance to change, it lacks a practical approach and fails to equip students with tomorrow's skills, leading to structural unemployment. Cryptocurrency is a volatile asset class but the underlying tech of blockchain is futuristic that would decentralize powers out-of-the-hands of institutions who miserably failed to keep a check on events that led to the 2008-Financial crisis. It holds too many promises, which if fulfilled can possibly make the world a better place to live in. So yes, such things should absolutely be inculcated into the curriculum.

6. The Modi Government may set up a panel for cryptocurrency. Will regulation help bitcoin, dogecoin and other investors?

Hotels didn't like when Airbnb came, supermarkets didn't like when Amazon took over the world, so how

can banks & governments like cryptocurrency? It's a red mark on the doors of such pivotal establishments which in essence is like waging war against the emperor, who would do anything to protect his fort. While any form of regulation would dilute the very essence as to why crypto exists in the first place, such regulations are inevitable. Whether that will help the crypto community or adversely impact depends on the gravity of grip.

7. What do you think initiated the NBFC crisis and how has it impacted the slowdown in the Economy?

NBFCs raise funds mainly by issuing debentures & commercial papers and borrowing from banks, and in turn advances short-term and long-term loans. The overarching problem that led the ripple effect in the Indian economy was NBFCs' flawed asset-liability management (ALM). They were raising money through short-term instruments (because they were cheaper) and lending money for long-term projects (because they were lucrative), leading to duration mismatched ALM. One default on payment and everyone realised what a house of cards NBFC business was. On top of this, we had cases of DHFL and IL&FS, rotting the corpses faster. Finance is the backbone of any economy, ours was cracked at places, pushing us into an abyss of slowdown.

8. What is your opinion on the IPOs that have taken place in the past year? What do you think has helped companies such as Burger King and Mrs. Bectors have such fantastic listings?

I'd restrict myself from giving any stock specific opinion. However, the exuberance around IPOs is quite evident. I often play the devil's advocate when it comes to the time period when we witness a chain of IPOs coming out in the market every now and then. People need to realise that an IPO, while it offers the public a chance to participate in great companies, is also an escape route for existing investors and promoters who could be struggling to raise more capital privately. It's a tight rope which should be tread with caution. A thorough read of the prospectus to understand current shareholding pattern and utilisation of raised funds is a must. If the company is raising capital to pay off existing debt, you are in principle giving out interest free loans to a struggling company. So always be cognizant of the form and substance.

The Quality of Indian Education



Prof. M.K. Sridhar Makam

Member-Secretary at Karnataka State Innovation Council; Executive Director of Karnataka Knowledge Commission; Professor at Bangalore University

1. According to you, what are the limitations of the current Indian education sector, with respect to both schools and colleges?

As far as school education is concerned, the present system is a product of the situation of 70s and 80s when enrolment was very less and heavy dropouts. 90s and 2000s saw the introduction of mega schemes like Sarva Shiksha Abhiyan and Madhyamik Shiksha Abhiyan as well as the enactment of RTE Act that involved all out efforts to increase enrolment on one hand and reduce drop outs on the other. As a result, access to education improved by leaps and bounds and the network of schools spread geographically. The enrolment in schools at the age of 5 or 6 years reached nearly 100%. Hence, the current school education needs to go beyond numbers and towards quality learning. Time is ripe to overhaul it holistically and in all dimensions.

When it comes to higher education, the present system is characterized by centralization, uniformity, multiplicity of discipline based regulatory bodies, rigidity, absence of autonomy etc. are some of the key challenges. The extent of rigidity and non-flexibility in terms of curriculum, systems and governance have become order of the day.

On the whole, it can be said that both school and higher education in India today suffer from many challenges that pull them back from achieving quality and excellence which is the urgent need of the hour.

2. With the New Education Policy in place, the traditional three-year course will be extended to four years, along with multiple exit points for students. How do you think this shift will affect the global view on Indian education? Also, how will this change impact students at the graduate level?

The four year degree program in a multidisciplinary setting with multiple entry and exit options envisaged under National Education Policy 2020 would not only improve the global view on Indian education, but also impact students to a great extent. The very fact that the world will get a signal of significant changes in Indian Education will itself pave way for change in perceptions apart from making Indian graduate education at par with many countries of the world in terms of duration. The yearly certification and flexibility in entry and exit as well as multidisciplinary education will improve the morale and employability of students.

Further, there will be a scope for developing multiple perspectives by studying multi-disciplines that addresses the requirements career through multiple jobs rather than the first job immediately after completing education. The academic bank of credit and the autonomy for HEIs would ensure creativity and innovation in curriculum development. Hence, the proposed changes in undergraduate program will usher in a new era of hope, interest and passion for education.

3. What repercussions will the pandemic have on the New Education Policy's goal of achieving a 50% gross enrolment ratio by 2030?

No doubt, the pandemic will create challenges for achieving 50% GER by 2030 in terms of dislocation in the academic calendar, interruptions in learning process, loss of habit of attending the classes on regular basis, easy mechanisms of assessment and subsequent success, the absence of full-fledged efforts on the part of governments and higher educational institutions for increasing enrolments. At the same time, the National Education Policy of 2020 will open up many vistas of opportunities by pulling the students for pursuing higher education through creativity and innovation in course and curriculum development. The autonomous higher education institutions would make all out efforts to design creative and innovative courses and combinations. Flexibility and mobility to enter and exit will also satisfy the diverse needs of students.

4. For the last two academic years, students in both schools and universities have been enduring online education due to the COVID-19 pandemic. Many students have complained about the deteriorating quality of education via this mode. How do you think the online system would impact the calibre of the present crop of students, as well as the future education system, keeping in mind the subpar digital infrastructure of our country?

No doubt, the COVID-19 pandemic has opened the flood gates of online education in school and higher education in spite of inadequate digital infrastructure, absence of competence of digital teaching in teachers, unfamiliarity with technology etc. have made the going very tough. In fact, it is more of an accident rather than by conscious design. But, the system and the institutions had no other go than to take recourse to the technology for continuing some learning under the circumstances. Therefore, we had to bear with it in spite of the issue of deteriorating quality and unequal digital infrastructure. Our experience of the last few months of online teaching has revealed many learnings relating to technology, pedagogy, preparation of teachers, availability of gadgets, suitable time, appropriate duration, kind of content etc. These will help us to identify the appropriate policy in the future with regard to technology in education.

Once we start experiencing better normalcy, it is quite possible that the online education issue settles down in its own way and we will be in a position to figure out an appropriate and balance view of online education. All said and done, online education would only support but can never supplement the interactive process that takes place between student and the teacher in the physical mode.

5. If, and when, the country will no longer be under the grasp of the pandemic, should the education system adopt a hybrid mode of education, that is combining both online and offline?

Already efforts are on to adopt blended mode of learning through offline and online modes. University Grants Commission (UGC) has already circulated a concept paper in this regard. In addition, UGC has also increased the proportion of credits through online mode from 20% to 40% of the total credits in higher education programmes. This means that the blended mode of learning will come to stay in the days to come. How well we make use of it without compromising basic values of human interaction, personal touch, social realities will be the real takeaway of the future.

6. The New Education Policy which was approved last July is the third education policy to roll out after independence. What are the merits of this policy that makes it the one to stay?

The National Education Policy 2020 is a forward looking one for a holistic and multidisciplinary education. It calls for complete overhaul of education in our country horizontally and vertically.

The transition from the traditional 10+2 system to 5+3+3+4 structure is a sweeping reform in school education that will allow holistic development of the child through age appropriate curriculum and pedagogy. Primacy to mother tongue as a medium of instruction and vocational education at an early age would help in the satisfaction of child's social, emotional, cognitive and physical needs. Removal of artificial barriers of curricular and extra-curricular on one hand and science and arts on the other is a welcome change. Introduction of school complex, redesigning of board exams, separate national body for assessment reforms, development of new NCF, reforms in teacher education etc. are some of the merits of this policy.

As far as higher education is concerned, the policy introduces sweeping reforms in undergraduate programmes, introduction of multi-disciplinary education, autonomy to HEIs, new classification of institutions, gradual abolition of affiliation system in Universities, overhauling of macro regulatory system and micro governance of institutions, launch of national research foundation, paving way for academic bank of credits.

As a whole, National Education Policy 2020 emphasizes life-long learning through India centered education with a vision of knowledge super power in the world

in the days to come. Much needed push to the Indian knowledge system is also a significant merit of this policy.

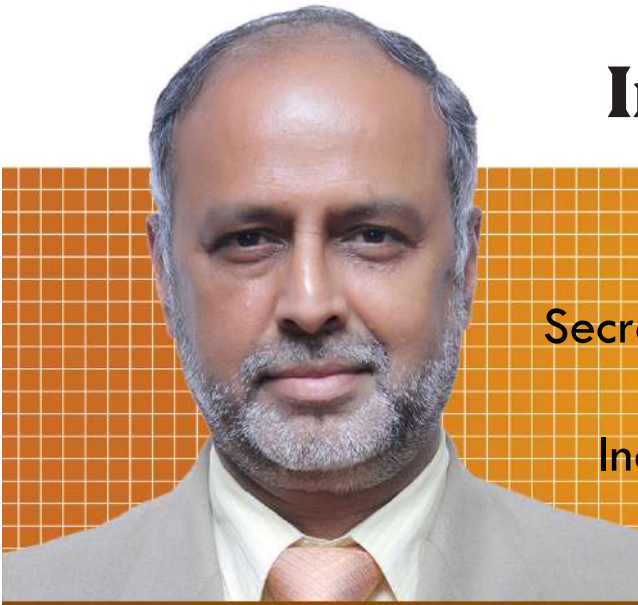
How is the Government planning on implementing this policy? Who will be the most affected in the first phase of implementation?

In the last 11 months, the governments at the Centre and States as well as various bodies and agencies have been pursuing efforts to implement National Education Policy 2020. Many states and union territories have

constituted task forces for implementation, worked out the detailed template for implementation and have also come out with a comprehensive plan for implementation. The ministry of Education has already released two volumes of 'Sarthaq' which is the implementation plan for school education.

University Grant Commission and AICTE have prepared a detailed plan for implementation of the various recommendations. Until all these plans are available in the public domain, it is difficult to say who will be the most affected because the details of the first phase of implementation itself are not yet announced.

Bridging the Infrastructural Gap



Sudhir Krishna

Secretary (Urban Development)
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1. India has planned to introduce metro rail networks even in two tier cities. Given that traffic and ridership have still been rising, how can the government tackle this problem?

Mass Rapid Transit Systems (MRTS) such as the Metro Rail and Bus Rapid Transit System (BRTS) not only facilitate quick, safe and easy movement of the people, but also promote the economic activities, social equity and an enhanced quality of life for the people. However, the cost difference between Metro Rail and BRTS is very significant, with the latter costing around 10 per cent of the former, both, for the capital cost and the operational cost. However, the operational viability would depend on the passenger traffic volumes. Therefore, as a thumb rule, Tier-II cities should seriously examine the option of BRTS, before deciding to go in for Metro Rail system. For big cities, with population of 2 million plus, a combination of Metro Rail and BRTS would be appropriate. However, in all cases, an integrated transport plan for the city would be required, to provide for an end-to-end mobility solution, including safe walkways, cycle lanes, besides BRTS and Metro rail. One should be able to walk up 100-200 metres safely, pick up a public bicycle to reach the BRTS or Metro station, avoiding the need for personal transport altogether.

2. Urban acceleration has been on a rise. Lakhs of people are moving from rural areas to urban areas at an unprecedented rate. Is this good, or should we focus more on rural development as well?

Given the growing crowding of the cities, urban migration is avoidable. However, economic considerations keep motivating people to move to cities, as jobs and businesses are concentrated in the cities. The way out is to develop regional transportation connectivity, to enable people staying in the villages and smaller towns come to the city only for the work, without the need for relocating. In fact, presently, a lot of migrants to the cities are menfolk, who leave their families behind, which causes hardship to both. Regional planning and development would resolve many social problems, besides bringing equitable development of both, urban and rural areas.

3. With Delhi consistently being described as a polluted city, is there a need for green infrastructure in Indian cities? How difficult is this for India to implement?

Air and water pollution has come to be associated with cities, which needs to be resolved, as cities are the economic hubs as well. Cities suffer pollution owing to improper handling and disposal of solid waste and sewage, as also the vehicular emissions and inadequately regulated construction activities. Conversion of the organic waste into energy and manure, recycling and reuse of the sewage for horticulture, industry, and construction activities and promotion of public transportation systems and non-motorised transportation systems like bicycles and walkways, and large scale avenue plantations are some of the key measures that would bring down the pollution levels in the cities.

4. The migrant worker crisis last year highlighted the income inequalities present in urban centres. Is this a chronic problem, or do you see the income gap reducing in the next few years?

Unplanned urban centres are prone to higher levels of income inequality, as poorer persons have lesser access to income opportunities. Cities that provide good infrastructure including safe and efficient commutation, water, power, housing, education and healthcare, enable the people at large reap better returns from income opportunities. Therefore, cities need to focus on development of such core infrastructure in an equitable framework that would eradicate proliferation of slums and provide better quality of life to the people.

5. With the second wave of COVID-19 hitting us harder this year, healthcare facilities in many cities are under great pressure. Did policymakers fail to prepare us for the second wave? Should both the union and state governments have invested more in healthcare infrastructure, especially for the major state capitals?

Yes, the second wave of Covid has highlighted the need for enhancement in the levels of public expenditure in healthcare. The World Bank data states that the number of hospital beds per 1,000 population in India was 0.5, whereas it was 4.2 in Sri Lanka, 2.9 in the USA and 4.3 in China (year 2017). Also, public health/medical care and education are two of the critical sectors that cannot be left at the mercy of the market forces and deserve sustained investment from government budget.

6. Because of the pandemic, it is likely that the ambitious 100 smart cities target will suffer many setbacks. How important is it for us to focus our efforts on this goal after the pandemic? Should urban planning energies be directed elsewhere?

The focus of urban development has to be sustainability, while smartness has to be a means to achieve that objective. Pursuantly, the National Mission for Sustainable Habitats (NMSH) has to be placed in the

vanguard position and made applicable for all the cities and towns. Smart Cities Mission should be positioned as subservient to NMSH and tried out in selected cities. That would provide the optimal benefit from the Smart Cities Mission.

7. At the risk of sounding slightly poetic, can we imagine a Calcutta without trams, a Bangalore without Masala Dosa joints, or a Bombay without Juhu Chowpatty? How important is local culture for urban development? Can the old elements in urban areas be synchronised with modernity?

Every city, as also village, must identify its cultural USP and make that the core of all development strategy. The present trend of single-minded pursuit of smartness is dissipating the cultural identity of the cities. The metro rail viaducts have come to define urbanisation, but it ends up making the city look like a concrete frame. Each state should set up Urban Arts & Design Authority with regional and district level outfits, like the Delhi Urban Arts Commission, to identify and nurture the cultural heritage.

8. Sir, lastly, a bit on the light side combined with some seriousness - which is your favourite city in India? How well has this city handled the pandemic?

I love more than one city, for their unique identity. These were Bhopal, Dehradun, Nagpur, Mysore and my home town Varanasi. Unfortunately, all these cities have largely lost their uniqueness, thanks to their joining the rush for flyovers, metro rail, skyscrapers and the likes. Yet, I would think that Mysore and Bhopal have managed to retain their cultural flavour. A recent addition to my favourite list of cities is Bhubaneswar. As I believe, the impact of the pandemic is less severe in these cities, though it would need more careful study to come to a more definite conclusion. But, in general, the cities that maintain environmental sustainability, should have a better chance of warding off or mitigating the negative impacts of pandemics and natural disasters.

Inequality vs Growth: India's Journey



Maitreesh Ghatak
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1. What are your thoughts on the income inequality that was present in India before COVID-19? How do you think the pandemic has affected this inequality?

India has an income inequality problem. Looking at the evolution of income inequality in India over time and before the pandemic, we see that share of the top 1% in total income was 13% in 1961, and, in fact, declined gradually to 6.9% in 1981. Then, it started climbing up from the 1990s onwards, going up from 10.4% in 1991 to 21.7% in 2019. The share of the bottom 50% in total income stayed somewhat constant between 21% and 23% between 1961 and 1981, but thereafter it started declining, going down to 14.7% in 2019 from 22.2% in 1991. The share of the middle 40% shows a similar pattern—it fell to 29.7% in 2019 from 42.6% in 1961. The pandemic is expected to exacerbate the existing income inequality – estimates suggest that during the first wave of the pandemic in India, 230 million additional individuals fell into poverty.

2. According to you, what are some of the strongest and most effective policies that the Indian Government introduced to combat the COVID-19 crisis?

Key additional policies introduced by the Indian Government during the first wave of the pandemic include free grain distribution through Public Distribution System (PDS), cash transfers through Jan Dhan accounts, and additional allocations to Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA). Evidence suggests that the efficacy of

free grains and cash transfers, conditional on eligibility, are similar (around 60%) and that there is unmet demand for MGNREGA work. However, issues with percolation of benefits to intended recipients exist across all programs, and bolstering social safety net programs is essential to extend coverage to vulnerable communities such as informal and migrant workers.

3. What are your thoughts on the future state of the economy in the coming year in terms of GDP, employment and income?

According to the latest national income estimates, India's GDP contracted by 7.3% (in real terms) during the 2020/21 financial year. India's unemployment rate in 2020 is estimated at 7.1% and prominent surveys estimate income reductions in 2020 between 42–74%. IMF projects the growth rate of GDP in India to increase by 12.5% in 2021 and 6.9% in 2022 – however, owing to the second wave and the overall evolution of the pandemic in India, the forecasts for the upcoming year would likely be adjusted downward by the IMF. The macroeconomic metrics for 2021 will depend on many factors relating to Covid-19, such as the proliferation of new virus variants, intensity of lockdowns, and rate of vaccine administration.

4. In terms of inequality, how do you think India fares as opposed to other developed and developing nations?

Comparing the wealth inequality in India to that of other major economies, India has a relatively large gap

between the share of wealth held by the top 1% and bottom 50%. While the US stands out in this respect, India has a larger gap than France and China, and is only marginally behind Russia. Turning to income inequality, India's gap between the income share of the top 1% and the bottom 50% stands apart among major economies. The gap is wider in India than, for example, in the US, China, Russia, France, and the UK.

5. As you have mentioned that while growth may have increased inequality, it has also reduced poverty. It is possible to conclude from this that the rate of increase in inequality is greater than the rate of decrease in poverty. What can be some corrective measures that can be taken so that the opposite could become a reality?

The various indicators of inequality and India's record in each of them leaves sufficient grounds for concern. Since they relate to different measures of the distribution of income or wealth and are different metrics, it is not possible to compare the rate of increase in inequality and the rate of decrease in poverty and say one is larger than the other. The real question is *'what are some measures that can be taken to reduce inequality, while encouraging growth and equality of opportunity, which is bound to reduce poverty.'*

Wealth reflects the accumulation of the economic advantage on the part of the rich over generations. Hence, from the point of view of creating more equality of opportunity, a compelling case can be made to have at least some forms of wealth taxation. Given the alarming state of wealth inequality, there should be a greater emphasis on wealth taxes, such as capital income taxation, net wealth taxation, and transfer taxation (inheritance tax, estate tax, and gift tax). Tax revenue thus generated can allow greater investment in health, education and infrastructure, all of which would create greater equality of opportunity. This will also strengthen the foundations for a more dynamic economy as these would be investments in raising the overall growth potential. Such policies would go directly after the main source of inequality of opportunity —

wealth — and ensure equality of opportunity.

6. Is it possible to combine the growth-based narrative and the inequality-based narrative in order to bring about a positive change in the country? If yes, can you please provide some pointers on how this would be possible?

Yes, it is possible. The link is economic mobility. The real questions then are: What makes growth inclusive? And, to the extent this does not happen automatically, what policies can facilitate inclusive growth? Focusing on mobility allows us to step beyond the stale debate about inequality versus growth. It also highlights what aspect of inequality is especially harmful. Inequality directly hurts growth prospects when the potential of those who are born poor but are talented is wasted. Instead of becoming successful entrepreneurs and creating jobs, they spend their lifetime in low-return occupations. I have already answered in the previous question the broad contours of a policy framework that would facilitate mobility.

7. How can more employment opportunities be created in the post pandemic era keeping in mind that technology has taken an upper hand over human resources during the pandemic?

Investment in educational and technological infrastructure are key to generating employment opportunities. Proactive investment in educational infrastructure – by promoting appropriate skill development, upskilling, and re-skilling – ensures that the current labour force is equipped with the skills that employers look for. Next, government policies must incentivize businesses to invest in technology. In this regard, policies that support the development of micro, small, and medium enterprises (MSMEs) in general, and encourage them to adopt higher levels of technology in particular, would result in increased job opportunities.



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UNICORN STARTUPS: The Billion Dollar Club

INTRODUCTION

COVID-19 Impact

Venture capital investments both in terms of the number of deals and the value of investments have been dropping since the start of the pandemic. Though the same set of VC majors are driving the funding, there is a slight movement in the pecking orders of the sectors. Before the COVID-19 outbreak i.e., in January and February 2020, VCs invested more in Indian startups as compared to the same period last year. March onwards, however, we witnessed a steep decline in VC deals in comparison to the corresponding months of 2019. The month of May was considered rather brutal as the amount invested by VCs in startups was about 1/4th of that invested in May 2019. The VC industry registered a growth of 55% in 2019, the industry witnessed a 30% increase in the deal volume and a 20% rise in average deal size. 2019 is also referred to as the milestone year for the Indian VC industry. Nevertheless, despite the pandemic, the VC industry invested approximately \$10 billion, which although is 10% less than 2019, is still arguably impressive.

There has also been a slight change in the direction of investments after the pandemic.

In 2019, VC investments were mainly concentrated in 4 sectors: Consumer technology, Software, Fintech, and B2B commerce and technology.

In 2020, however, the scenario changed; a number of investments were concentrated in Fintech, Healthcare and Education.

E-commerce has been the biggest loser, going from raising more than a billion dollars in each half of 2019 to a mere \$202 million in the first half of 2020. Contrary to this, education startups were able to raise an amount equivalent to 96% of the total amount collected in 2019 in less than six months in 2020.

Valuations

At the end of the day, it's the valuations that make a company a unicorn. More precisely, these valuations are guided by investors who are optimistic about a particular company's future and thus willing to assume the highest risk. With India having more unicorns today than ever before, an important point of contention becomes whether the boom is actually a bubble or if the Indian economy has fundamentally improved.

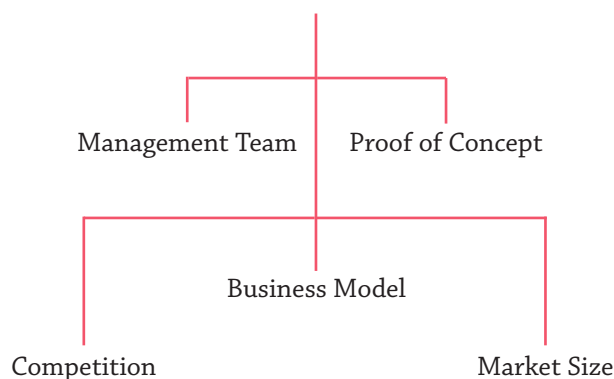
While the pandemic induced an overall slowdown in the economy, it has substantially improved the speed of digitisation; millions of new Indians join the internet every month.

Largely due to this reason, the EdTech platform, Unacademy is currently valued at a forward P/E of about 35 while Byju's has a forward P/E of about 17. An unassuming reader might be able to tell that these valuations are at par with the numbers that listed companies get these days. These valuations seem sane because they are backed by genuine sales.

However, this is not always the case. Some companies swim their way to a billion dollars without generating a lot of revenue just on the basis of a promising idea. This scenario might resonate with the readers as similar to what happened at the beginning of the Dot Com Bubble. Furthermore, it is important to note that only those start-ups that get funded at crazy valuations garner media attention and coverage, giving the audience the impression that the entire Private Equity market is on RedBull, which may not necessarily be true. Another factor for the premium valuations is the supply-demand mismatch between a lot of eager investors having idle cash and very few quality companies that not only have an exciting idea but have reached a mature stage in revenue generation as well. Therefore, if the supposed bubble ever bursts, we already know who will be responsible for it.

What are Venture Capitalists looking for?

There have been situations when entrepreneurs are able to raise a huge amount of money for investment from venture capitalists in their firms solely on the basis of a viable product and in some cases an idea. Evidently, the idea behind a startup is one of the major factors that determine the future of the company. Venture capitalists often look at certain qualities which showcase strong growth potential before they invest.



Many factors are at the forefront when investment decisions are made by venture capitalists. Having considered the idea of the start-up, perhaps the next important aspect which investors consider is the presence of a strong management team. It is an accepted fact that a great idea is worthless without effective execution. A talented team is needed for the proper execution of an idea.

The team should consist of experienced professionals, willing and adaptive individuals as well as individuals who are passionate about the product and service being sold.

It is a commonly noticed trend that on an average venture capitalists look to exit the investment within seven years. Unlike founders, they aim to make as much profit and as quickly as possible rather than staying with the company for the long run. Thus, the good market size for the product which can provide rapid growth is an important factor of consideration.

In addition to a large market size, a viable business model is also a consideration. Having a good idea and a market for the idea will only lead to success if the start-up has a viable business model which is capable of aiding revenue generation.

Companies that reached the Unicorn status in 2021



Cred was founded in 2018 by serial entrepreneur and Freecharge founder Kunal Shah. Even before it started operations, it was valued at US\$ 75 Million based solely on the idea and business model itself. Furthermore, its mind-boggling ads and unconventional marketing strategies created a lasting impression in the minds of many. It is the second-fastest startup and one of the newest ones to reach the unicorn status within 29 months.

CRED boasts of a US\$ 2 billion valuation in the latest round, where it raised US\$ 230 million from existing investors: DST Global, Tiger Global and Sequoia Capital.

CRED's main value proposition lies in letting its customers pay their credit card bills through its platform and giving them cash backs in return. It has been successful in creating a community of customers

who have a credit score of 750 or above. It currently has 60 lakh users with up to 30% of its members being premium cardholders, while 4 lakh people are on the waitlist.

The startup has launched CRED pay for merchants on its platform. It also enables e-commerce on its app and has forayed into the lending and renting business as well.

CRED is a unique innovation in the untouched landscape in India and has the ability to scale up its revenue and reduce its costs, thus making it an attractive startup.

CRED's exponential growth indicates that it could also work in the product availability direction wherein it could compete with e-commerce giants like Amazon and Flipkart. The Indian market is divided into 3 parts: India1, India2 & India3. India1 corresponds to the richest 110M Indians who contribute to India's GDP by \$1T. India1 also features a subset of the richest 10M which is its own market and maybe called India 1(alpha).

CRED largely targets this consumer base. These are the rich folks who can afford to live luxurious lives with iPhones, have nice holidays abroad, send their children to study in elite private schools, frequently use DTC products and most importantly (for CRED) own and use their credit cards. In India, about 50M credit cards have been issued, which are used by about 25M people with an average monthly credit card spend of ~₹12,000. Credit card spend is not a normal distribution and is probably skewed towards a percentage who use their cards to transact more frequently and spend more money. CRED also, through its branding, seems like a millennial-first company targeting the high spending young adult population who are earning comfortably (~20M Indians made more than 5L in 2018-2019). CRED's target customer is someone who lives in a big city, earns over 10L, is a millennial and who prioritizes convenience and high-end services. In late April, the company launched two new financial products:

CRED Stash - An instant credit line up to ₹5L. Stash is truly the easiest way to get credit in India in a completely digital manner from the comfort of your home. CRED rolled this out in partnership with IDFC Bank. Users can access any amount within their available limit without any hassle, select their payback term and receive the amount in their bank accounts. Users are charged interest on the amount withdrawn & are only charged a third of the interest rates on credit cards.

RentPay - The easiest way for its members to pay their

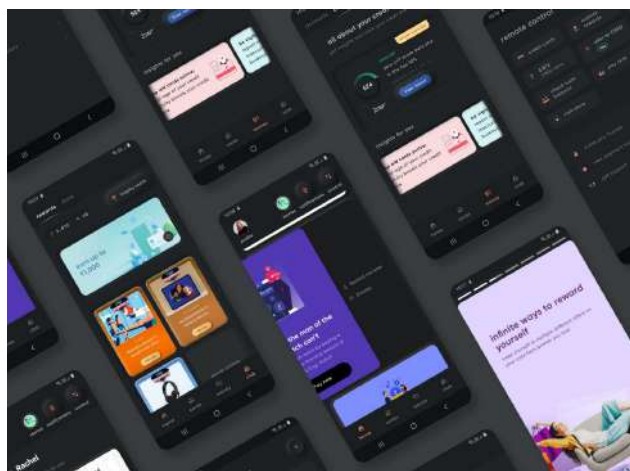
monthly rent to landlords with their credit cards. All you need to do is add the amount you need to pay, your landlord's Bank Account/UPI details and choose a card to pay it with. CRED charges a nominal service fee (up to 1.7%).

CRED can also launch its own credit card much like Am-Ex (American Express) to drive future sources of revenue or even launch UPI. Both ideas will fall into its major target customer base which is the high spending millennial urban youth. The future of CRED looks brighter due to rising internet connectivity in India and higher spending habits among affluent people. Moreover, it has the potential to serve as a single platform for all kinds of bill payments and recharge facilities.

This ideal customer base places CRED in an envious position which makes it attractive for banks to partner with. While questions around its monetisation and valuation are justified, what really separates it from the rest of the financial startups present in India is its database and access to customers.

The company, like many Indian Startups, generated no revenue in FY19 and had humungous expenses worth INR 63 crore.

In FY20, expenses grew almost six-fold, to about 378.39 crores, but its operational revenue stood at a meagre INR 52 lakh. It earned about INR 17.5 crore from interest on bank deposits and hence posted a loss of INR 360 crores. This sparked a massive debate on financial forums and social media on the valuation of startups that grow at a great pace and achieve mass recognition, but have unclear and shaky business models.



In 2015, two young Mumbaikars had a dream to attach patients to local pharmacies through a mobile app. Their vision was to make healthcare accessible and affordable across India through a quick and efficient doorstep service coupled with great discounts. This vision gave birth to PharmEasy which has become India's No. 1 healthcare distributor. Founded by Dharmil Sheth, an MBA from IMT Ghaziabad and Dr Dhaval Shah, an MBBS from Rajiv Gandhi Medical College and MBA from XLRI Jamshedpur, PharmEasy offers services such as doorstep medicine delivery, at-home sample collection for diagnostic tests, teleconsultation, as well as, a subscription-based healthcare service.

The start-up presently caters to over 20 lakh families annually and has added more than 20,000 new pin codes to its service network over the past two years. Today, PharmEasy is accessible to millions of customers through its mobile app across the country.

PharmEasy has built a medical services conveyance stage to rearrange and modernize the medical services arrangement in India. The stage assists patients to remain associated with different nearby drug stores and outlets. Information and innovation are the key elements that PharmEasy uses to fortify its medical services in India. The organization utilizes portable application and web innovation to offer the best quality medical services items to clients at reasonable rates.

When PharmEasy sends your clinical remedy to the pharmacy, a conveyance specialist gathers the medications from the pharmacy while gathering information on a wide range of insurances and rules. Your request is then bundled and is conveyed to your doorstep. The organization accomplished doorstep conveyance of everything identified with medical services. Furthermore, it has now effectively refined this goal. Digitization has become a basic part of India's medical care industry. Be it planning a physical checkup or conveyance of reports and medications, each progression in the business has been digitized. Additionally, a significant lump of the credit goes to e-drug stores like PharmEasy. PharmEasy also provides information on the after-effects of different drug substances.

In its latest funding round, PharmEasy raised \$500 million which led to a valuation of \$4 billion for its parent API Holdings. Furthermore, the company acquired a 66.1% stake in Thyrocare Technologies. It is also gearing up for an IPO offering in the coming year, with plans to raise anywhere between \$800 million to \$1 billion.

Funding and Valuation:



PharmEasy merged with its rival Medlife in May 2021, to fend off increasing competition from other players such as NetMeds, Flipkart and Amazon that entered the Indian E-pharmacy segments in 2020.

With this acquisition, MedLife was discontinued and its customer base was absorbed by PharmEasy. PharmEasy's parent company API Holdings acquired a 100% stake in Medlife whereas Medlife's promoters got a 19.95% stake in the combined entity. According to Medlife's unaudited financial projections, prior to the acquisition, it posted a revenue of INR 1,142.4 Cr for FY20, which was a 3.13x increase from FY19 which had a revenue of INR 365 Cr.

Compared to other e-pharmacies, PharmEasy has been able to keep its losses in check. In FY20, according to the unaudited financial statements, PharmEasy doubled its revenue to INR 637 Cr compared to that of INR 240Cr in FY19. However, over the same period, the losses of the company (before tax) also doubled to INR 100.7 Cr from INR 50 Cr. This is still a better performance as compared to its competition, in FY19, Medlife's revenue grew to INR 363 Cr while the loss was INR 404 Cr and 1mg posted revenue of INR 240 Cr on a net loss of INR 170 Cr.

However, many have pointed out that the reason behind this is that PharmEasy counts its marketing costs, which is a large expense in the online pharmacy business, as part of its parent company API Holdings' statements.

meesho

Founded in 2015 by two IIT-Delhi graduates, Vidit Aatrey and Sanjeev Banwal, Meesho meaning 'Meri Shop', is claimed to be India's number one re-selling platform. Headquartered in Bengaluru, Meesho empowers individuals to start their own businesses with zero investment.

Meesho connects producers with resellers who market the products on social media platforms and earn commission on a per-sale basis. The company claims to have a network of more than 13 million entrepreneurs, predominantly housewives. It boasts a huge selection of products spanning across 200 categories from clothes and apparel to household items. It has helped make entrepreneurship more accessible to every individual by providing suppliers with facilities such as order management, logistics, online payments, real-time shop updates which empower entrepreneurs to run successful ventures.

Initially started as an app that enables taking inventory online and providing social media as a channel to sell, it then pivoted to providing individual resellers with the opportunity to sell these products via social media platforms. Starting from predominantly fashion, Meesho has pivoted to non-fashion lifestyle, food, travel to a host of other products and recently is looking to foray into the online grocery market in tier-2 and tier-3 cities. They are currently deliberating on the logistical challenges involved in bringing Kirana shops online.

Funding and Valuation:



To date, Meesho has raised a total of US\$ 515.2 million in funding across 9 rounds. Meesho has also made two investments; the most recent one was on 4th March 2021, when Elenas - a Latin American social commerce platform that empowers micro-entrepreneurs to open up online stores, raised US\$ 6 million.

Meesho recorded a revenue of Rs. 341.6 Cr in FY20 which was a major jump from the previous year's revenue of Rs. 84.8 Cr in FY19. However, during the same time there was a massive growth in the expenses of the company to a whopping Rs. 657 Cr. Therefore, even though Meesho performed comparatively well in FY20, it incurred a loss of Rs. 315.4 Cr, which was three times that of the previous year. Meesho has had a shaky foundation, coupled with the growing competition in its space, which has led to them having to incur a heavy cost on logistics, advertisements and employee benefits.

When the lockdown was announced, Meesho came up with a micro-credit strategy to ensure minimal income for their suppliers. They provided small loans worth Rs. 5,000 to their resellers without having to undergo any formal documentation process. This helped them establish a strong bond and trust.

Meesho plans on adding more resellers to its platform in the coming year. They are targeting different geographies, especially remote locations. Meesho sells products such as fashion, furniture and home appliances currently but is looking to diversify into staples and FMCG, going head-to-head with already established companies. This year Meesho is planning to expand into grocery through Farmiso. Meesho's asset-light model will help them grow significantly as they do not keep any inventory but still function as an e-commerce player.



Founded in 2014 by Abhiraj Singh Bhal, Varun Khaitan and Raghav Chandra, Urban Company reached the unicorn status after it raised \$255 million in series F funding in June 2021. It is an online marketplace for gig workers which aims at providing instant access to reliable and affordable services for customers and provides the local vendors with opportunities to grow their business.

The company started with the intention of changing the landscape of how local servicemen were working and paid. Urban Company provides a plethora of services ranging from home installation, maintenance and repairs as well as beauty and wellness services.

The business model of the company solves two problems in the economy:

- It solves the problems faced by the consumers and helps them to derive more value from their daily needs by providing quality and cost-efficient services at the click of a button.
- It enables local service providers to get more work than before.

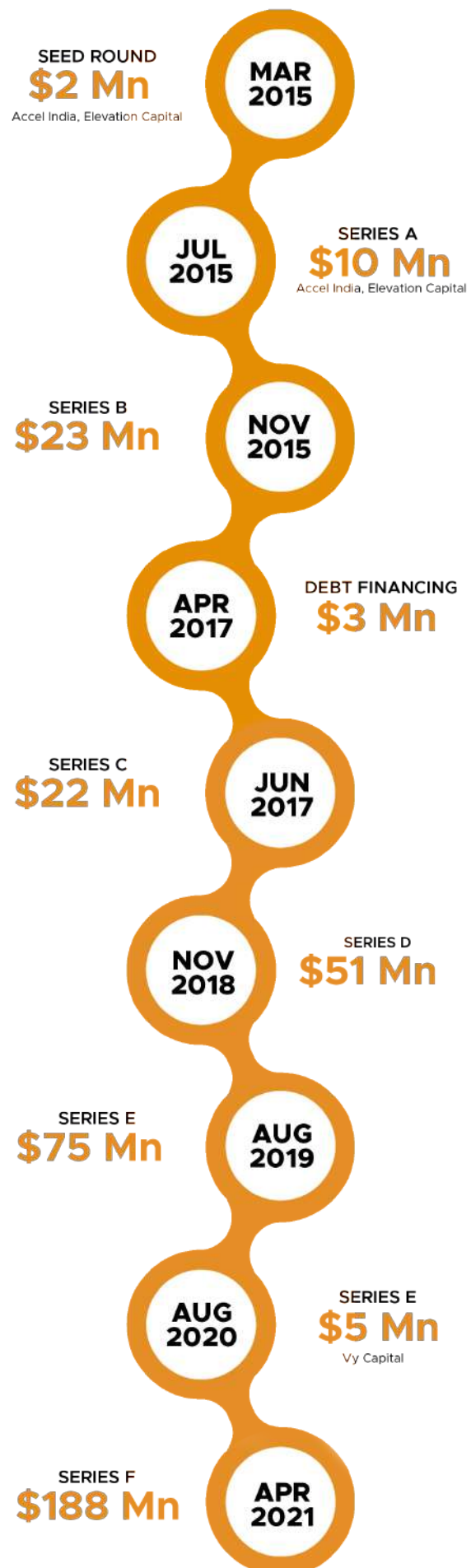
Prior to this, most service providers and consumers were dependent on either word of mouth or different intermediaries.

Furthermore, the business works closely with its service providers and turns them into micro-entrepreneurs. Initially, the company followed a lead-generation model, however, over time they have adopted a more meticulous model. Apart from providing them with a platform to offer their services, the company helps individuals by offering financial assistance, skills training as well as access to tools and products. This helps the company maintain quality standards irrespective of the city or the service provider, thereby winning the loyalty and love of the consumers.

This idea is a perfect solution to deal with the challenges inherent in India's unorganised local services market. Furthermore, with the rise of freelancing professionals, the company has innumerable opportunities to expand its offered range of services in the coming decade.

Currently, the company services 35 cities in India and has started its expansion in international markets. It is currently available in Singapore, the UAE, Saudi Arabia and Australia.

Funding and Valuation:



The Dark side of startup Valuations:

12 April 2021 marked a historic day for the Indian Start-up Industry. In a period of four days, we saw six new start-ups become Unicorns - cross the valuation of a Billion dollars. To name a few - Investing platform Groww raised a valuation of more than \$1 Billion, Meesho reached \$2.1 Billion and the infamous Cred also backed up \$2.2 Billion. For perspective, India had witnessed a total of seven new unicorns in 2020 and six in 2019. Among the investors helping them reach these fancy numbers, Softbank and Naspers, for a long time, remain the most recognisable names.

This recent success in the start-up scene has brought a wave of much needed optimism for the future of the economy. India, though considered a big player, has trailed far behind on the global scale for too long. Everything looks quite promising. Apart from the mentioned new ventures, several old names like PayTM and Byju's have reached the peak of their valuations as well; \$16 Billion and \$15 Billion respectively.

Valuations, though depicting the company's current worth; as in the total money poured in, sometimes fail to accurately judge the business itself. It's well known that Indian Startups fail more than succeed. Investors have lost a huge amount of money in these ventures. And yet the current scene seems a bit contradicting. To understand this, we need to understand the investor's perspective and what they actually see in a start-up.

First and foremost, it's the idea. Investors have learned from the model of Silicon Valley. Considering most of

the new ventures already belong to the tech sector, this seems quite relevant. All the successful names which garnered the blessings of the investors in their initial years didn't meet the conventional revenue requirements. But in the long run, they did bring a lot more than revenue. The assumption can be made that the expectations of investors are quite similar for the new startups in India. The rapid digitisation of the country, reinforced due to the pandemic, raises hopes in business models of these particular companies.

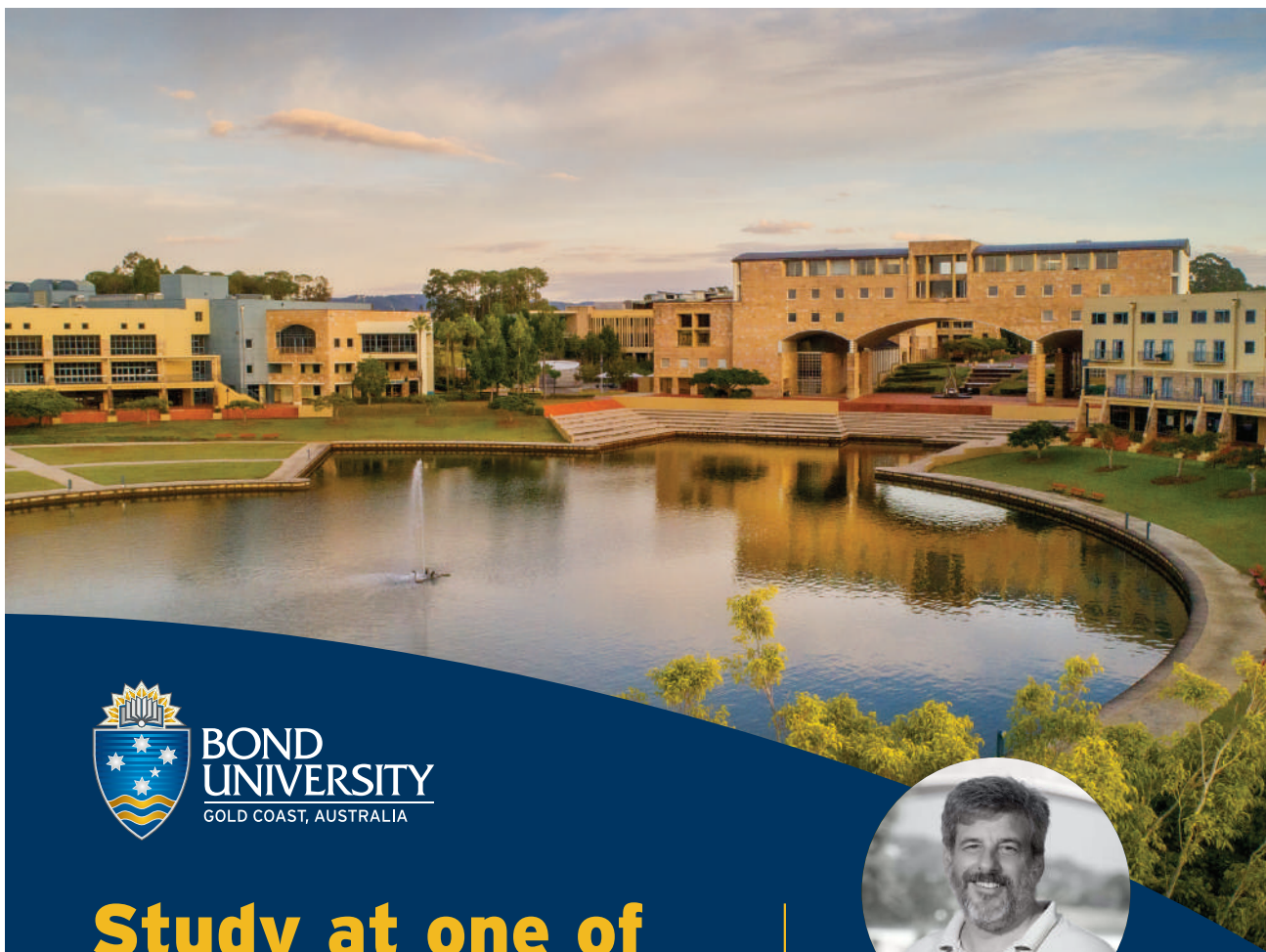
However, we have seen some popular examples of heavily backed start-ups fail (Snapdeal, Zebpay, etc.). So, this does bring suspicion to the model. Since popular names with big money aren't able to make convincing numbers such as Cred, this seems even more relevant. After the valuation of the fintech start-up nearly tripled in a span of three months from \$ 800 million to \$2.2 billion, many were left scratching their heads since the company posted a substantial loss in FY 2020. The company spent almost Rs. 727 in terms of marketing and customer acquisition to earn a rupee in FY20. The absence of a solid monetisation strategy for its operations makes one wonder if CRED would also face a similar fate as FreeCharge.

So, we can partly conclude that this funding frenzy of investors is more of a trend based on recent successful models and may wear out with time. But this phenomenon also becomes quite critical, considering the growing start-up scene of India.

Contributors

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EPISTEME 2021

The flagship annual financial fest of FIC, SRCC, Episteme'21 was successfully conducted on 7th and 8th April 2021.

With 6 finance based events, insightful panel discussions and seven special speaker sessions, it presented to students pan India a panoply of opportunities to both gather and showcase knowledge. Despite the events being held virtually due to the pandemic's constraints, we saw a participation of over 12,000 enthusiasts.



MENACE AT METROPOLIS

A stock market simulation event that tested the grit, stoicism, and financial acumen of the participants. Spread across 3 rounds, it presented an opportunity for one and all to find the Buffet inside them. Analyzing, Strategising, Managing, and Investing- it required them to be not just the jack of all trades, but the very masters!

SHRI RAM FINANCE CHALLENGE

A one-of-a-kind competition that was meant to put the participants in the shoes of Wall Street barons with the power to control millions. In 3 terrific rounds, they had to analyze, interpret, process, buy, sell, bargain, beg; whatever that was needed that safeguards their capital! There was only one rule: the moment something felt expensive, you've lost.



JANUS

A mind-boggling contest that invited everyone to place themselves in the shoes of notorious scammers; to experience a world where one has to be a sinner to become a winner. Spread across 3 rounds, it gave an opportunity to get your hands dirty by trading conscience for big money.



CONSILIARTIS

A policy simulation event that provided participants an opportunity to embrace their skills as a policymaker and challenge their intellect. The competition, spread across 2 rounds, paved the way for students to be either prudent or a risk-taker, depending on their choices.



SHRI RAM PARAMARSH

'We cannot solve our problems with the same thinking we used when we created them.'

-Albert Einstein

This event was a Case Study Competition that challenged participants to turn into professional problem solvers and come up with the best solutions. In 3 vexing rounds, they were tested on their quick thinking, knowledge, and sense of practicality.

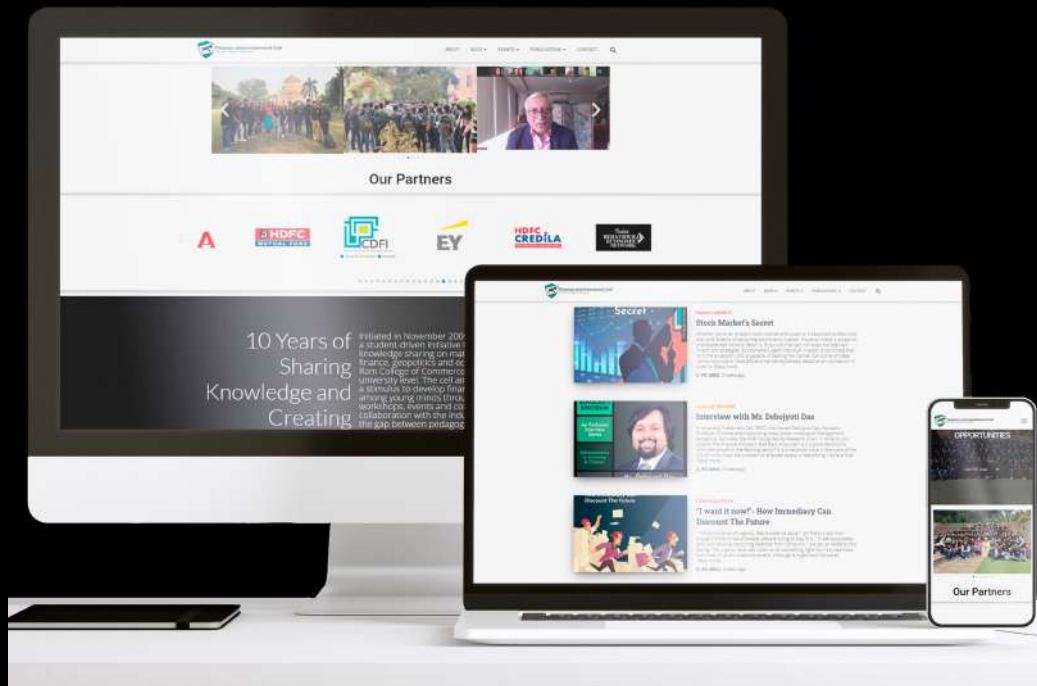


BET OR DEBT

An event where Lady Luck held the key to success; not hard work!

Does one get queasy at the prospect of loss? Or does the possibility of winning big motivate one to go all in? In this event, the more the participants risked, the sweeter the prize. One wrong bet could finish it all, and one right bet could seal the victory.





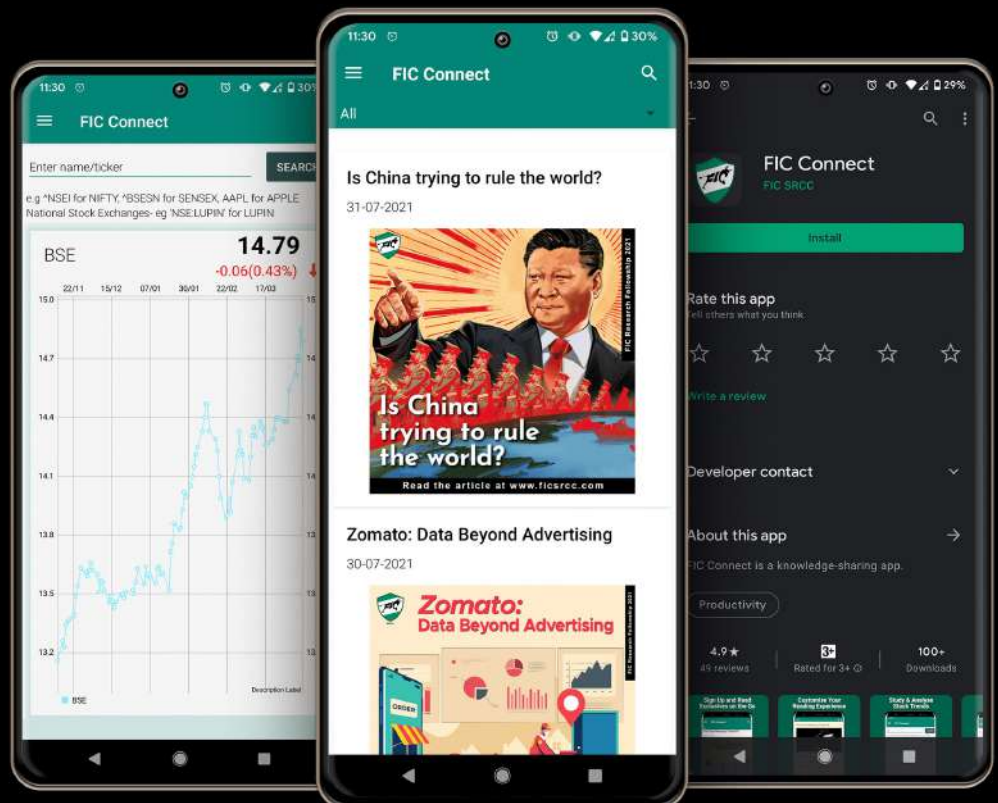
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The website contains over 120 articles across 7 different categories along with newsletters on various topics, access to VITTA, our annual finance journal and information regarding all events and activities.

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The Annual Finance Symposium of SRCC - Finergy, was conducted on 30th and 31st October 2020. The flagship event received an honourable recognition by being aired on Doordarshan, one of India's largest broadcasting channels. The chief guest at Finergy'20 was Renu Karnad, the Managing Director of HDFC Ltd.

It consisted of 2 events, namely:



ENVISION

The Research Paper Presentation competition, 'Envision' witnessed pan-India participation from 40+ colleges. The theme for Envision was kept open this year, as long as the specific topic chosen was within the domain of finance and economics. The event was characterised by great quality of research and enthusiastic participation, despite the pandemic.



CASSER LE CAS

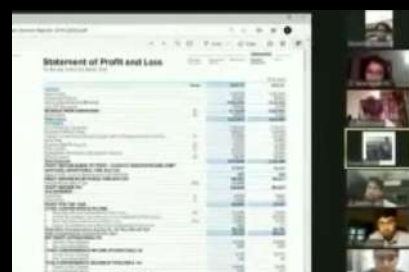
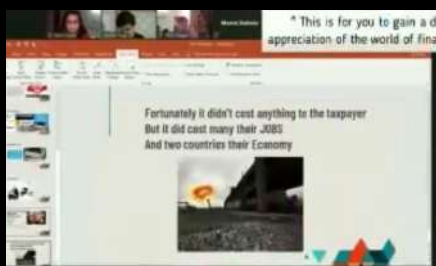
Casser le Cas put problem-solving skills to the ultimate test. This year, we conducted all the rounds of Casser le Cas online and saw participation from over a 1000 teams (Nearly 2000 students) scattered across different colleges in the country, Casser le Cas was conducted in collaboration with IIM Ahmedabad.



2 WEEKS COMPETITIONS MENTOR GROUPS RESEARCH SESSIONS

FIC RESEARCH FELLOWSHIP

Even as schools and colleges remained shut due to the COVID-19 pandemic, FIC conducted the 1st ever finance-based learning program for high school students from 15th July to 31st July 2020. We organised both workshops and collaborations with people from within the industry, to connect education and practice. Basic concepts of finance were taught, along with lectures by industry experts on technical analysis and bond valuation. The fellowship was 15 days long and remains the first of its kind.



FINQUIZITIVE

An FIC Members Exclusive Event, Finquizitive, was organised by the members of the society on 19th and 20th February 2021, with participation of 50+ students to test their knowledge in the field of finance, economics, commerce and beyond to become "The Wolf of FIC".

The event comprised of 2 rounds which paved the path to the finals. 10 pairs were shortlisted for the 2nd round out of which 8 members qualified to the final round. 1st Position was bagged by Armaan Wadhawan, followed by Aarushi Doomra and Sanchay Aggarwal at 2nd and 3rd positions respectively.



FINERTIA'20

A completely online-based financial quiz introduced for the first time by FIC, this event was brought about to jolt the participants out of the pandemic ennui and rack their financial brains, putting their business acumen to test.

SHRI RAM FINANCIAL FORUM

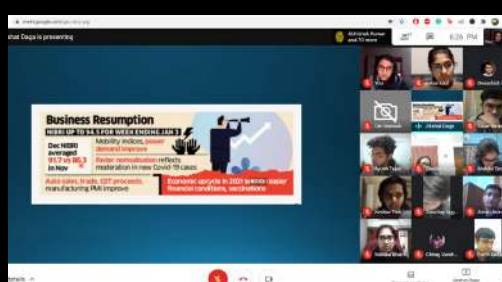
SRFF is a platform where we invite dignified speakers from various fields such as finance, geopolitics, banking, policy making and the like, to share their valuable experiences and embolden the youth of today to achieve greatness with their acquired knowledge. Esteemed speakers such as Shri Narayana Murthy, Shri Montek Singh Ahluwalia - Padma Vibhushan Economist, Dr. RS Sodhi - MD of Amul, Dr Charan Singh - Board of Directors, EGROW foundation, Shri Pramod Bhasin - Chairman of ICRIER, CLIX Capital, Founder of Genpact, and several other renowned figures from institutions like RBI and World Bank, have graced our sessions with their presence and motivated the young minds of the society.



RESEARCH SESSIONS

These are conducted on a wide range of topics, which are usually 1 hour long, and also involve detailed discussion of the presented themes. In these, seniors introduce and explain different concepts in a brief manner, followed by interactive discussion on the subject to ensure everyone's involvement.

This year, there were around 10 such research sessions, which covered diverse topics like Bollinger Band, derivatives, NEP policy, Portfolio Theory, US 2008 Financial Crisis, and many more, making it a pleasant and knowledgeable experience for all.



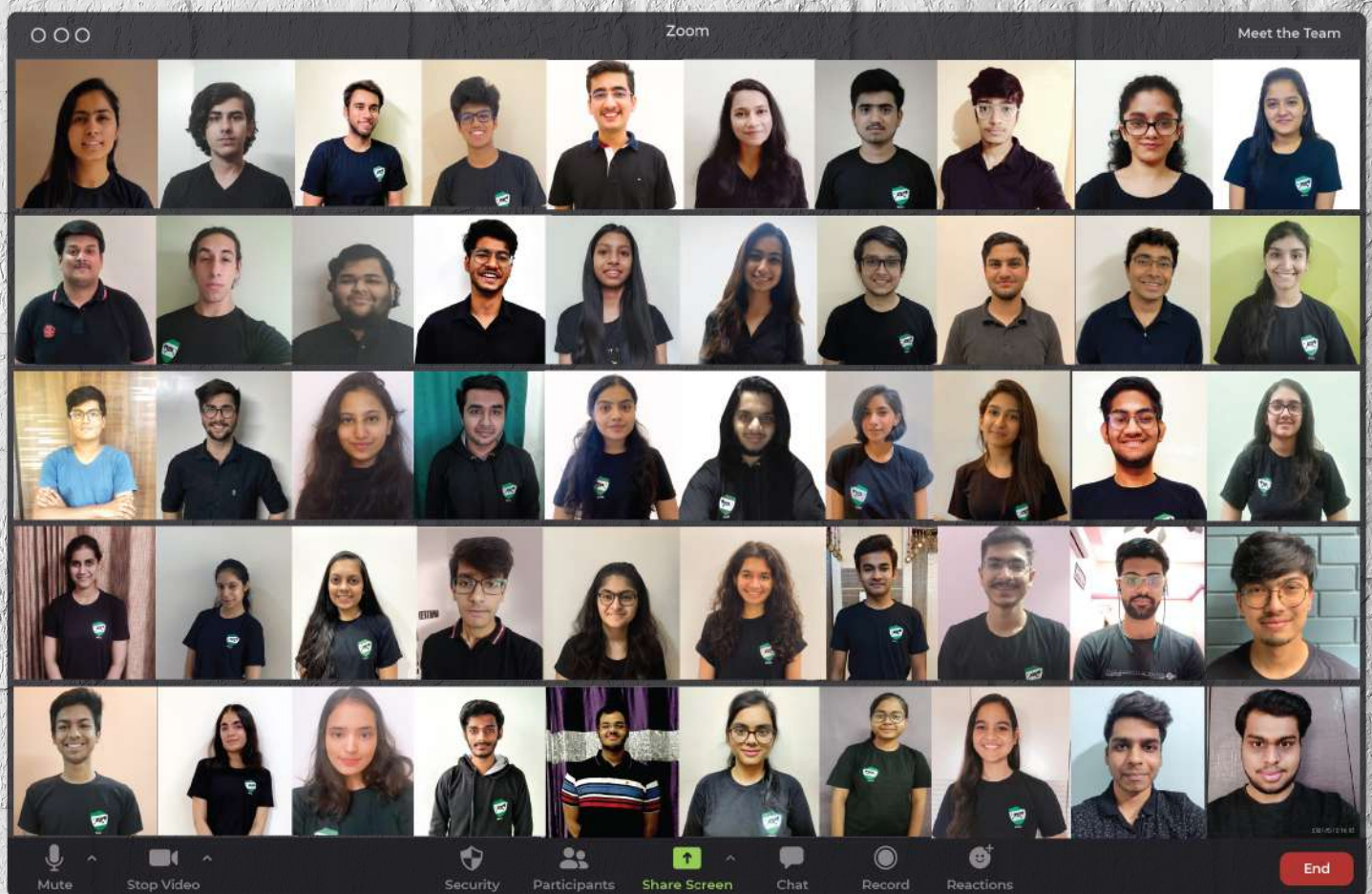
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