a₹tha

A NEWSLETTER OF THE FINANCE LAB

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Indian Institute of Management Calcutta

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Editorial

In this eighth anniversary issue, we have curated the best 12 articles out of the 25 received. A₹tha has come a long way since it was first published in August 2012 with just 3 articles. We are so grateful for the tremendous support from our friends – academics, students, and alumni – around the globe during this journey. This issue has four articles contributed by academics: current and former faculty member in the Finance & Control group at IIM Calcutta and current faculty members at the Booth School of Business (the University of Chicago, USA) and Burgundy School of Business (the Université Bourgogne Franche-Comté in Dijon, France). Four articles are by current students: three by IIM Calcutta PGP/MBA students and one by ISB FPM/Ph.D. student. Finally, IIM Calcutta alumni contributed six articles: PGP/MBA alumni four; Executive Education alumni two. These numbers do not add up to 12 due to overlap across the three groups.

The articles in this issue cover a variety of interesting topics. The first seven articles center around the COVID-19 pandemic and discuss issues related to corporate governance, rational expectations, financing and financial stability, mergers and acquisition, and education. The *first* article points out the threats to established Corporate Governance practices by the pandemic, highlighting the vital role of CEOs and independent directors working together to make their firms more resilient and emerge successfully in the post-COVID-19. The *second* piece explains how rational expectations apply to the pandemic and its cycles of lockdowns and how this understanding can help separate the winners and the losers. The *third* article reflects on who pays for the COVID-19 related stimulus and lays out the pros and cons of seven established financing choices and four innovative ones. The *fourth* piece critically examines the latest, July 2020 RBI report on Financial Stability and suggests that the central bank's assessment may be more optimistic than what the ground realities would suggest. The *fifth* one empirically shows that the short-term stock-market reaction to the pandemic induced shutdown in India was no different for firms with high and low cash reserves, contrary to what one would expect. The *sixth* article lays out the impact of the pandemic on global and regional M&A activity in general and in healthcare, consumer & retail, technology, media & telecom, and financial sectors in particular. The *seventh* piece reviews the impact of COVID-19 on the education sector that is dear to all of us.

The remaining five articles deal with covered debt instruments, investment opportunities for retirement funds, underwriting, the threat of the global debt buildup on the financial ecosystem, and the rise of growth equity investment strategy. The *eighth* article deals with covered bonds and explains how these are structured. The *ninth*

piece provides insights into the investment vehicles used by retirement funds such as Provident Funds to protect capital and generate returns. The *tenth* article explores how credit underwriting has evolved from being an art and is moving towards being a science. The *penultimate* one reviews the rise in global debt holding since the 2008 financial crisis and its threat to the stability of the financial ecosystem. Finally, the *last* piece first contrasts growth equity from private equity and venture capital and then explains the trends in the global rise and performance of growth equity investment strategy.

The editorial team has worked extremely hard to bring out this eighth-anniversary issue of A₹tha for you. We very much hope that you will enjoy reading it and look forward to your feedback and suggestions. Please email them to us at artha@iimcal.ac.in.

Stay safe and in good health!

Sudhir S. Jaiswall

Editor

GUEST COLUMN

Corporate Governance: Challenges during and Post Covid 19

Asish K Bhattacharyya

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INTRODUCTION

Issues related to corporate governance (CG) came into prominence in the USA with the separation of control from ownership, highlighted by Brealey and Means in 1932.[1] At that time equity (risk capital) in most companies was provided by dispersed shareholders. These shareholders had neither the capability nor the interest in controlling the use of the assets held by the company. Therefore, professional managers enjoyed 100 percent control over assets with trivial rights on the cash flows generated by the use of those assets. As a result, the agency problem arises in CG. Like an agent, the manager expropriates the shareholders' wealth to enrich himself using the residual decision making powers.[2] In a principal-agent relationship, a complete contract cannot be written as all contingencies cannot be foreseen; even if anticipated, they cannot be articulated unambiguously. In a business, contingencies arise daily. Therefore, the manager enjoys huge residual rights. CG issues come to focus again and again when corporate frauds and scandals are reported. CG practices evolve to protect the interest of shareholders. The basic premise, which is that the manager enriches himself by expropriating shareholder's wealth unless effectively monitored, continues.

Shareholders enjoy two important rights – the right to vote and the right to receive timely information. CG Code ensures that the management facilitates the use of the voting right by shareholders freely without any cost (for

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[1] Berley, Adolf. and Means, Gardiner. The modern corporation and private property. Transaction Publishers, New York (1932).

[2] I have used he/his/himself to refer to all the genders without any gender bias.

example, e-voting). It also mandates the management to provide timely information to shareholders either directly or through the stock exchange or media. Shareholders elect/appoint two important actors in CG – directors (particularly independent directors) and the auditor. Therefore, discourses on CG focus on the independence of independent directors and auditors. Directors and the auditor are elected/appointed by a simple majority (more than 50 percent votes of shareholders present in the general meeting should go in favour of the proposal, called ordinary resolution), except the appointment of an independent director for the second term (each term is of five years) and appointment of a non-executive director who has attained 75 years of age (in case of a listed company). In those two cases, the proposals are approved only if two-third of the votes go in favour of the proposal (called, special resolution). The law specifies that some crucial decisions reserved for shareholders, in addition to those two, should be approved by special resolution. In practice, in companies with a dominant shareholder, nominees of the controlling shareholder get appointed as directors, and an auditor recommended by these directors is appointed.

Shareholders are prohibited from interfering in the management of the company. They have recourses under the law if the company is mismanaged. The law entrusts the responsibility for managing the company on the board of directors (Board) constituted of directors elected by shareholders. It gives the Board full freedom to take decisions, except those that are reserved for shareholders. The courts provide immunity to directors by restraining themselves from having a second look at a business decision unless it is blatantly inappropriate, or the decision-making process is tainted by the conflict of interest (business decision rule).

BOARD'S DUTIES – CHANGING PERSPECTIVE

Corporate law in most jurisdictions requires directors to act in the best interest of the company as a whole. It was viewed for long that the company is a collective of shareholders and the phrase 'company as a whole' implies shareholders' interest, treating all shareholders equally. However, now it is universally accepted that directors should act in the interest of the company, which is a legal entity separate from shareholders, and not in the interest of shareholders only.

Directors derive their power from the Articles of Association, which is the internal governance document approved by shareholders, and from the law. Although, shareholders have the right to incorporate, modify or delete clauses in the model Articles of Association provided in the law, directors primarily derive their power from law.

Corporate law accepts the primacy of shareholders by not giving any right to other stakeholders of the company. However, in defining the director's duties, corporate law in different jurisdictions have taken different

perspectives on a director's duties toward some important stakeholder groups. For example, the U.K. Companies Act 2006 has incorporated the 'enlightened stakeholder value' (ESV) principle in section 172 (1) of the Act. It reads,

> "A director of a company must act in the way he considers, in good faith, would be most likely to promote the success of the company for the benefit of its members as a whole, and in doing so have regard (amongst other matters) to— (a) the likely consequences of any decision in the long term, (b) the interests of the company's employees, (c) the need to foster the company's business relationships with suppliers, customers and others, (d) the impact of the company's operations on the community and the environment, (e) the desirability of the company maintaining a reputation for high standards of business conduct, and (f) the need to act fairly between members of the company."

The concept of ESV was introduced by Michael C. Jensen in 2000. ESV requires directors to pursue the goal of 'maximising the long-term market value of the firm', and in doing so, they should meet the demand of important stakeholders.

Indian Companies Act goes beyond ESV and imposes on directors the duty to balance the interest of the company, employees, shareholders and the community. They are also duty-bound to protect the environment. Section 166 (2) of the Indian Companies Act 2013 stipulates,

> "A director of a company shall act in good faith in order to promote the objects of the company for the benefit of its members as a whole, and in the best interests of the company, its employees, the shareholders, the community and for the protection of environment."

A plain reading of the Indian law gives the impression that directors have fiduciary responsibilities towards employees and the local community. One has to wait for the court's interpretation of the law.

INDIAN CORPORATE SECTOR

Family firms dominate the Indian corporate sector. As per the ET Intelligence Group's analysis, the market capitalisation of family businesses was around INR 65 lakhs crores, which is an average of the market cap for January 2020.[3] This represented 42 percent of India Inc's total market cap of INR 156 lakh crores. In January 2020, the NIFTY 50 had 31 family-run companies and the S&P BSE Sensex 30 had 16 family-run companies.

[3] Available at: https://economictimes.indiatimes.com/markets/stocks/news/family-businesses-are-doing-better-than-rest-of-india-inc/articleshow/74109424.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst; extracted on July 20, 2020

In accordance to a report published in Business Standards on July 29, 2019, based on research by NSEInfobase.com, the value of the holdings of Domestic Institutional Investors (DIIs)—comprising mutual funds, insurers, banks and other financial institutions—rose to 13.78 percent at the end of June 30, 2019.[4] Ownership of foreign portfolio investors (FPIs), stood at a two-year high of 19.8 percent on June 30, 2019. The percentage holding of promoters in companies listed on NSE stood at 54.46 percent as of June 30, 2019. Thus, on June 30, 2019, investment by retail investors was 11.96 percent. It is pertinent to note that retail investors lack motivation for exercising their voting rights. As per a report published in The Hindu Business Line on December 29, 2019, based on the research by the National Institute of Securities Market, only 0.6 percent of retail investors in India cast their votes. [5]

In accordance to analyses published by Economic Times on October 17, 2019, during the period from June 2018 to June 2019, top 50 companies by market cap attracted 77 percent of the total domestic institutional investments (DII) and 63 percent of the total foreign institutional investments (FII). [6] Companies ranked 51-100 received 7 percent of DII, ranked 101-200 received 12 percent, ranked 201-300 received 3 percent, 301-400 received 1 percent and ranked 401-500 saw a net outflow of 1 percent. If this trend continues, institutional investments in companies that are not among the top 100 companies will come down, and they will not feel the pressure from institutional investors for improving CG. The CG standards on those companies will depend primarily on the management and the quality of financial reporting and audit quality.

CORPORATE GOVERNANCE IN INDIA

CG Code in India is based on the Anglo-Saxon model, which is based on the agency theory. Indian CG Code is contemporary and comparable with CG codes and practices in advanced countries like the U.K. and U.S.A., which have adapted the 'Unitary Board' concept. Indian Boards have both supervisory and executive responsibilities. In India, the same SEBI CG Code applies to all the listed companies - family-group companies, stand-alone family-controlled companies, public sector enterprises (PSEs) and others. The government and regulators have taken a 'one size fits all' approach, although they provide certain exemptions to PSEs.

The efficacy of the Anglo-Saxon model and the 'one size fits all' approach is questionable. Under Indian culture and tradition, individuals are not purely economic person. They are a combination of economic person and social

[4] Available at: https://www.business-standard.com/article/markets/domestic-institutional-investors-bump-up-holding-in-indian-stocks-in-june-119072901038_1.html; extracted on July 20, 2020.

[5] Available at: https://www.thehindubusinessline.com/opinion/are-shareholders-exercising-their-vote/article30426866.ece, extracted on July 20, 2020.

[6] Available at: https://economictimes.indiatimes.com/markets/stocks/news/domestic-institutional-investors-zero-in-on-just-top-50-companies/articleshow/71624110.cms?from=mdr; extracted on July 20, 2020

person – a person who does not consider the accumulation of wealth a sin, but also holds values, cares for self and family reputation, enjoys peer recognition, and derives motivation from the job itself. CG code designed based on the agency theory might not be appropriate in the Indian context. CG system should be developed drawing from both the agency theory and stewardship theory. Stewardship theory is more appropriate than the agency theory in case of a family business where the decision-maker is the controlling shareholder, for whom protecting the family silver and creating family wealth are the priorities. Families do not want to give up control to non-family members even when they professionalise the management. The CEO is either a family member or a nominee of the family who functions under a shadow director, who is a family member, usually the '*Karta*' (patriarch) of the family. The family wants the balance of power between the CEO and the Board to be tilted towards the CEO. For example, families are not comfortable with the SEBI regulation that mandates the separation of the position of chairperson and the CEO in the top 500 listed companies and the appointment of a non-executive chairperson who is not related to the CEO. The application of the regulation has been deferred to April 1, 2022. Although research shows that family-controlled companies perform better than professionally-managed ones, research has also established that siphoning of funds is common in family-controlled businesses. Therefore, monitoring is required to check the siphoning off of company's wealth, which is detrimental to the interest of non-controlling shareholders. Therefore, the CG Code has made the audit committee to approve 'related party transactions' (RPT).

Families do not want outsiders in the Board. Therefore, family-managed companies comply with the provision of having independent directors in the Board by inducting those known to family members or to the senior management. The Nomination and Remuneration Committee (NRC) does not nominate anyone without the tacit approval of the controlling shareholder. Therefore, independent directors do not demonstrate the level of independence that is expected of them. If the independent directors are made accountable for every omission and commission of the company, it will be like 'throwing the baby out with the bathwater'. Competent individuals will not join Boards, and companies will be deprived of a good sounding board to test the controlling shareholder's ideas and strategies. Government, regulators and courts restrain themselves from imposing a penalty on independent directors for the company's omissions and commission, although the law holds all directors equally responsible for decisions taken by the Board.

The standard of CG in India hinges on the auditor's independence. Therefore, currently, the focus is on auditor independence. In July 2020, National Financial Reporting Authority (NFRA) has handed over severe punishment to the Ex-CEO of Deloitte in the case of beleaguered IL&FS Financial Services Limited (IFIN) related to the audit for the financial year 2017-018.[7] Indian Standards of Auditing are a clone of the International Standards of

[7] NFRA bars Ex-Deloitte CEO for 7 years, slaps Rs 25 lakhs penalty; available at: https://www.thehindubusinessline.com/money-and-banking/nfra-bars-ex-deloitte-ceo-for-7-years-slaps-25-lakh-penalty/article32165128.ece; extracted on August 2, 2020

Auditing. Similarly, Indian Accounting Standards (Ind AS) applicable to listed companies, are a clone of the International Financial Reporting Standards (IFRS). Therefore, in the coming years, the quality of financial reporting and audit are expected to improve and incidences of management fraud to come down. Consequently, on average, CG standard is likely to improve in coming years. In a nutshell, Indian Boards are not rubber-stamp boards but are mostly ornamental-cum-advisory boards. Director's performance is evaluated based on three important criteria: (a) reputation and capabilities in the eyes of institutional investors, (b) skills necessary for guiding the CEO and boundary spanning (lobbying), and (c) ability to present shareholder-friendly image while being management-friendly.[8] It has worked well so far but has also resulted in several large corporate sandals like Satyam and IL&FS. It may be incorrect to expect a significant change in current CG practices, which is to comply with the law by adopting the 'tick-the-box' approach, and adopt good practices appropriate for the company by improvising the CG Code. For example, reputed family-managed companies avoid having an independent Board, but engage meaningfully with large shareholders, disclose timely information and facilitate voting by shareholders, comply with laws and regulations and adopt high ethical standard. The CG standard in Indian companies hinges on audit independence and that is likely to improve.

CHALLENGES DURING AND POST COVID 19

The pandemic COVID-19 has posed a serious threat to established CG practices, particularly in companies that are not in the top league. Since many companies may not have adequate cash reserves, their future is uncertain and survival might be under threat. The most significant challenge for them is to ensure their survival through the COVID-19 crisis and building resilience to come back on the growth path post-COVID-19.

The Companies Act 2013 requires that while fulfilling their duties, directors should balance the interest of shareholders, employees and neighbouring communities and should conserve and protect the environment. Boards are duty-bound to balance the interests of all employees and the local community while crafting and implementing strategies for survival and growth in the post-pandemic era.

The general prescription for survival and resilience is to take the 'people first' approach and deal with employees, customers, vendors and members of the neighbouring communities with empathy and compassion. Under the pressure to cut cost, a CEO might be tempted to compromise with this fundamental principle, ignoring the long-term impact on the company. In today's dynamic and competitive business environment success of a firm depends

[8] Management friendly does not imply conniving with the management in perpetrating management fraud. It implies softer attitude toward the management and be sympathetic to the management.

on its capability to effectively manage institutional knowledge and relationships, as technology and emerging management techniques are freely available and imitable. During this period of pandemic-induced disruption, the focus should be on protecting and augmenting relationship capital and retaining talent while taking tough decisions required for the survival of the company. Any bad decision will impair the relationship capital and make retention of talent extremely difficult. Therefore, people related strategies should be formulated jointly by the CEO and the Board.

During adversity, the company's ability to hold its core values is severely tested. This is an area for which the Board should think deeply. It is the Board's responsibility to ensure that ethical standards and risk culture are not diluted during the pandemic when the company is under tremendous stress for achieving economic performance.

The Board, jointly with the CEO, should design training programmes and identify internal trainers (managers) to reinforce the values and risk culture across the organisation.

It is the responsibility of the CEO to share new information about COVI 19 with employees. Board's responsibility is to guide and support him. The Board may create a committee of board members with CEO and outside experts for evaluating the reliability of the new information flowing in. The CEO should share only that information that is approved by the Committee.

The Committee constituted to evaluate new information should support the Board in scenario analysis, which is necessary to redesign the business models for different businesses. Existing business models might not succeed in the new normal. Every company should review existing business model and evaluate alternative new business models taking into account opportunities within the adversity and learnings during the pandemic period. It is likely that these times will see severe disruptions. The national protectionism will increase, so will the use of AI and IoT. Employment and disposable income, especially of the lower middle class and marginal communities, will fall. Customer tastes and buying preferences in different geographical locations be affected. Activism in support of higher social responsibilities of Business will emerge. These factors need to be considered in designing the new business model.

In general, a Board's (read independent director) engagement with the CEO has to be much more intensive than what it was before the outbreak of the coronavirus pandemic. The Board, jointly with the CEO, should develop a written CG Charter with a clearly defined relationship between the CEO and the Board. The Charter should clearly explain the roles of the CEO and the Board and establish the relationship between the CEO and the Board. This will avoid the possible tension between the CEO and the Board, as the CEO might view the increased engagement as an interference in his domain. The Board and the CEO should jointly design a new metric for evaluating the performance of the CEO and the company, as in the coming few years, financial and operating

performances will not be the only key criteria for measuring the performance. [9] Boards should strive to link the CEO's performance with integrated reporting and integrated thinking. If a company is using the Balance Score Card, the same should be redesigned and objectives and measures should be redefined.

CONCLUSION

Compliance with CG code is not difficult if a company adopts the 'tick-the-box' approach. Therefore, framing new rules does not necessarily improve CG. The standard and quality of CG depend on the quality of the Board, the Board's culture and contribution of independent directors, quality of financial reporting and audit quality. Indian corporate sector is dominated by family business. Families do not want to give up control of the company, which they have promoted and nurtured, to an independent Board. Therefore, independent directors will not be able to act as independently as is expected by regulators. However, in the post-pandemic era the engagement of independent directors with the CEO will intensify. The distinction between management and governance has been blurred. A sound CG system should take this fact into consideration. Both the CEO and the Board should recognise that providing guidance to the CEO in managing the company is not undue interference into the CEO's domain of responsibilities and does not undermine the CEO's position. In future deliberations on CG by academics and practitioners, softer CG issues should receive proper attention. Government and regulators should restrain themselves in revising the CG Code. The present CG Code should continue for at least the next five years.

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[9] It will be important to generate surplus. But performance cannot be measured by ROI (or EVA) or total shareholder's return, as stock market often fails to understand the strategy fully and its long-term impact. During next few years, companies may not able to earn ROI higher than the cost of capital.

VOICE OF AMERICA

Rational Expectations in a Pandemic

Ayan Bhattacharya

Ayan Bhattacharya is an Assistant Professor of Finance at the University of Chicago Booth School of Business and the City University of New York, Baruch College. He has a Ph.D. from Cornell University and his research focus is financial economics, especially financial market design and asset pricing.

Gary Becker, a pioneering economist based at the University of Chicago, was famous for applying principles of economic theory to questions hitherto considered outside of core economics. In doing so he expanded the oeuvre of economics appreciably, while bringing a new level of rigor to many important questions in sociology and human affairs. Followers of Becker choose economic ideas with universal appeal and then apply them to social questions to obtain new insights. In today's world, the most important social question seems to be the pandemic along with its unending cycles of lockdowns. While economists justifiably worry about the economic fallouts of the situation, could principles from the dismal science provide new insights into how we the frame broader social rules in these embattled times?

1. Rational Expectations

An economy, at the most basic level, is simply a group of humans that decide to work together, because doing so is to the mutual advantage of everyone in the group. But working together requires the members of the group to anticipate one another's behavior. And anticipation implies the formation of expectations. Thus, expectations form a primitive ingredient of any economic model. In fact, it would hardly be an exaggeration to say that most of economics is about understanding, managing or manipulating expectations to attain objectives that are acceptable to members of groups.

Despite the fundamental importance of expectations, many early economists struggled with this notion. John Maynard Keynes, arguably the most influential of last century's economists, spent many years thinking about the origin of probability and expectations before embarking on a full-time career in economics, and many of his influential macroeconomic theories demonstrate a deep appreciation of human expectations. Yet, he never

managed to put forward a rigorous formulation. It took many years and a number of false starts before the field hit upon a novel, mathematically sensible ways to handle expectations.

In a pioneering paper in 1961, John Muth, then at Carnegie Mellon University, proposed the idea that rational economic agents' prognosis about the future should be consistent with the economic models used to predict the future. This was the birth of the concept of rational expectations. The underlying principle behind Muth's idea was one of consistency. Sitting today if an agent posited a model of the future that included the agent himself, yet did not behave according to his own model's prediction when the future actually unfolded, he would be irrational. Such irrational agents would surely not be interesting economic agents, it was believed, since they would fall a prey to Darwinian survival. A similar idea animated Harsanyi's extension of game theoretic equilibrium to incomplete games. Thus, economic agents' expectations of the future were encapsulated in the models they built today, and at the same time, the models they built today had to be accurate descriptions of the future, since all agents were rational. In effect, economists had managed to replace the neurobiological mechanism of expectation formation with the logical apparatus of consistency.

2. Rational Expectations in Economics

The effect of rational expectations theory on economics was swift and dramatic. In the deft hands of Robert Lucas, another Nobel Prize winning economist at the University of Chicago, rational expectations theory soon developed into a mathematically sophisticated toolset that could provide fundamental insights into formerly puzzling macroeconomic phenomena like the Phillips curve. The famous Lucas critique posited that estimated parameters which were previously regarded as structural in analysis of economic policy actually depended on the economic policy pursued during the estimation period. In simple terms, models that didn't allow for human beings to adjust their behavior in response to the model rationally could not provide good macroeconomic predictions, because people were bound to alter their behavior until the models in question no longer worked. Finn Kydland and Edward Prescott carried forward Lucas' argument even further, attacking the problem of inflation using the tools of rational expectations theory. And many of the widely influential theories of finance that explain asset prices, starting with the Capital Asset Pricing Model, also rely on the rational expectation logical apparatus.

3. Rationally Expecting a Reopening

Perhaps the biggest question facing policy makers today is the best way to re-open our shuttered economies. This is a fraught issue with many dimensions. At the most basic level, we still remain unsure about the microbiology of the virus, the efficacy of projected vaccines, the timeframes for their commercial availability,

and a host of such variables. Yet come to think of it, is the management of lockdowns that very different from managing inflation? There are multiple uncertainties and unknowns in case of price rise, too, and whether lockdown or interest rate hike, what really matters is altering the expectations of agents.

In case of inflation, the expectations at stake are the rational expectations of agents anticipating their economic future. Only when a central bank credibly manages to signal that it will do all it will take to slay future price rise does the inflation today begin its downward slide. In case of lockdown, the expectations at stake are the rational expectations of agents anticipating their social future. A close look at the spread of the pandemic reveals that only governments that have managed to credibly signal that they will do all it takes to stamp out the pandemic – no matter what the costs – managed to bring the infections under some sort of control.

Credible signaling by governments has taken various forms under the pandemic. At one end, we've had countries like China that have been ruthless in the imposition of lockdowns whenever and wherever a new outbreak has raised its head. At the other end, there have been countries like Korea that have relied more on soft closings backed up by extremely well-managed contact tracing and quarantine efforts. In either case, citizens know that there is a credible plan ahead, and because they factor this into their current expectations, the plan becomes credible even today. On the other hand, countries that have dawdled, or started with one plan and shifted midstream to another, seem to be paying huge tolls.

4. Masking Incentives

Another knotty issue seems to be the wearing of masks. The science seems to indicate that wearing a mask is an effective antidote most likely because it prevents a carrier from spreading the infection to onlookers. However, this justification for wearing masks once again seems to violate rational expectations theory. Polluting industries have known for ages that if they stop polluting it will lead to a cleaner environment. Yet they continue to pollute, because doing so begets gains to the polluters while the costs are borne by the wider society. Such effects are termed "externalities" in the lexicon of economics, and mask wearing in many countries has emerged as a practice associated with externalities. If the only advertised benefit of wearing a mask is the greater social good, it is indeed going to be tricky to convince healthy, rational individuals to don the mask, given the inherent discomfort it causes.

There are many ways out of these tricky situations, however, and economics has been studying them for a long time. One way out of externalities are taxes; thus, polluting firms are taxed for the pollution they cause. For masks, this means strict fines for not wearing a mask, and we've already seen countries like Australia adopt such a path. Another way out is subtle behavioral nudges. If there is a stigma associated with pollution, or an emphasis on

how it destroys local communities, it forces polluting industries to reform. Similarly, if mask wearing becomes a social norm, or if there is attention brought to the fact that wearing masks helps an individual protect his/her younger and older loved ones, this fundamentally changes the dynamics at play.

5. Conclusion

One could go on in this fashion, almost endlessly. Distributing scarce supplies in the absence of well-developed markets is a specialty that economics has worked out in great detail in recent decades under the rubric of Market design. Administration of scarce resources such as hospital beds or ventilators, or even costly medicines, among the vast number of deserving in these times of pandemic can benefit greatly from the insights in market design. Countries have now begun to work out protocols for airspace bubbles – bilateral agreements to allow resumption of flights; but what are the best ways to design these bubbles? Again, vital clues lie in network economics that investigate how one must add nodes to an existing node to maximize everyone's welfare. The list goes on.

There is no doubt that our times have become extremely challenging due to the unprecedented circumstances we find ourselves in. Who would have imagined that we'd have to go months on end holed up in our burrows, in fear of something we cannot even see with bare eyes! Yet, this is also an opportunity because the existing order of things has been put in complete disarray. No one knows what new order will emerge at the other end of the tunnel. Nevertheless, understanding and applying economic principles like rational expectations might be the key separator between the ultimate victors and the vanquished.

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ALUMNI CORNER

Reflections on the financing of Covid-19? Introducing MACRO-Equity and opening Pandora's Box

Arvind Ashta

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There seems to be a certain gusto to the speed at which presidents and prime ministers all over the world have responded to COVID-19. This speed and the magnitude of the action has not been witnessed for any other major killer virus or disease. Along with the lock down of people, the real economy has taken a direct hit. This in turn briefly impacted financial markets which often seem to have a runaway path of their own. Certainly, the fact the American and European lives are being lost (certainly more valuable lives if we use discounted values of expected future cash flows) must have caused a faster reaction in developed countries. Watching the pains taken to save lives in this part of the world, perhaps developing countries have responded with like measures. Whatever the reasons for the mimetics, the availability of global information systems, backed by media solidarity, seems to have its effect. The question we are asking is rather mundane and does not lower our sympathies for those whose loved ones have succumbed to this or any other disease. This mundane question is "Who pays"?

The question of who pays is important because millions of people have been out of work during the last few months and have been promised social security benefits. Without this, and perhaps despite this, thousands of enterprises would or will close. Many of these enterprises were already under-provisioned in 2019 since they are forever trying to match short term financial market expectations. Alongside, we have been told, time and again, that social security regimes in most developed country are in severe deficits and are to blame for our low competitiveness. Therefore, neither the State nor the social security regimes have the funds to finance the stimulus

and pay for all the doctors and nurses who have heroically worked overtime. All the material for hospitals and for transferring the ill from one part of the country to another must be paid for.

While statistics on the daily number of infections and deaths caused by Covid-19 are available from many sources (for example, https://www.worldometers.info/coronavirus/), there is absolute silence on the bill that is being prepared to finance all the emergency action. Even a developing country like India announced that it would spend 266 billion dollars (10% of its GDP) on stimulus measures without indicating where the money is going to come from. In this essay we provide our thoughts on seven established options (developed from Ashta 2020) that are usually considered before thinking of four innovative ways.

Examining seven usual suspects

A first possibility would be to just print more money. This is the approach suggested by modern monetarists, especially in times of unemployment (Wray 2015; Kelton 2020b). The experience on Venezuela of printing more money seems to be that it leads to hyper-inflation accompanying massive unemployment. However, it is possible that Venezuela faces specific external constraints and pressures that keep it from rebounding (Brown 2019). An assessment of modern monetary theory (MMT) shows that it may have more detailed explanation but is not a major departure from the old monetary theory (Mankiw 2020). The problem is that monetarists seem to focus on interest rates and these interest rates are already low to boost effective demand. But with consumers with purchasing power not wanting more goods, the entire increase in money goes to speculative financial markets. This explains why financial markets in developed countries keep booming and why they have returned to their pre-COVID levels despite government concern on the real economy. Following Piketty (2014), the governments seem to have realized that massive redistribution is required. Even USA offered $600 a week to unemployed workers in the COVID period, more than the minimum wage which is closer to $400 (it varies from State to State in the US). The question is who will pay for these stimulus packages. Will it just be printing of money? If so, why hasn't it been done for the last decade?

The middle classes suspect that they will have to pay higher income taxes, a second option. However, as Keynesians would be quick to point out, the effect of this would to dampen private demand and would be in sharp contrast to the stimulus that governments would like to provide. The only possibility is to have very high progressive tax rates on those so rich that they can't possibly spend their money nor desire to invest in productive assets. Joe Biden is thinking along these lines (Buffie 2020). For those countries who are not deducting tax at source, there will be a positive fiscal drag because people will pay tax on income earned in 2019. Therefore, the governments' worries get postponed by a year.

A third possibility would be to raise corporate taxes. However, any move towards this would kill the enterprises that are already struggling owing to the effects of the lockdown. The technology companies that profited from the lockdown would in any case pay higher taxes if we leave tax rates unchanged. Therefore, we would echo the words of wisdom: Let it be. However, insurance companies may be having many hidden reserves if they don't cover lockdowns. Some cooperative based mutual insurance companies will restitute premiums, but the cumulated reserves of many private insurance companies could be taxed using Gandhiji's trustee based concept (Gandhi 2009 [1909]): they are holding the money for society when it needs it.

A fourth option is to look at indirect taxes. Notably, crude oil prices have reduced from about $100 in the beginning of the decade to $70 in 2018 and now to $ 40. If governments just tax the difference between retail prices and crude oil prices, they could make a windfall gain that could largely finance the Covid-19 expenses. For example, if crude prices fall by $30 and consumption is 100 million barrels a day, this finances a trillion dollars per year. Keeping retail petrol retail prices high would also appeal to the environmentalists. Lowering crude prices further is possible if the cartel is broken. Of course, businesspeople don't like high indirect taxes, but they don't like high direct taxes either. Some economists feel that indirect taxes create are regressive and create more distortions, while others feel they are cheaper to collect, but most countries' economics are so distorted by public policy that the efficiency debate is hardly heard (Atkinson 1977; Kaplow 2006).

Fifth, we would strongly advise the State to avoid stimulus packages aimed at providing subsidies to firms and bailing them out. Shareholders, including pension funds and sovereign funds who invest in shares, knowingly take risk and should bear risk as far as bankruptcy is concerned. The troubled enterprises need to raise fresh equity capital issued at a lower share premium. Thus, existing shareholders lose marginally. The IPO markets should therefore boom and instead of paying taxes, people should be investing their savings in corporates with risky returns. If the government invests equity in companies, the danger is that it will lead to inefficiencies of bureaucratic control and later, invariably, the taxpayer bearing the burden of these inefficiencies instead of the shareholder. Higher taxes lead to depressed economies later.

Having seen that governments should not subsidize firms, but should instead focus on stimulus packages aimed at consumers, the question remains how to finance this and whether public deficits should be financed by debt, a sixth possibility? A first argument in favour of taking debt is that we would have overcome the immediate problem, and a more powerful economy could pay for the debt later. Second, we have already mentioned the modern-day monetarists who feel that we just don't have to pay money back (Wray 2015), and indeed there is a call for perpetual bonds. Third, arguably, a bigger public debt will lead to a bigger public sector and collective consumption may be more efficient. While we can understand, using this logic, that countries like Rwanda may need a bigger public sector, the question is how big a public sector is enough before we go into communism.

While one can argue that the USA could go from a third of GDP to half (following France), how far should France go? Where does one stop? If the state goes from 50% to 99%, who are the 1% who own all the public debt? There is a fourth argument in favor of debt: as pointed out by Kelton (2020a), public deficits mean private surpluses (assuming third countries are in balance).However, she also points out that taxes are required to pay interest and local/State level budget expenditures (as opposed to federal).

Let us assume that there is no problem in having public deficits when interest rates are zero or negative. The problem comes when interest payments on public debt eat up a major part of a country's tax collection, and for many developing countries and some very advanced countries, this is the problem. The question we are raising is who gains when there are public deficits and the government issues interest-bearing bonds? Here, Ms Kelton is quite satisfied with wealthy people charging interest to finance public deficits, interest which will be paid by taxpayers (Kelton 2020a). And, in my opinion, safe almost risk-free interest to the wealthy with low transaction costs, rather than higher-risk loans to millions of middle-class tax-payers with much higher transaction costs of initiating, monitoring and enforcing. So, if you notice the symmetry in her graphs (see the video, 29'), all the public deficits are leading to huge private profits (probably for a few). And if you combine Wray's and Kelton's work, it means a very miniscule part of the private sector will exist and will hold the debt of the 99%. This critique is not a critique of MMT but of all those who recommend perpetual deficit financing. Keynes had it right: deficits in bad times and public surpluses in good times. True, the MMT is also suggesting printing money in bad times and public surpluses in good times, but this has been forgotten and politicians follow the growth mantra in good times and bad, to the profit of a few.

Before we proceed further, let us go back to the insight of Ms Kelton who indicates that public deficits are matched with private surplus or third country surpluses. So far, we had assumed a balanced external sector. But imagine if public deficits are leading to surpluses in other countries, instead of private surpluses in the home country. Can this explain better the problem of Venezuela and Argentina? Can it explain Donald Trump's anguish that the Chinese will enjoy the surpluses from American public deficits which he needs for his re-election?

Finally, a seventh solution is charity from rich individuals or from rich states to poor states or those that are suffering. After all, if rich individuals can finance the reconstruction of Notre Dame, they could surely come forth to pay for the suffering of the millions affected by Covid-19. Indeed, some research shows that donation-based crowdfunding has grown enormously in the last few months (Moine and Papiasse 2020). The problem is that all this crowdfunding has collected only a few million Euros, a far cry from the billions required. Arguing for richer States to finance others also has its limitations because very few countries are even willing to contribute 1% of GDP as foreign aid, but mostly to exert geopolitical pressure to serve their ends. The recent plight of Pakistan vis a vis China's inflating the costs of financing of their roads is just a case in point (Haqqani 2020).

Four alternative innovative solutions

Here we look at four innovative solutions which are less talked about or totally original: Pandemic bonds that have been tried by the world bank but need to be improved; equalization payments that exist in federal countries but yet to be used in Europe; the Tobin tax that has long been suggested but never implemented; and Macro-equity that is being suggested here for the first time and should raise political philosophy questions or democracy versus meritocracy.

First, there are pandemic bonds, a special case of catastrophic bonds. These bonds are sold by a body such as the World Bank to investors who get high interest rates of 5% to 20% over LIBOR. This is really a lucrative offer in a world with close to zero interest rates in much of the world. The high return of course comes with a risk: in the case a catastrophe such as the pandemic does materialize, the debt is converted to charity. The problem with the pandemic bonds is that only 250 million dollars was raised, grossly insufficient to finance 64 poor countries to which it was directed: about three million dollars per country. At the same time, if the black swan event doesn't happen, some people gain huge amounts (Hodgson 2020).

Second, little known to unitary states such as France, federal countries like India, Canada, USA and Australia have shown that some amount of equalization payments are essential for peaceful cohabitation and maintenance of the federation (Ashta 1998 [1996]). If we are dreaming of a solid Europe, it must reflect solidarity, an opinion clearly emerging from the experience on the Greek crisis (Ashta and Sinapi 2017). Without this solidarity, and without everyone gaining from trade, either through profits or through equalisation payments, a European Union with open markets cannot thrive. This response would then acknowledge those who suggest that Germany or northern European states, who are richer than the rest, pay for those in southern Europe. Going one step further, the innovation being suggested here is that if we want northern hemisphere countries to continue access to developing country markets, we need equalization payments that allow the gains from trade to be shared. These equalization payments are not charity, but recognize that stronger regions and countries get better gains from trade for both exports and imports and need to reimburse part of the gains to the country that loses relatively.

Third, we would like to revive the discussion on the Tobin Tax (Raffer 1998). If financial markets are booming again despite a fall in the real economy, it is clear that all increase in liquidity is being used for speculation. To break this speculation and release the money for more constructive purposes, we come back to the proposal of the worldwide Tobin tax attributed post-mortem to a comment the Nobel Laureate James Tobin had made when alive. A small tax of 1% on all financial transactions is often considered sufficient to break the speculative momentum and sufficient to finance all expenses for ushering in the green economy. They may be sufficient also

to finance crisis such as COVID. At least, the tax would direct the debt taken or the money printed to the uses for which this is being done.

A major problem with such a tax is financial capital would flee the country that imposes it. However, it can work if the whole world were to impose it. So, once again we find that we need a world federation with taxing powers, and which distributes the proceeds of the tax in a manner that is economically and socially healthy. This means equalization payments from the North to the South and perhaps redistribution towards the poor who have higher marginal propensities to consume and, thus, higher propensity to stimulate a depressed economy.

Finally, we come to macro-equity. Recently, George Soros suggested perpetual bonds because these are equity like (Soros 2020). However, such bonds would make a country perpetually indebted to a rich investor and his descendants. Besides the morality of such a situation, it means that if these bonds are issued at 1% p.a., someone makes money risk-free. Of course, if these are fixed interest rates, there is some risk because if interest rates rise the investor loses relatively but George Soros is smart enough to make it a floating rate spread. Nevertheless, why not go one step further and make the instrument totally equity like? Let's call it macro-equity. Rich investors would then finance a country and get shares in return. They would get a dividend of say 2%. The hitch is that they would be entitled to this dividend only in times of surplus and not when the State has a public deficit. However, if they want their size of equity to grow, they would want the State to be in deficit. This then leads to a countervailing power: investors would want alternate periods of deficit and surplus. They could then be motivated to usher in proper Keynesian politics of surplus in boom periods and deficit financing in crisis. This would correct the tendency for banks and rich investors to insist on debt for financing both deficits and surplus, in the pursuit of even higher growth.

Although this suggestion sounds brilliant, it comes with a moral caveat. The rich investors would then own the country. And if the rich investors are corporates, the large corporates may own the country. Even a pretence of democracy may not be maintained. This means that laws would be ushered in for the protection of those who have the shares. This then opens a pandora's box on all questions relating to equality, solidarity and fraternity.

As we mentioned in the title, the purpose of this paper is to initiate reflection. No clear cut solutions are being proposed.

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What the Reserve Bank's Financial Stability Report portends?

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Central banks are positioned at the apex of the financial system. They possess enormous power to create money "out of thin air"; for example, using electronic accounting entries, the New York Federal reserve built up a balance sheet of nearly 4.5 trillion dollars through quantitative easing, post the Global Financial Crisis. COVID-19 and associated monetary stimulus measures have seen further balance sheet expansion of most major central banks, close to the GDP of some economies.

The Reserve Bank of India, by virtue of its independence and professionalism, carries tremendous respect in the financial markets. Stories are legion of the governors of RBI fiercely protecting their independence from their political masters, from YV Reddy to Subba Rao, Raghuram Rajan to Urjit Patel. Much of this institutional credibility has carried forward to the current dispensation, headed by a former senior government official, a significant difference in profile from the economists/technocrats who led the central bank in the past. A non-controversial relationship between the central bank and the government may better suit today's turbulent times for the COVID-19 economy and the financial system, in contrast to the frequent tussles played out in the media in the past. The tussle is best exemplified by the fiery speech of the former RBI Deputy Governor Dr. Viral Acharya about "governments that do not respect central bank independence sooner or later incurring the wrath of financial markets, igniting economic fire, and coming to rue the day they undermined an important regulatory institution". With an impassive head at the helm now, the media will have to look elsewhere for such headlines!

Apart from its power to create bank reserves, the central bank plays several critical roles in India. It is the banker to banks, banker to the Government of India and its debt manager, issuer of currency, regulator and supervisor of banks, manager of the country's foreign exchange reserves which today top nearly half a trillion dollars, conducting monetary policy, etc. For the general public, a less well-known responsibility of the central bank is maintaining financial stability.

The Reserve Bank's annual Financial Stability Report is an eagerly awaited document among the financial market participants and the media. In today's COVID-19 scenario, the central bank's views on financial stability are, therefore, all the more critical. This article seeks to examine the latest report from RBI and the messages that it carries.

Disconnect between financial markets and the real economy

Stock market indices have recovered most of their losses, jumping by about 50% from their March lows and are just about 10% of their 2020 pre-COVID highs. Corporate bond markets that went through a selloff and tremendous illiquidity have also since gained, with a collapse in bond yields, from their March highs. Bond prices and yields move in the opposite direction.

According to RBI's report, domestic economic activity virtually came to a standstill in April 2020; however, for several sectors, the contraction became less severe from May 2020. Early data arriving for June 2020 indicate some plateauing much below the pre-COVID-19 levels. Agriculture and allied activities, however, showed continued resilience on the back of all-time production highs and huge buffer stocks of rice and wheat. The above-normal rains predicted for 2020-21 also boded well for agricultural production. PMI (Manufacturing) has also consistently improved from 27.4 in April to 30.8 in May and further to 47.2 in June 2020. But it has shrunk again to 46.0 in July 2020. For the fiscal year as a whole, there is still heightened uncertainty about the duration of the pandemic. As such, the downside risks to growth remain significant and full restoration in economic activity would be contingent upon the support for robust health infrastructure, recovery in demand conditions and fixing of supply dislocations, in addition to the state of global factors like trade and financial conditions.

Understandably, the report does not paint a totally dire scenario, but the reality on the ground is much bleaker. Though the government at the centre has, by and large, lifted the lockdown in many sectors (though not all), many state governments have been much more conservative. Reopening and closing again repeatedly has led to uncertainty for businesses. Public transportation on which the workforce depends is yet to commence in many states. The migrant workers who went back to their home towns and villages en masse, are yet to return in strength. Supply chain domestically and internationally is still a far cry from the pre-COVID days. Layoffs and salary cuts/freeze, uncertainty on employment and lack of significant direct fiscal stimulus portend unprecedented demand destruction. Tourism, aviation and hospitality sectors are still in lockdown mode, even if some partial relaxations have been made, with the resumption of limited flights. But with many states requiring air travelers to quarantine and travelers' fear of catching the virus, travel is still muted.

RBI's report devotes more space and attention to the economic devastation globally while being relatively cautious on the impact of Covid-19 on the domestic economy. The RBI Governor says that for the year 2020-21 as a whole, real GDP growth is expected to be negative. That could well be an understatement.

A rare current surplus

The collapse in oil prices, with crude futures even trading at a negative price for a brief period, is sweet music for India, a significant oil importer. Prices have since rebounded to about USD 44 per barrel, but are significantly below pre-COVID levels. Fall in volume in oil imports along with lower prices, negligible gold imports, etc. have led to a rare current account surplus. The surplus may not be a cause for celebration entirely, as a fall in imports is a sure sign of contraction in the economy.

Meanwhile, the consumer now pays more than pre-COVID prices for petrol and diesel as the government has taken away the benefit of falling international oil prices, through an increase in taxes. If international oil prices rise further or the rupee depreciates, the government's windfall on account of additional petroleum product taxes may reverse; any further increase in fuel prices will be both inflationary and pinch the pockets of consumers already suffering from weak earnings.

Central government finances

In another understatement, the Financial Stability Reports states that Central Government finances are likely to "suffer some deterioration'' in 2020-21. With both direct and indirect tax revenues falling significantly, and additional government expenditure on COVID relief (though modest in comparison to advanced economies), coupled with contraction in GDP, published fiscal deficit numbers of both the Centre and the states this year will be nightmarish. On top of this, a large part of the deficit does not sit on the central government's balance sheet directly but figures on the balance sheets of public sector entities like the Food Corporation of India, power finance companies, the public sector airline, credit guarantee trusts etc. both on the balance sheet and off-balance sheet. Contingent liabilities for the centre had been growing even in the pre-COVID period through schemes like Mudra; but they will now be exacerbated by schemes like the guaranteed emergency credit line of Rs 3 lakh crore to the MSME sector. When these contingent liabilities fructify, this will impact the fiscal deficit, a few years down the line. India is in good company here, with the likes of the underfunded Social Security Scheme of the US government. For Individuals, corporates or governments, the favorite way of dealing with a problem is to postpone the day of reckoning, more so for current governments and their elected officials, who can hope to be no longer around when the chickens come home to roost.

Loan moratorium, restructuring and asset quality of banks

On a similar vein, the central bank has permitted loan moratorium to borrowers till August 31, without a downgrade of loans into non-performing category. Nearly half of the customers accounting for around half of outstanding bank loans opted to avail the benefit of the relief measures as on April 30, 2020. These numbers have since improved. But some analysts have looked askance at the declared moratorium figures, as certain lenders

may have classified loans where installment may have been paid for say the June month, but with previous installments of April/May unpaid, as loans not under moratorium. If banks have adjusted the additional facilities on account of the guaranteed emergency credit line towards the outstanding loan moratorium, that would further paint an unduly positive picture.

The full picture of the asset quality of banks will be revealed when the loan moratorium is lifted on August 31. Even here, to push the problem even further down the line, there has been a growing clamor to allow restructuring of loans, without downgrading the loans to non-performing assets. On 6 August 2020, RBI has announced such a loan "resolution" scheme with a Committee appointed to come out with the parameters for carrying it out. While this will undoubtedly help borrowers under stress for reasons beyond their control (COVID-19) and forestall recovery actions from banks, "extending a loan and pretending that all is well" merely kicks the proverbial can down the road. The full impact of COVID-19 on the balance sheets of banks may be known only years down the line. Everyone, including borrowers, banks, the central bank and the government, credit rating agencies, and financial market participants, can sleep easy until then!

The stress tests of the RBI indicate that the GNPA ratio of all scheduled commercial banks may increase from 8.5 percent in March 2020 to 12.5 percent by March 2021 under the baseline scenario. If the macroeconomic environment worsens further, the ratio may escalate to 14.7 percent under the very severely stressed scenario. With RBI permitting the aforesaid loan resolution/restructuring, it may moderate some of these figures.

Capital adequacy

Capital adequacy and asset quality are two sides of the same coin. As any risk manager or central banker will tell us, it is all about adequate capital, when it comes to banks, especially in today's extreme scenario. Capital from shareholders and others (AT1 bond and Tier2 bond investors), provides a buffer to depositors against credit losses. Stress test results indicate that five banks may fail to meet the minimum capital level by March 2021 in a very severe stress scenario, assuming no further recapitalization or mergers. Furthermore, 23 banks with a share of 64.5 percent in total assets might fail to maintain the required capital to risk-weighted assets ratio (CRAR) under an extreme shock scenario, according to RBI's Financial Stability Report.

Even if these numbers don't play out in the immediate future and with the scenario being further muddied by the loan restructuring scheme, failure of even one bank may pose a contagion risk to the banking system. The government/central bank-led rescue of Yes Bank is an indicator that no bank will be allowed to fail, barring cooperative banks. But rescue missions come with a cost, as this will pose further stress on the balance sheet of the bank(s) bailing out such failing entities.

Private sector banks are on a massive capital raising spree, while the owner of the public sector banks (the government) has been silent on capitalizing them. The Financial Stability Report has not touched upon this subject, despite calling out possible capital shortfall at public sector banks. However, the RBI Governor alluded to this in a speech on July 11, 2020, stating that a recapitalisation plan for public sector banks has become necessary.

For the five years between 2015-16 and 2019-20, the Government had infused a total of Rs 3.08 lakh crore in public sector banks. The infusion was necessitated due to pre-COVID NPA's on account of large corporate borrower defaults. NPA's and resultant taxpayer funded bank recapitalization seems to be a never-ending story for public sector banks, with COVID impact resulting in fresh capital requirement running potentially into a few lakh crores again. We may yet again see the recapitalization bond route being adopted by the government, which is a swap mechanism and cash neutral, with only interest payment on the bonds having a fiscal impact.

Perhaps once things revert to normalcy post COVID, talks of bank privatization will gather speed, though that may not be a panacea. Private sector banks have not exactly covered themselves in glory, with the private sector Yes Bank's bailout funded largely by tax paper owned SBI. Again India is in good company, with large scale government-sponsored bailouts of private sector commercial and investment banks in the US and Europe at the peak of the Global Financial Crisis. In the interest of financial stability, no economy can afford to see even a mid-sized bank fail, for fear of setting off a contagion effect on the rest of the banking system.

RBI's Financial Stability Report of July 2020 assures us that the financial system in India remains sound while cautioning on the need to stay extremely watchful and focused.

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Dissecting the COVID crisis

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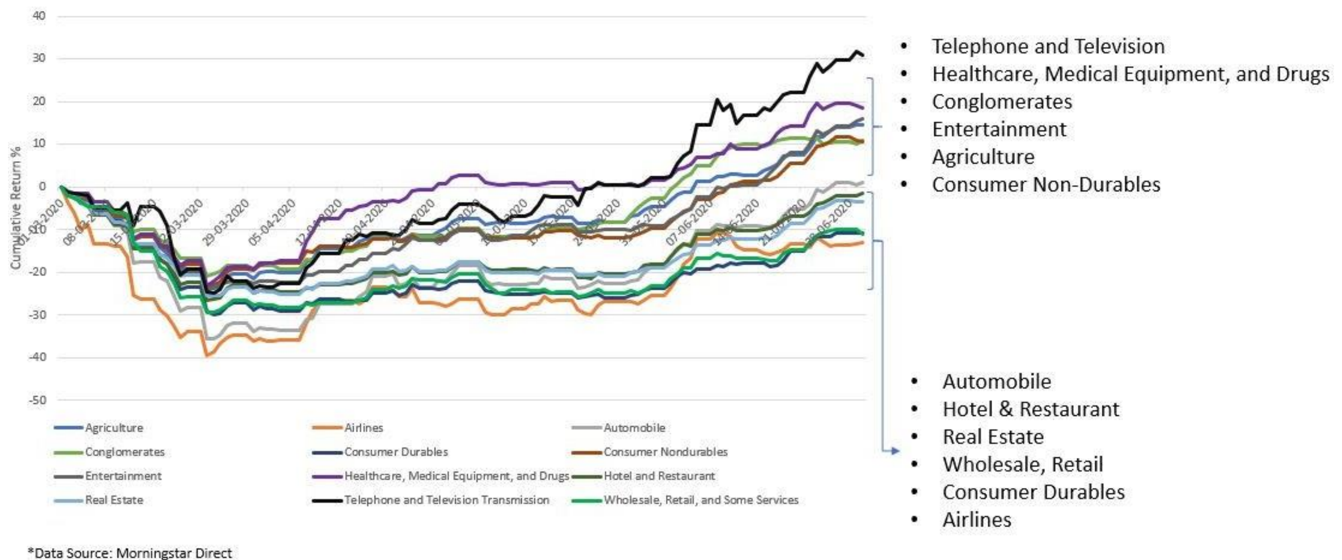
Subramanian and Felman (2019) had come out with a policy piece discussing what has been ailing the Indian economy in recent years. Their focus was on the slowdown since 2018. In this paper, the ex-CEA had argued that India suffered from four balance sheet crisis that started with the twin crisis on bank and infrastructure firms balance sheets, which later percolated to the balance sheets of NBFCs and real estate sector. The authors in this policy piece had feared that a temporary exuberance in the economy could put the policymakers back into a state of paralysis, as had happened time and again. The first of the twin balance sheet crisis had been so quickly forgotten once the economy picked up around 2014 on the back of unsustainable credit growth by NBFCs to the real estate sector. The same mistake had repeated itself since no effective regulation had resulted from a similar story of banks and infrastructure sectors. Little did these authors know that the derailment of any regulatory step would instead be caused by an unthinkable risk that was about to hit the world from its epicenter in Wuhan.

The COVID crisis has given an already battered Indian corporate sector a debilitating blow. Given that it is an ongoing crisis and the firms' financial results have only started trickling in, it is too early to comment about the magnitude of damage it could have had. The only high-frequency data point that could be an (imperfect) indicator of relative positions of the industry is the stock market return i.e. if you are a strong believer in the rationality of Indian capital markets. Figure 1 shows the relative performance of the various industry portfolios formed on 1st March and held until the end of June. The top and bottom 6 industries have been shown, and they are the usual suspects of this crisis. The worst-hit industries include automobile, hotel and restaurant, real estate, wholesale and retail, consumer-durables and, of course, airlines. The list should worry us even more because most of these listed industries were already doing

poorly before the crisis and are also the major employers.

Figure 1: Industry Aggregated Cumulative Return from 1st March 2020 to end of June 2020



WHAT MAKES COVID-19 CRISIS DIFFERENT?

COVID-19 is a very unique crisis in the sense that it has two channels of impact on the economy - the first is due to the health consequences leading to a dip in productivity at a very large scale, and the second is through the forced lockdowns. There has thus been a sharp drop in demand within months of the start of the crisis. The disproportionate impact of thecrisis on sectors that are bulk-employers does not give much confidence in v-shaped recovery in the medium term because the demand may not go back to the pre-crisis levels for a long time. In comparison, the 2008 sub-prime crisis started as a supply-driven slowdown due to the drying up of credit in the economy. In fact, studies such as Duchin et al (2010) & Joseph et al (2020) have shown that the firms which had high cash reserves completely weathered the 2008 crisis by relying on their internal capital to sustain investments. A similar exercise for Indian firms during the COVID-19 crisis tells a very different story.

HOW DID CASH RICH FIRMS PERFORM?

Could the cash reserve of the listed Indian firms before the crisis give some confidence to the investors? The answer seems to be no. First, Table 1 shows the top 5 and bottom 5 sectors in terms of cash to assets ratio. Mining, recreation, construction, manufacturing, and real estate were the worst in terms of cash reserves before the crisis, whereas professional services, agriculture, wholesale and retail, transportation and healthcare appear to have had a healthy cash reserve. There does not seem to be a very high correlation

between this list and the best/worst performing industries in the capital market.

Table 1: Top 5 and Bottom 5 Sectors by Cash Holdings as of March 2019

Top 5 Sectors	
Sector	**Average Cash-Asset Ratio**
Professional, scientific and technical activities	2.7
Agriculture, forestry and fishing	2.4
Wholesale and retail trade	1.3
Transportation and storage	1.1
Human health and social work activities	1.0
Bottom 5 Sectors	
Sector	**Average Cash-Asset Ratio**
Mining and quarrying	0.3
Arts, entertainment and recreation	0.3
Construction	0.3
Manufacturing	0.2
Real estate activities	0.1
*Data Source: Prowess	

The most interesting result, though, is shown in Figure 2 below. The figure very clearly shows a complete disconnect between the cash reserves before the crisis and the cumulative returns during the crisis (from March 2020 to June 2020). The portfolio of firmsat the bottom quintile in terms of cash to assets ratio seems to have outperformed all the other portfolios.

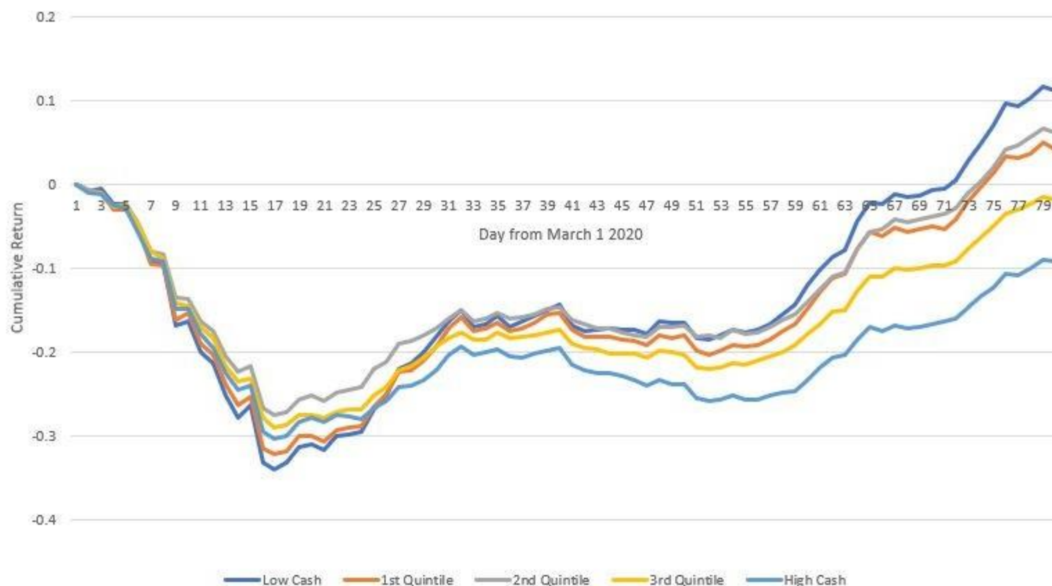


Figure 2: Average Cumulative Return for Quintiles based on cash balance in March 2019

The above figure tells a great deal about the nature of the current crisis. It is currently a demand-driven slowdown, and thus the cash reserves of the firms are not at all handy in the short term. Even if the firms are sitting on a pile of cash, what is the rationale for investing when there is no demand? This crisis is, in fact, very industry-specific and have negatively affected some industries disproportionately.

Will cash help at all then?

Although the current data say otherwise, cash is, of course, going to be an essential asset in the long term. First, the obvious implication will be on the time that it buys for the firms to keep itself going until the demand starts to pick up after the economy opens. Second, this demand-driven crisis will ultimately lead to a drying up of credit as the banks start facing the heat and then the cash will come handy as it did for firms during the sub-prime crisis. The capital market does not seem to have factored those in at the current stage.

REMEDIES?

A drop in the real demand in the economy due to lockdowns leaves policymakers with very limited options. They are currently faced with a tough choice between saving lives and saving jobs. Add to that the existing malaise in the Indian banking system, which does not allow much room for temporary forbearance. There are two difficult options for the policymakers – first, saving the large employers which are not necessarily the most efficient firms in the economy, and second, start a temporary unemployment benefit while allowing the most inefficient firms to fail – and they are mutually exclusive given the limited resources with the government. This decision could probably be driven by the expected length of limited movement of labor between states. A longer hiatus would call for unemployment benefit schemes; a shorter one would call for a temporary forbearance which could keep the employers floating until they later absorb the currently unemployed workforce.

A heterogeneous impact on the industries also calls for careful consideration of allocation of government resources, and policy targeting towards specific industries. It will come down to a welfare maximization choice, which is the central objective function of the government. Another focus should be to ensure that the firms being saved have been considerably impacted by the current situation and are not the ones who were already doing badly before the crisis and are just plain inefficient.

CONCLUSION

The current crisis that we are going through has probably not been seen by a few generations, and hopefully will not be seen again for a few generations. We are currently in the extreme tail end of the risk distribution and, to say the least, none of the countries was prepared for a crisis of this scale. India went into this crisis with an already depleted economy with growth that had fallen to 4-5% in the last few quarters. The corporate sector was especially in trouble with about 40% of the firms having an interest coverage ratio of less than 1 (Subramanian and Felman 2019). COVID-19 has given it a death blow, specially to a subset of industries which were already doing badly before the crisis hit. In such a bleak scenario, the remedial steps must succeed a careful analysis of the impact and the needs of specific sectors and their average financial positions. There is no substitute for a data-driven approach which also calls for researchers to step-up their game on India-focused policy research.

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STUDENT CORNER

M&A in times of COVID-19

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2020 would have been a remarkable year, even without the ongoing COVID-19 pandemic. Fiercely contested US presidential elections, the much-debated withdrawal of UK from the EU, simmering trade tensions between US and China, attempted restructuring of the Indian economy – any of these could have potentially impacted the regional and global economies. However, these factors pale in comparison to the impact of the COVID-19 pandemic on the world economy and financial markets. The wildly swinging stock markets and the erratic capital flows are a reflection of the impact of the pandemic on the real sectors of the economy and the deal-making activity therein. While M&A activity is primarily attempted for realizing synergies and pursuing inorganic growth, factors such as business & industry outlook, financing ease, liquidity, and investor optimism play important facilitating roles. Below is a brief discussion on the impact of the pandemic on global and regional M&A activity with a sharper focus on the trends in Healthcare, CR (Consumer & Retail), TMT (Technology, Media & Telecommunications) and FIG (Financial Institutions Group) sectors.

A comprehensive synopsis

Globally, M&A transactions worth $901.6 billion were signed in 1H20 (First Half of the calendar year 2020), a 52.7% decline compared to the $1906.1 billion deal signings in 1H19. [1] Volume of transactions declined by 32%, from 10,203 to 6,938. [1] This implies a dip of over 30% in average deal value, from $187 million to $130 million. Key highlights of the global M&A activity in 1H20 are as follows:

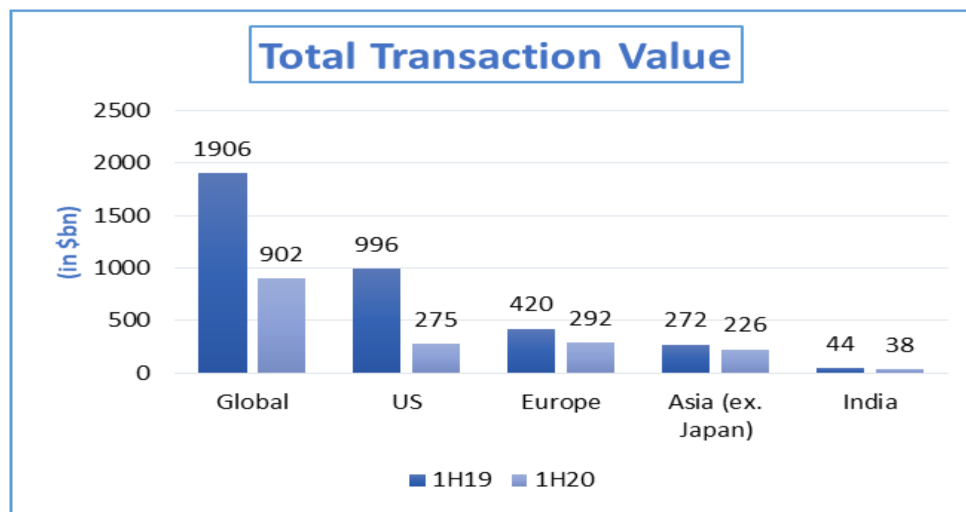
i) Regional disparities in the spread of the virus and its economic impact led to the creation of near-global parity. The market share of the United States declined drastically while the rest of the world saw its global market share increase.

ii) Large, high-profile deals (higher than $2 billion) suffered the most with a decline of about 66% while smaller mid-market deals were less impacted with a fall of 24%. [1]

iii) Cross-border transactions saw the steepest fall, while domestic consolidation became more prominent.

iv) Industrials and Chemicals was observed to be the most active sector, closely followed by Financial Services. Consumer and Leisure sector was badly hit, with an almost two-thirds decline. The Energy and Utilities sector too was strongly impacted as commodity prices reacted sharply when energy demand dried up.

Although M&A activity struggled, a surge was observed in debt and equity fundraising. L22everaged loans and high yield bond issuances rose notably.



Source for data: http://www.mergermarket.com/pdf/MergermarketFinancialLeagueTableReport.Q22020.pdf

Highlights by Region

The United States

M&A activity in the US declined drastically. There were 2139 deals worth $274.5 billion signed in 1H20 as opposed to 3174 deals worth $996 billion in 1H19. [1] A surge in deal terminations and withdrawals was observed. Reportedly, deals worth $103 billion were terminated in this period. [2] Across the spectrum, sectors ranging from TMT to Real Estate were affected. Connecticut headquartered Xerox's hostile bid for California based HP and Japan-based Softbank's bailout investment in New York-based WeWork are two of the biggest scrapped deals. A far higher amount of deals could have been terminated because of the inability to finance the transactions had the Federal Reserve not stepped in and flooded the market with liquidity. Higher value deals were particularly affected and the average deal size fell from $314 million to $128 million, a whopping 59% decline. [1] The market share of the US fell by more than 20 percentage points, from over 50% in 1H19 to 30% in 1H20. [1] This decline is not only due to the economic impact of lockdown but also because of rising political uncertainty triggered by the looming presidential elections and the widespread protests against social and racial injustices. Corporate

acquirers were the hardest hit and strategic acquisitions declined by 75% in 1H20 vis-à-vis 1H19. [1] Private equity buyout activity proved to be more resilient, primarily because of abundant liquidity and dry powder (estimated to be $1.7 trillion). [3] PE activity saw a shift towards transactions involving direct lending, Special Purpose Acquisition Companies (SPACs), and Private Investment in Public Equity (PIPE).

Europe

European M&A fell to its lowest YTD deal value in over a decade. 1H20 saw cumulative European deals worth $291.5 billion, a 30.6% dip from the 1H19 value of $419.9 billion. [1] Cross-border transactions were the worst affected, with both European inbound and outbound activity suffering. Going forward, regional consolidation is anticipated as firms look towards exploiting synergies to weather the storm. Financial sponsors are expected to be amongst the front-runners in reviving deals as European economies begin to open up. PE funds are anticipated to capitalize on corporate carve-out opportunities as large multi-business firms pursue divestitures to focus on core competencies.

APAC

Asia (ex. Japan) was relatively least affected. The region noted a 17% fall in total transaction values, from $271.8 billion in 1H19 to $225.6 billion in 1H20. [1] Asia's market share rose by more than 10 percentage points to 25% to 1H20. [1] Signs of recovery became visible towards the end of the second quarter despite the weak global economy and growing geopolitical tensions. The following are the major reasons behind the optimistic, recovering M&A markets:

i) China and Hong Kong, which account for the majority of deals in Asia, are returning to economic growth as the first wave of the COVID-19 pandemic ended in these regions.
ii) Expansive monetary policies are spurring financial transactions, despite central banks' efforts to redirect the liquidity towards the real economy.
iii) China-based, US-listed companies are increasingly going private amidst threats of the US restricting such firms' access to US capital markets.
iv) Low valuations are driving firms to share buybacks and subsequent delisting from the Hong Kong Stock Exchange.
v) The Chinese government is pursuing opening-up policies and attracting strategic investments from the European Union.

India noted a relatively modest decline in the total value of signed deals, from $44.4 billion in 1H19 to $38.1 billion in 1H20. [4] Nevertheless, this total deal value marks a 3-year low. The deal volume fell by more than 22%.

[4] Contrary to the global trend, the average Indian deal size witnessed a rise. The United States was the most active foreign acquirer in India in terms of both volume and value. Outbound M&A activity was the worst-hit plunging to its lowest level in a decade after almost 75% fall from a year ago. [4] The majority of deal-making activity was concentrated in the Energy & Power sector, followed by Telecommunications and Financial Services.

Expected impact on ongoing and new deals

Firms would likely focus on their immediate health and liquidity position rather than pursue inorganic growth. Financial sponsors would simultaneously concentrate on strengthening and saving existing portfolio companies while also initiating new buyouts. Transactions involving rescue deals, restructuring, distressed sales are likely to increase. All stock transactions are expected to dominate as this structure allows for both parties to benefit in the upside as the economy recovers. Although firms might want to adopt a conservative approach and focus on cost-cutting followed by organic growth while they confront the demand and supply disruptions caused by the pandemic, below rationale points towards the emerging opportunities for M&A in present times:
Strategic M&A transactions seem likely in e-commerce and healthcare as firms are uncharacteristically amenable towards merging resources and capabilities in the pursuit of healthier balance sheets, lower fixed costs and a larger consumer base. Opportunistic acquisitions would be viable in sectors such as retail, oil & gas, travel & tourism, etc. that have faced the harshest brunt of the virus. Even fundamentally strong firms in these sectors are at remarkably low valuations. These industries are expected to bounce back once the spread of the virus is contained and lockdown is lifted. Declining valuations during periods of economic doldrums create windows to pursue deals that create long term value for firms with strong balance sheets. Deal premiums come down and assets that target firms had earlier been reluctant to sell may become available. Firms can focus on integrating the target during the downturn and then fully benefit from the ensuing synergies in the recovery periods. Excess liquidity may be best utilized to pursue accretive acquisitions in scenarios where share buybacks or dividends are curtailed. Regulators are likely to be much more tolerant of larger (domestic) M&A transactions in many industries to preserve the health of the economy and jobs.

A glimpse of the expected impact on various facets of a transaction

Deal timelines: Transaction timelines are expected to be significantly lengthened for both existing and new deals because of the following factors: i) Negotiations will take longer due to logistical constraints. ii) Due diligence will become challenging due to social distancing norms and difficulty in plant or factory visits. Pandemic specific due diligence involving business continuity, supply chain vulnerability, employee claims, termination or suspension of contracts by counterparties, force majeure provisions, etc. will assume paramount importance. iii)

Governmental approvals, third party consents, and other closing logistics will be subject to even longer regulatory delays.

Acquisition funding: The volatility in the financial markets has created unexpected challenges for transactions that depend on third-party financing. Following will be the key contentions about debt financing: i) the willingness of lenders to underwrite new financial commitments, ii) challenges faced by lead lenders in syndicating the debt, iii) the possibility of an increase in pricing and imposition of stricter financial covenants, iv) sellers negotiating a reverse break-up fee for a 'financing failure' on the part of buyers, etc.

Deal pricing: Target valuations would be re-evaluated in the face of uncertainty with respect to revenue and earnings expectations. Purchase agreements would be restructured to include performance-based purchase price mechanisms such as earnouts. The riskiness of fixed pricing arrangements, such as locked box mechanisms, would increase, thus impacting the valuations.

Termination clauses: MAC (Material Adverse Changes) and MAE (Material Adverse Effects) clauses are unlikely to be triggered because of definitional language that tends to exclude general economic, financial, and regulatory conditions applicable to markets and industries as a whole. Though Indiana based REIT Simon Property Group terminated its planned $3.6 billion acquisition of Michigan based Taubman Centers on the grounds of Taubman having suffered an MAE, Taubman contested the termination, and the dispute is now in court. [2] Debates over 'disproportionate' effects and 'durationally-significant' impacts make it likely for the MAC and MAE clauses to be used as leverage and as a basis for renegotiating deal terms, rather than as a device to terminate the deal.

IT Emphasis: Due diligence on IT requirements will become increasingly crucial while picking potential targets or even while fundraising. Companies with robust IT systems and business continuity plans would attract higher valuations even in traditional sectors such as manufacturing, industrials, and consumer retail.

Pandemic impact and trends in major sectors

Healthcare

Prima facie, it appears that the ongoing pandemic has severely affected the one sector at the frontline of the crisis – the healthcare & life sciences sector. M&A deals in the sector fell to $12.3 billion in Q2 2020, a 60% drop from the first quarter of 2020. [5] Relatively higher activity was observed in the biotechnology and pharmaceutical sub-sectors; of the 20 largest deals in the healthcare sector, 13 were in these two sub-sectors. [5] US PE major Carlyle announced the acquisition of a 20% stake in Mumbai based Piramal Group's proposed pharmaceutical business subsidiary for about $500 million. [6] Piramal plans to deploy the investment as growth capital for the pharma business and to tap attractive acquisition opportunities within and outside India.

Due to the postponement of elective care and reduction in hospitalizations for even severe non-COVID-19 related conditions, hospital revenues have plunged. Simultaneously, health organizations faced supply chain and workforce disruptions. The pandemic is creating a buyer's market in which stressed hospitals are forced to sell assets for vital cash infusions. Resultantly, in-market collaboration is expected to flourish as independent hospitals share best practices and coordinate to optimize care and maximize operational effectiveness.

Consumer and Retail (CR)

The CR industry has been one of the most impacted sectors. Understandably, the effect on non-discretionary, essential vendors, and luxury retailers has been different. Let us take a brief look at the two.

Food and mass-merchandising

Increased consumer awareness and preferences towards healthier foods and lifestyles, particularly in the face of the pandemic, may make the assets in this space more valuable. Smaller, more 'natural', 'organic' brands across categories may become attractive acquisition targets for larger manufacturers.
The economic downturn and the resultant financial uncertainty is increasing consumer switching to private-label, value-oriented products. Larger companies may consider acquiring smaller 'value brands' to protect and enhance their category market share in the face of shifting consumer choices.
Demand volatility and logistical hurdles on the supply side have reaffirmed the importance of a resilient and well-managed supply chain. Producers may look to shore up supply control through vertical integration. Smaller producers depending on co-manufacturing have been particularly affected. Larger producers may acquire smaller, fast-growing challenger brands with complementary capabilities at attractive valuations. Increased e-commerce penetration due to in-home consumption is likely to increase interest in firms with digital and hyper-local delivery capabilities. Traditional manufacturers might consider participating in these emerging ecosystems by adding data analytics or last-mile delivery assets to their portfolio.

Apparel, Fashion, and Luxury

Store closures and a sharp decline in discretionary spending has crippled non-essential retail players. Brands that are believed to have a unique value proposition and have retained their brand value would become attractive propositions for PE investors or strategic acquirers. Firms with relatively stronger balance sheets might consider

merging multiple brands into a portfolio to realize cost synergies**Technology, Media, and Telecommunications (TMT)**

Although TMT is one of the more resilient sectors, it too was impacted by the pandemic. Even in Q1 2020, when the virus had just begun to spread globally, deal signings showed a 45% decline compared to the previous quarter. [7] Nevertheless, the quarter exhibited a 16% year-on-year growth. [7] The dominant sub-sector in terms of deal value was Communication Systems & Technology, closely followed by Fintech and Software. In terms of deal volume, the most active sub-sector was the Internet and Media.

Going forward, the most attractive targets would be the ones that can effortlessly adapt to the evolving situation and can facilitate other businesses to adhere to the remote working and sheltering-in-place guidelines. Challenger firms specializing in fintech, big data, cloud computing, collaboration tools, cybersecurity, and Internet TV could be pursued by the Big Tech companies with hefty cash reserves seeking to add to their multi-capability portfolio. The trend of large tech firms opting for small to medium-size acquisitions to fill in some capability or expertise gap is expected to persist. Some of the recent notable deals in this sub-domain are: (i) Apple's acquisition of Californian NextVR, a virtual reality start-up providing sports content for VR headsets; and (ii) Google's acquisitions of Ireland based Pointy, a retail tech company assisting in the online listing of products, and Seattle based AppSheet, which enables businesses to build mobile apps without writing code.

Financial Institutions Group (FIG)

The financial sector was observed to be relatively resilient; M&A activity in the sector declined less than 25% on a year-on-year basis in 1H20, while the overall decline was more than 50%. [8] Activity in the United States region fell sharply as firms in the banking, insurance, and asset management space underperformed relative to the broader S&P 500 index. However, the value of deal signings in the EMEA region surged, mostly on the back of a few large deals. Activity in the capital markets showed mixed trends; IPOs declined while a rise was seen in FPOs, QIPs, and convertible offerings. Debt issuances increased too, especially by firms with good credit ratings looking to make the most of the prevailing lower coupon rates.

Prospective activity in the sector could be catalyzed by the pressure on capital appreciation, lower valuations, and favorable regulatory and tax conditions. The pandemic has made digital transformation essential and M&A remains the quickest and the surest way to gain capabilities for cybersecurity, fraud management, and digital client servicing. Increasing costs and thinner margins may drive domestic consolidation aimed at improving operating efficiency. Banks with high exposure to stressed industries such as hospitality, travel, commercial real estate, retail, oil and gas, etc. are likely to face increasing NPLs and worsening asset quality. Such banks may

become a potential restructuring opportunity for asset management companies and PE investors. Firms at the intersection of finance and technology, such as payment processors and data providers, may continue to drive inter-industry consolidation.

To sum up, while the plunge in M&A activity was expected, the regional numbers shows interesting trends with the US being the worst impacted and Asia being relatively resilient,. Strategic acquirers have been cautious while financial sponsors remain buoyant due to ample dry power and the potential for opportunistic acquisitions. TMT has emerged as the promising sector along with niche sub-sectors in Healthcare. Capital raises by FIG players stand out. Looking forward, the outlook for M&A will be closely tied to economic recovery timelines. It is expected that a secular upswing in M&A activities will be apparent only by mid-2021.

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COVID-19 and Education in India

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The recent crisis of COVID19 has produced undreamt new normals in whatever we pursue in our day to day life. On March 11, 2020, the World Health Organization (WHO) has declared the novel coronavirus a "pandemic". As of 07 August 2020, the spread of this “pandemic” has severely affected 213 countries and territories raising 19,308,752 confirmed cases of infection and 718,597 deaths, globally[10]. In case of India, this tally stands at 2,033,847 and 41,685 respectively. The onset of such outbreak has forced people to stay at home and maintain social distancing while avoiding close contact with others. It has compelled the world to experience and weigh the costs and benefits associated with countrywide lockdowns and domestic as well as international travel restrictions. Prominent impact of such restrictions is mostly evident in the education sector as this sector has experienced lockdown for the longest duration. Hence, it is of much interest to understand the coping mechanism adopted by the education sector to combat this unprecedented situation that has adversely impacted the economics of education.

As per the recent calculation by UNESCO[11], schools that are still shut down due to imposed lockdown affecting almost 106 crore learners across the globe. In India, number of such affected learners count nearly 32 crore. Therefore, a significant change in the education sector is inevitable to keep the sector surviving. As a result, the 'study from home' concept has suddenly become a popular practice and the basic modus operandi of this sector demands massive transformation. The distinctive rise of e-learning has been found to be one indicator of such change. In online mode, teaching is being performed remotely using digital platforms. Thus, it avoids the issue of close contact quite successfully. Moreover, researches have demonstrated that online learning has added value in the process with increased retention of information, lesser scheduling time and savings of set up cost. Some studies have shown that students usually retain 25-60 per cent of learning imparted online compared to 8-10 per cent of what provided in a classroom setting. This is due to the fact that during the process of e-learning students

[10] https://www.worldometers.info/coronavirus/
[11] https://en.unesco.org/covid19/educationresponse

can learn at their own pace, re-visit the discussion, skip or accelerate through concepts as they prefer. Apart from tech companies, schools and colleges are developing innovative pedagogy to make the online environment conducive for learning for the younger generation. No doubt, this involves extensive effort from learners, educators and support providers (i.e. tech companies). However, it can be considered as an initial investment which may reap enough future benefits.

Digital wave in Education

Popularity of digital platform and usage of its content has been experiencing an increasing trend in the field of education even before the COVID era. The Chief Researcher at Metaari, Mr. Sam S. Adkins has stated: "*A breathtaking $18.66 billion flowed to Edtech companies around the world in 2019. To put this in perspective, investments in 2018 and 2019 combined far outstrip the total combined investments made to all Edtech companies for the entire twenty-year period between 1998 and 2017. There are interesting patterns in the recent investor behavior.*" Spread of COVID-19 provides further impetus in the adoption of online technology in global education. The significant surge in application of videoconferencing tools, virtual tutoring and language apps has made analysts projecting an investment of $350 billion by 2025. In India, online education market is expected to grow by $14.33 billion during 2020-2024. Bangalore-based company, *BYJU'S*, has become world's largest Edtech company when it recently raises a whopping $540 million. In response to the overwhelming demand, *BYJU'S* has started providing free access of their services. Since the time it has announced free live sessions on its Learn and Think app, *BYJU'S* has experienced 200% increase in its user base. And, the story is no different for other Edtech companies. For example, *Great Learning* has recorded 150 per cent revenue growth while *Toppr* has witnessed 100 per cent spike. Similarly, *Vedantu* and *Unacademy* have also experienced extensive growth in watching time, collection and revenue. More interestingly, while companies in different sectors are trimming their workforce to cope up with the situation, Edtech platforms such as *Dronstudy*, *Simplilearn*, and *UpGrad* are planning to create at least 3,000 new job opportunities within a year. Another interesting fact has been evolved over the period of this pandemic. Besides Edtech companies, several other business firms which are not primarily operating in the domain of education have come up with online education innovation. One of the prominent players in this domain is Google which has launched several web based applications such as *YouTube Learning Destination* and *Teach from Home Hub* to foster online education. One of the Google spokespersons, Mr. Satya Raghavan, has commented: "*The COVID-19 outbreak has forced us to think and execute learning in an online environment, at scale and with speed. YouTube learning hub and Teach From Home are part of our first response to help educators and students in maintaining teaching and learning continuity.*" Even the established news media channels, e.g. ABP News, have started telecasting education programs to facilitate this new mode of imparting education to the greater mass. Thereby, the education sector which is expected to be significantly affected by the

extended countrywide lockdown, has unleashed an enormous potential to grow with completely transformed environment.

Indian education system is largely driven by various initiatives of Government of India. Unless Government's intervention is there, it is very difficult to pass on the desired benefits at the grass-root level. Recent digital initiatives of Indian Government play a pivotal role in the growth of e-learning. For instance, initiative like e-Pathshala aims to familiarize the rural population with online education while hosting online resources available for educators, students, and guardians. Similarly, the Indian Government has set up virtual classrooms and labs to promote online remote learning in higher segments of education such as science and engineering with active participation from IITs, IIITs, and NITs. Students of undergraduate, postgraduate as well as Ph.D. level can extract the benefits of these virtual labs according to their requirement. Undoubtedly, these initiatives have catalysed the successful implementation of web based learning and generate a demand for the same from institutions located across rural and urban areas. A senior analyst of Technavio, a global market research firm, has pointed out:

"Factors such as the emergence of cloud computing, and the growing popularity of big data and learning analytics will have a significant impact on the growth of the online education market value in India during the forecast period,"

Challenges and Measures

owever, such transformation is not free of challenges. First and foremost question that keeps on coming is: "*Is this online learning mechanism sustainable?*" This question is even more valid in the context of developing economy like India where very few families have access to computer and internet facility. Mostly, online sessions require laptops or smartphones connected with high speed internet which are not affordable to most Indian families. Therefore, students belonging to families with fewer resources are worst sufferers as they are forced to manage their education with limited family resources. Moreover, this mechanism has deprived students from some other important aspects of life such as spending quality time with friends, regular physical activity, access to healthy meals, and facility of physical and mental health care. Further, students with special needs cannot avail necessary support from institutes. In India, schools ensure required nutrition of students by providing mid-day meals. Needless to say, only ensuring education through online mode and overlooking the other bare necessities due to continued closure of schools will affect a vast majority of children's nutrition intake and thereby, their health. Fortunately, Central and State Governments of India are aware of these challenges. Hence, besides promoting online education as discussed before, they have adopted multiple measures to address these issues. For example, the Union human resources development (HRD) ministry has planned to launch 12 direct-to-home (DTH) television channels exclusively for distance learning. Each of these channels would serve the needs of students from one academic year. Moreover, HRD has already tied up with "Information and Broadcasting" ministry to facilitate airing Swayam Prabha channels on their DTH platform, Tata Sky, and Airtel DTH.

Hopefully, this would be beneficial for students suffering from slow or limited internet connectivity. Union HRD Minister Shri Ramesh Pokhriyal 'Nishank' has said in an interview: "*Now a student anywhere in India can request the DTH service provider for these channels without any extra cost as these are free-to-air channels. Swayam Prabha is a group of 32 DTH channels providing high quality educational curriculum based course contents covering diverse disciplines*". At state level also different initiatives have been undertaken. For instance, many states are successfully delivering mid-day meals to students even during closure. Numerous helpline numbers are provided where telephonic consultations are being provided to take care of physical and mental health of the children. Besides these initiatives, it has been witnessed that public-private coalitions are shaping up while bringing diverse stakeholders together in this sector to act during this crisis.

The Way Ahead

One important message conveyed by different studies on online learning suggests that the effectiveness of such process varies among age groups. Since the younger kids can be easily distracted, some structured environment is required to impart effective learning. Educators need to get out of the practice of replicating physical lecture mode of teaching in online class setting. Instead, they should use a range of collaborations and engagement tools that promote "inclusion, personalization and intelligence". Secondly, making learning fun for the children is essential as the extensively use their senses to learn. According to the speech of BYJU's Mrinal Mohit: "*Over a period, we have observed that clever integration of games has demonstrated higher engagement and increased motivation towards learning especially among younger students, making them truly fall in love with learning*". Finally, Indian education sector needs more budget allocation. Currently, India spends approximately 2.8% of its GDP on school education which is one of the lowest among BRICS countries.[12] According to the report by Parliamentary Standing Committee report, the Department of School Education and Literacy is allocated Rs 59,845 crore this year against a proposed budget of Rs 82,570 crore resulting a 27.5% shortfall. Samagra Shiksha Abhiyan (SMSA), one of the key programs intended for development of holistic school education, has been allocated Rs 38,750 crore in 2020-21 against projected demand of Rs 45,934 crore. Therefore, a conscious and comprehensive effort starting from allocation of resources to building a structural learning environment in most innovative manner is the way forward for developing the future of India.

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[12] https://thewire.in/education/schools-reopening-lockdown

ALUMNI CORNER

Covered Debt Instruments

Arvind Rangarajan

T.C.A. Arvind Rangarajan is an IIMC Alumnus (1989-91) and retired banker. Roles include Head of Trade for Standard Chartered, India, and Head of Structuring for Deutsche Bank India and short term consultant for World Bank. Other interests are distance running and translating old Tamil poetry.

"It's only a paper moon and a cardboard sea,

But it won't be make-believe if you believe in me"

- Tennessee Williams in A Street Car named Desire

"Modern capital markets financing is increasingly an act of faith. We rely on ratings, on the words of economists and pundits who quite often live in worlds completely disconnected with reality". I believed I had cause for a rant… I had an argument with my bank's portfolio manager. How much return was acceptable for a cash-backed loan that my client wanted? He expounded the LAW to me:

Return requirements depend on ratings. [*fair enough*].

Ratings depend on the probability of default. [*with you so far*] and

The Probability of default has nothing to do with the cash collateral. [*huh*!].

"It is 101 of banking – what's your first way out? Cash flows? This is a weak company. So, there is a good chance they will default." [*True enough. But what about the cash?*].

"We will give it credit under FSV – Forced Sale Value of collateral @ 95%…" and that was my own little Siddhartha moment… not the moment of startling clarity under the Bodhi tree… rather the moment when he walked out of the house in search of an answer to old age death and disease

Banking lives in a complex world of formulae. Capital adequacy. Risk weight and Forced Sales Value for different types of collateral. It is gotten to the point where if your rating is below a certain investment grade, it does not matter what the causes are or what case you build. Financing costs will tend to be unviable. A cash-backed bond will not be AAA. True, these situations are rare. But a bond backed by AAA-rated collaterals? What about a bond

backed by a pool of Commercial vehicle loans which if they had been securitized would have been AAA? What about loans backed by receivables of AAA-rated companies? What about a 2x cover on receivables of AA-rated companies?

Floating in the wind

In India security is created in favor of the lender and registered with the Registrar of Companies. In theory this is how it is done everywhere in the world. But what is the process of accessing this collateral? This is usually a big black box. If it is a pledge, (usual for financial instruments), no permission is needed – the lender can sell the collateral. If it is a fixed charge, you need to enforce but cash flows and title cannot change hands without the lenders consent. But in India, the commonest form of charge is a floating charge. This means that the collateral can be sold or changed in the usual course of business – which means that by the time you figure out you need to access the collateral, the first default has probably happened. So yes. It looks like there are solid reasons why security quality should be separated from the quality of the borrower. In a strong enforcement framework the arbitrage or cost of having high-quality collateral for a loan or bond versus a high-quality borrower would not be much. But in India?

PMC bank depositors who are covered by Deposit insurance are yet to receive their fully insured deposits. Lenders to DHFL found that some of their assets said to be charged to them had in fact been securitized. Security enforcement is a mess. If one is lending to an NBFC, there is no clearly laid out path to taking them to a bankruptcy court and realizing one's collateral. (Until the DHFL default caused the government to include NBFCs under IBC.)

Alienating the collateral assets

A lot of the issues relating to security enforcement have actually been tackled by the Indian market through another instrument. This is the market for securitised instruments. At issuances of over INR 10 Trillion per annum this category of debt seems to have addressed many of the same concerns and considerations relating to security. Instead of a debt issuer, the fund raiser is designated as the Originator. Recourse to the originator does not extend beyond the pool of identified loans and yet AAA ratings are possible here. The reason is that the identified pool is placed in a trust which is outside the balance sheet of the fund raiser. Enforcement of the underlying assets is a lot less difficult since the Trust owns the assets for the benefit of investors. Lenders to the Originator cannot claim those assets. Further the investors (through the trust) paid for those assets and deposited the cash with the banker of the Originator – so the lenders lost nothing.

Securitised paper has now been issued in India for over 20 years. So why do lenders not adopt the same structure? Put the collateral in trust and so on? In fact, SEBI requires secured bonds to have a security trustee which will hold the collateral. So, the alienation of the collateral to a trust is done. So why does this structure not get the benefit of the collateral? The short answer is that Indian law does not distinguish between collateral placed with a trustee or directly with the lender. It is all registered with the Registrar of Companies and the level of detail in identifying the collateral is usually up to the lender and borrower. – Usually it is very loosely defined as a charge over all assets. The process of enforcement could take months or more commonly years. By definition, an AAA-rated asset should have an overwhelming probability that it should get paid on the due date and hence building in the uncertainties of a security enforcement will defeat most structures that seek to use the value of collateral.

Covered Debt

Rating agencies and lenders have a healthy respect for third party guarantees or third-party credit enhancements. If the third-party guaranteeing a bond is AAA-rated, then so is the Bond. However, there will be a small tag of [SO] to differentiate such offerings. So, could one put the collateral into the hands of a third party who then guarantees the debt offering? Maybe put it into a trust and have the trustee issue a guarantee to the extent of the trust property?

In the summer of 2018, a fledgling NBFC sought to buy a supply chain business. Typically the suppliers would provide a 90 day credit period to the buyer and the NBFC in turn, would bridge the cash flow gap by providing a loan to the supplier for 90 days (provided the Anchor had confirmed quantity and quality of goods and waived set off rights). As in all such arrangements, the Anchor provided a measure of operational comfort by agreeing to pay the sums due to the suppliers into the account designated by the NBFC.

At the heart of it was a portfolio of loans to suppliers, which would be retired from payments due from an AAA-rated engineering major. How could a small NBFC with high-cost borrowings fund this high quality but low yielding book?

When the book was purchased, documentation was rejigged to allow the borrowers (suppliers) to place their high-quality receivables in a trust. The trust then directly guaranteed lenders to the NBFC. The debt was “covered” by direct recourse to cash flows from a high-quality pool. This approach has the advantage that the asset/collateral is no longer in the hands of the borrower. So other lenders to the Borrower could not object.

Further, if the Borrower defaulted, the cash flows from the assets held in trust would go directly to the Lenders and repay them. The legal separation of the high-quality collateral from the borrower allowed rating agencies to rate this A1+, the highest short-term rating. It is not a securitisation – recourse to the borrower is fully in place.

But it behaves like one – the underlying pool also need not be static. It can change, but with the consent of the trustee.

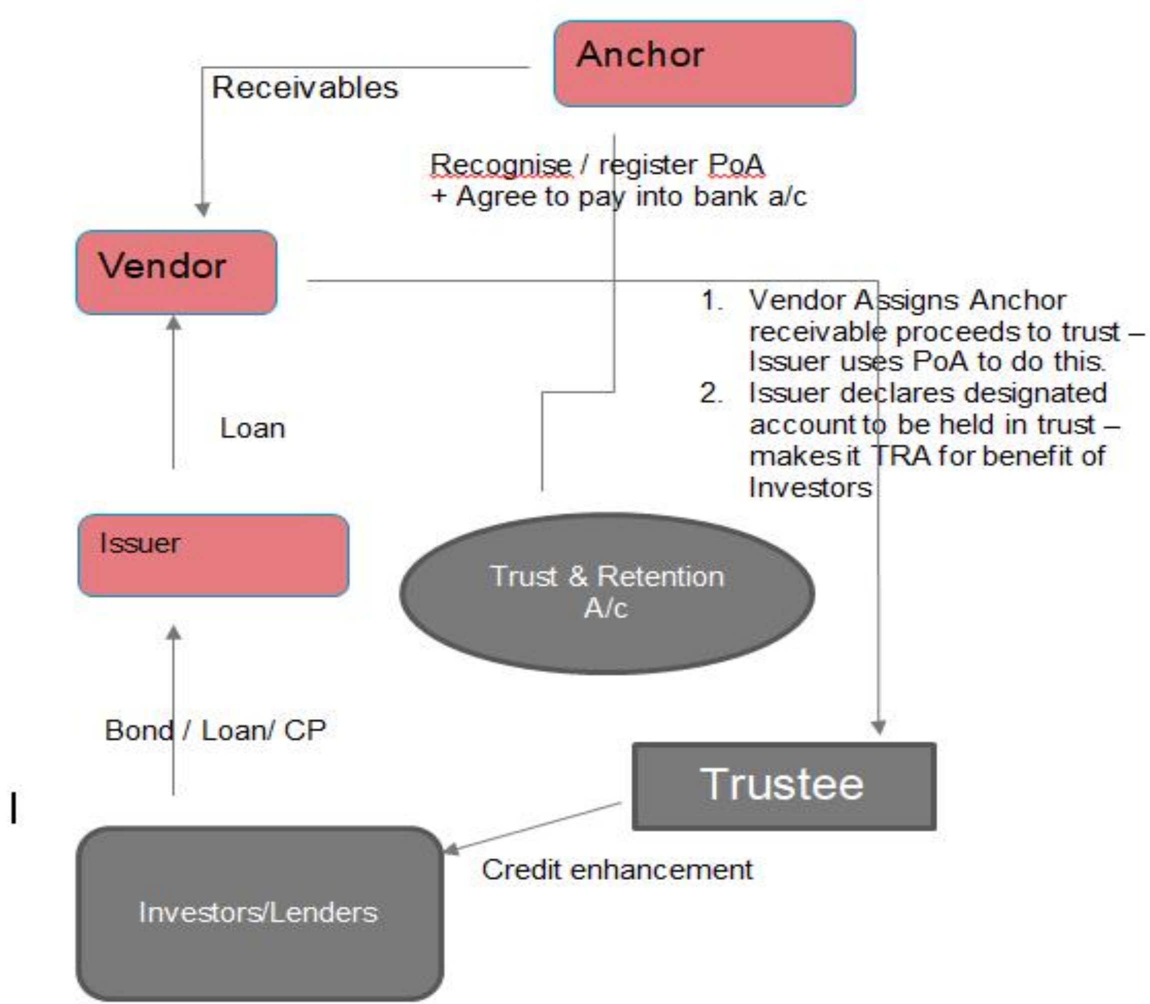
The cash flows coming from the Anchor were routed into a debt service account owned by a trust set up for the benefit of the Lender to the Covered debt; i.e., any money lying there would be first used to retire the debt obligations of the Lenders and any surplus would be used to pay remaining obligations to the NBFC and if anything is still left over it would go to the vendor This addressed the risk of co-mingling of cash flows from the Cover pool and separated the ownership and title in practice. A court would be unlikely to freeze payments coming into an account which was not in the name of the NBFC.

What did the Structure achieve

The Issuer raised commercial paper which were rated A1+(SO) while the stand alone rating was A2.This impacted cost as well as the universe of investors who would lend to the NBFC Secondly the pool could change daily and the average life of the pool at any point in time was 45 days. However, the instrument had a maturity of 1 year. So, it helped access to term finance. Could securitization of the pool have achieved the same result? Possibly. But some questions would have remained. Can the pool composition change? Would cash flows from the pool be used to buy new receivables? [Is that a replenishment or would it trigger RBI caveats around revolving securitization. What about the minimum holding period of 90 days before a loan is sold? What about the operational debt nature of vendor receivables? And so on.]

Inversion of priorities

A second approach to achieving a covered bond rating enhancement was attempted as well. In this case the NBFC had a portfolio of commercial vehicle loans. A pool of such loans was sold into a bankruptcy remote trust and a third-party investor subscribed to the trust corpus. Since the cash consideration was paid the pool was bankruptcy remote. When the pool's cash flows were tranched the senior tranche would have qualified for a rating of AA. The investor in the senior tranche however agreed that these cash flows would be used to credit enhance a bond issuance of the NBFC. This inversion of cash flow priority allowed the bonds to be rated AA. Why such a complex structure? Why not place the cash from the sale of loans into a deposit and credit enhance the bond? The answer takes us back to the beginning. Enforcement of collateral is complex in India. Even if it is cash.



Structure rated by ICRA and CARE. Legal advice by Juris Corp and Jerome Merchant Partners.

Conclusion

Indian debt markets have been reeling under the impact of defaults by many large financial institutions. As the environment turns bleak investors have been looking to secure their interests by piercing the veil and looking straight through into the underlying assets to which NBFC and corporates have exposures. A useful statistic to remember is that while the default rates (NPA %) for MSME has consistently hovered at around 12%, it does mean that a good 85% have not defaulted. Covered bonds with adequate asset cover of say 1.25x ought to be very safe indeed.

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ALUMNI CORNER

Demystifying Investment Opportunities for Retirement Fund

Varsha V. Pawar

Varsha V. Pawar is an alumna of IIM Calcutta Executive Education (2016-17, EPAF – Batch XI) and a Chartered Accountant. She has various Finance certifications to her credit over the years. She started her career with Tata Group after completing her CA. She is associated with the Group for approx. 18 years now. She has vast experience in the Treasury and Finance field, varying from Fund management and Fund placement- cash and liquidity, fixed income investments, Fund raising through IPO/ Rights issuances/ private placements/ Borrowings etc. and writing covered calls. She was a core team member for Tata Consultancy Services Limited, IPO in 2004.

As per Indian culture every individual is inculcated with the habit of saving money from early childhood. When the person takes up employment in an organization a part of his salary gets deducted as his/her contribution towards Provident Fund (PF). At the time of retirement, the amount accrued in the his/her PF is handed over to the employee as his/her social security. This article gives an insight on investment avenues that are used to generate a return on our savings and multiply the retirement fund of every employee over the years. The contribution of provident fund and interest thereon forms the retirement corpus of the individual. Further, this article throws light on how fund management activity can be carried out by a PF Trust.

Efficiencies in fund management of a PF can be evaluated with the surplus generated by the PF, whether the PF Trust can credit the employee PF account by the pay-out rate declared by Employees' Provident Fund Organisation (EPFO). The EPFO is one of the world's largest social security organizations and a retirement body that provides social security in India to the salaried class. It is similar to a 401 (k) plan which provides social security to employees in the US. The features of provident fund in India and 401(k) plan may vary. The guiding principle of the PF can be summed as safety, returns, and liquidity. Safety by investing in safe assets as permitted, returns which can be measured by being able to match EPFO pay-out rate and liquidity being assessed fund management skills of the investment officer managing the PF.

As per the Provident Fund Act, 1952 (the Act) an employer with 20 or more employees is under an obligation to register under the said Act and start a provident fund scheme for its employees. As per the Act, once an individual joins an organization, the employee contributes 12 % of the basic salary (plus dear allowances if any) towards provident fund. Similarly, the employer should be able to contribute an equivalent percentage i.e. 12% as the employer's contribution. Of this, 3.67% is the employer's contribution towards provident fund and balance 8.33% is the contribution to Employees Pension Scheme.

The employer may transfer the monthly provident fund contribution to the Employees' Provident Fund Organisation (EPFO) or manage the investment of the provident fund contribution in-house. In case, an employer decides to manage the provident fund in-house, the employer will have to set up a Trust entrusted with the responsibility of the management of the retirement benefits of its employees. This is done through the Board of Trustees who manage the day-to-day affairs of the Trust.

The investment of the surplus funds has to be as per the Investment Pattern prescribed by the Ministry of Labour and Employment. On 29th May 2015, the Ministry of Labour and Employment notified the prescribed investment pattern for investing the retirement funds of the employees. Irrespective of whether the employer manages the retirement corpus through its Trust or gives the fund management to EPFO, both are obligated to follow the Government prescribed Investment pattern.

The Employees Provident Fund money is sovereign-backed, and the interest earned is tax-free. Provident Fund enjoys the EEE (exempt-exempt-exempt) status. The employee's contribution is tax-deductible under Section 80C of the Income Tax Act, 1961. Hence, the money invested, the interest earned, and the money the employee eventually withdraws after the mandatory specified period (5 years) are exempt from income tax.

There have been major changes in the Investment pattern which was introduced in May 2015. The applicable Investment Pattern went through severe criticism from trade unions (Economic Times article Jun 2014 and others also) due to the introduction of investment in equity and equity-related instruments. However, the investment pattern was approved and is now is the applicable Investment Pattern for provident fund contributions.

Summarised investment pattern is as below:

Category of Investment	Description	Minimum investible (%)	Maximum investible (%)
I	Govt Securities and related instruments	45	65 ^
II	Debt Instruments and related investments	20^	45
III	Short-term Debt Instruments and Related Investments	0	5
V	Equities and Related Investments	5	15
VI	Asset-Backed, Trust Structured and Miscellaneous Investments	0	5

^ as amended from time to time

This pattern applies to the investible surplus for the year. How is investible surplus determined? The investible surplus is the provident fund contributions plus the interest inflows on the investment of the Trust so far plus the maturity proceeds of the existing portfolio less the outflows (i.e. pay-out obligations). Outflows are pay-outs towards retirement (settlements) or if the employee leaves the current organization, he would transfer the accumulated PF funds to his new organization. This is referred to as transfer out. The Act permits withdrawal for specific purposes only, such as education, marriage, housing loan, and medical reasons; this is referred to as non-refundable withdrawals. Primarily these are the only outflows – settlements, transfer outs, and non-refundable withdrawals. A PF Trust does not bear any expenses, the expenses are borne by the employer. These are reimbursed by the employer and typically would include audit fees/ bank charges.

Under Category I of Investment: Government Securities and related instruments:

The permissible investment papers are securities issued by the Government of India (GOI) and State Government. GOI issues securities to raise funds, and these securities can be subscribed by Provident Fund Trust. Similarly, State Governments also raises funds to meet their respective state finances, and this is done by issue of State Deployment Loans (SDL). Yields on a GOI paper is lower than that of SDL – GOI papers carry zero risks. The borrowings of the state, education, infrastructure, etc. would determine the quality of the State which would in turn determine the yield of SDL.[13]

Extracts from Negotiated Dealing System – Order Matching (NDS – OM), gives a perspective of yields for GOI /SDL (across states)

[13] Further reading of quality of state is available at www.rbi.org.in/Scripts/Annualpublications.

Market Session Open   As on Jul 8, 2020 11:58:17 AM IST

Reserve Bank of India | NDS - OM | Negotiated Dealing System
Order Matching Segment

CG Mkt. Watch | SG Mkt. Watch | T-Bills Mkt. Watch | WI Mkt. Watch | Odd Lot Mkt. Watch | Market by Price | Individual Trades | Reported Deals | Mkt. Liquidity Indicators | Active Member List

CG S 2033 116.9000 6.3418 T 11:56:48 ◆ 06.45 GS 2029 103.9700 5.8854 T 11:56:31 ◆ 06.57 GS 2033 102.9000 6.2466 G 11:56:29 ◆ 05.22 GS 2025 101.1000 4.9650 G 11:56:29 ◆ 06.19 GS 2034 100.150

SG/TB 100.5000 6.5111 T 11:56:15 ◆ 091 DTB 27082020 3.0500 99.5922 T 11:55:53 ◆ 182 DTB 26112020 3.2600 98.7650 T 11:54:19 ◆ 06.58 MP SDL 2035 100.6500 6.5114 T 11:54:14 ◆ 06.56 AP SDL 2031 1

Refresh

:: Regular Market ::

YTM Curve

Security Description	Trades	TTA	Open	High	Low	LTP			LTY
05.79 GS 2030	1059	13675.00	100.0000	100.2400	99.9425	100.1400	↓	G	5.7699
06.45 GS 2029	471	5460.00	103.8000	104.0400	103.7625	103.9700	↔	T	5.8854
06.19 GS 2034	345	3510.00	99.9200	100.2275	99.8750	100.1500	↔	G	6.1743
07.57 GS 2033	94	1765.00	111.1000	111.2200	111.0000	111.1500	↔	G	6.2966
05.22 GS 2025	64	1100.00	101.1200	101.1200	100.9900	101.1000	↔	G	4.9650
07.27 GS 2026	47	560.00	109.3500	109.4500	109.2800	109.4500	↑	T	5.3366
06.18 GS 2024	39	555.00	105.0000	105.0725	104.9950	105.0725	↔	G	4.8617
07.26 GS 2029	44	470.00	108.4500	108.6000	108.3450	108.5600	↓	T	5.9630
06.79 GS 2027	22	385.00	106.1500	106.3200	106.1500	106.2600	↓	G	5.6726
07.59 GS 2026	14	295.00	110.2900	110.3400	110.2700	110.3400	↑	T	5.3941
07.17 GS 2028	17	240.00	107.7500	107.9600	107.7500	107.9500	↓	G	5.8451
08.26 GS 2027	6	225.00	114.1000	114.1300	114.1000	114.1300	↔	T	5.7930
06.68 GS 2031	26	215.00	103.9000	104.2000	103.9000	104.2000	↔	G	6.1537
08.24 GS 2033	10	190.00	116.7000	116.9000	116.7000	116.9000	↑	T	6.3418
07.32 GS 2024	13	175.00	108.4500	108.5800	108.4500	108.5500	↔	G	4.6787
Total	2452	31560.00							

1 2 3 4 5

:: Odd Lot ::

¥ NDS OM- ccil.com

In the above extract, one may observe the following:

- All the papers under this Tab are Government papers.
- 5.79 GS 2030 – the 10YR GOI Security, LTY 5.7699% semi-annualised (5.85% annualised)
- Maximum trades and most liquid from the entire lot.
- LTY (represents the last traded yield).
- Yield in the above table is all semi annualized yield.

The other papers that can be invested under Category I are the SDL. Extract of the same is in the next table, which shows:

- All the papers under this Tab are SDL.
- MH represents papers issued by Maharashtra state, GJ represents papers issued by Gujarat state, and so on.
- Interest rate differential is due to the quality of state, and the tenor for which the paper is issued.
- Bid-ask spread indicates the liquidity of the paper.for 5.79 GS 2030 – the 10YR Gsec, LTY 5.7699% semi- annualised (5.85% annualised).
- Yield in the above table is all semi annualized yield.

Market Session Open | As on Jul 8, 2020 11:58:40 AM IST

Reserve Bank of India | NDS - OM | Negotiated Dealing System | Order Matching Segment

Home Page | CG Mkt. Watch | T-Bills Mkt. Watch | WI Mkt. Watch | Odd Lot Mkt. Watch | Market by Price | Individual Trades | Active Member List

State Government Market Watch

Security Description	Maturity Date	Bid Amt. (Cr.)	Bid Yield	Bid Price	Offer Price	Offer Yield	Offer Amt. (Cr.)	LTP	LTY	LTA	TTA (Cr.)
06.57 MH SDL 2031	03/06/2031	5.00	6.4514	100.9100	100.9500	6.4463	10.00	100.9500	6.4463	5.00	170.00
08.05 GJ SDL 2029	27/03/2029	0.00	0.0000	0.0000	110.5000	6.4538	10.00	110.2775	6.4855	25.00	125.00
08.53 MH SDL 2020OCT	27/10/2020	0.00	0.0000	0.0000	0.0000	0.0000	0.00	101.4975	3.4129	20.00	80.00
08.10 WB SDL 2025	28/01/2025	0.00	0.0000	0.0000	0.0000	0.0000	0.00	110.1075	5.5555	5.00	70.00
08.55 UP SDL 2020OCT	27/10/2020	0.00	0.0000	0.0000	0.0000	0.0000	0.00	101.5075	3.3996	5.00	65.00
06.56 AP SDL 2031	08/07/2031	5.00	6.4700	100.7000	100.9000	6.4445	5.00	100.8000	6.4572	25.00	60.00
06.60 TN SDL 2030	10/06/2030	5.00	6.4609	101.0000	101.1000	6.4472	30.00	101.0000	6.4609	25.00	25.00
06.50 AP SDL 2030	08/07/2030	10.00	6.4410	100.4300	0.0000	0.0000	0.00	100.4700	6.4355	5.00	20.00
06.65 PN SDL 2050	08/07/2050	10.00	6.6068	100.5600	101.0000	6.5732	10.00	100.5600	6.6068	10.00	20.00
06.58 MP SDL 2035	08/07/2035	5.00	6.5272	100.5000	0.0000	0.0000	0.00	100.6500	6.5114	5.00	15.00
07.59 KA SDL 2027	15/02/2027	0.00	0.0000	0.0000	0.0000	0.0000	0.00	107.0000	6.2765	5.00	10.00
07.37 MH SDL 2026	14/09/2026	0.00	0.0000	0.0000	0.0000	0.0000	0.00	106.9500	6.0049	10.00	10.00
06.64 TS SDL 2050	08/07/2050	0.00	0.0000	0.0000	0.0000	0.0000	0.00	100.6500	6.5900	10.00	10.00
09.19 KL SDL 2024	28/05/2024	0.00	0.0000	0.0000	0.0000	0.0000	0.00	113.1000	5.4044	5.00	5.00
08.01 TN SDL 2026MAY	11/05/2026	5.00	6.0673	109.4200	109.7500	6.0031	5.00	109.4200	6.0673	5.00	5.00
07.59 UP SDL 2027	25/10/2027	20.00	6.3311	107.2500	107.5500	6.2814	5.00	107.2500	6.3311	5.00	5.00
06.58 JK SDL 2030	08/07/2030	5.00	6.5111	100.5000	100.9000	6.4564	10.00	100.5000	6.5111	5.00	5.00
06.58 KA SDL 2030	03/06/2030	0.00	0.0000	0.0000	0.0000	0.0000	0.00	100.5900	6.4971	5.00	5.00
06.24 TS SDL 2026	27/05/2026	0.00	0.0000	0.0000	0.0000	0.0000	0.00	101.5000	5.9326	5.00	5.00
06.67 RJ SDL 2050	01/07/2050	10.00	6.6158	100.7000	0.0000	0.0000	0.00	100.7500	6.6120	5.00	5.00
07.05 TS SDL 2027	24/07/2027	0.00	0.0000	0.0000	0.0000	0.0000	0.00	104.1500	6.3102	5.00	5.00
07.16 MH SDL 2026	28/09/2026	5.00	6.1769	105.0000	0.0000	0.0000	0.00	105.9000	6.0066	5.00	5.00
07.20 AP SDL 2029	23/10/2029	0.00	0.0000	0.0000	105.5000	6.4033	5.00	0.0000	0.0000	0.00	0.00
07.22 TN SDL 2028	30/10/2028	0.00	0.0000	0.0000	105.5300	6.3511	10.00	0.0000	0.0000	0.00	0.00
07.23 KL SDL 2029	30/10/2029	0.00	0.0000	0.0000	105.6000	6.4196	5.00	0.0000	0.0000	0.00	0.00

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¥ NDS OM- ccil.com

Under Category II of Investment: Debt Instruments and related investments

The following are the key features that the debt security should have to qualify for investment by a PF Trust:

- Listed paper or proposed to be listed
- Residual maturity of not less than 3 years
- Dual rated
- Fixed deposits placed with bank qualify under this category, however, the following criteria are required to be met before placing deposits with banks
    - Should have declared profits in the preceding 3 years
    - Should have maintained Capital to Risk-weighted assets ratio of 9% or as prescribed by RBI from time to time
    - Non-performing assets should be less than 4%
    - The minimum net worth of not less than 200 crores.

The below extract gives bond yields which are traded;

bricsonline.net/bonds/BondsTradedToday

New folder | Tata Mutual Fund N... | Reliance ETF India | Index Composition... | Bonds Traded Today | Black Scholes Calcu... | NSE - National Stoc...

Corporate Bond Reporting on NSE Reporting Platform as of 08-07-2020 11:55:04							
Table B1: Corporate Bond trades in listed bonds							
ISIN	Description	Weighted Avg. Price	Weighted Avg. Yield %	No Of Trades	Trade Value (Crs)	Last Traded Price	Last Traded Yield %
INE081A08165	TATA STEEL LIMITED 11.8 NCD PERPETUAL FVRS10LAC	101.8124	9.2000	1	1.00	101.8124	9.2000
INE683A08051	THE SOUTH INDIAN BANK LTD. SR I 13.75 BD PERPETUAL FVRS1LAC	101.0000	13.3700	1	0.40	101.0000	13.3700
INE572E09429	PNB HOUSING FINANCE LTD SR-XXXII 7.8 LOA 07MY21 FVRS10LAC	98.0223	10.3500	1	0.20	98.0223	10.3500
INE941D07190	SIKKA PORTS & TERMINALS LIMITED SR PPD 11 7.20 LOA 16JU23 FVRS10LAC	103.1568	5.9925	1	5.00	103.1568	5.9925
INE540P07152	U.P. POWER CORPORATION LIMITED SR-IV-E 8.48 BD 14MR25 FVRS10LAC	99.1793	8.9910	1	5.00	99.1793	8.9910
INE245A08042	THE TATA POWER COMPANY LIMITED RR NCD 21AG72 FVRS10LAC	105.0032	4.2500	2	0.20	104.6103	8.5000
INE062A08223	STATE BANK OF INDIA SERIES II 8.50 BD PERPETUAL FVRS10LAC	104.9230	7.8987	3	0.50	103.5200	7.5000
INE540P07251	U.P. POWER CORPORATION LIMITED SR-I-H 9.75 BD 20OT26 FVRS10LAC	93.7618	11.6820	3	0.50	93.5072	11.7500
INE906B07EI0	NATIONAL HIGHWAYS AUTHORITY OF INDIA SR IIA 7.35 BD 11JN31 FVRS1000	123.5148	4.4900	1	1.00	123.5148	4.4900
INE733E07JG5	NTPC LIMITED SR-3A 8.66 BD 16DC33 FVRS1000	141.1935	4.5000	1	1.00	141.1935	4.5000
INE756I07CD9	HDB FINANCIAL SERVICES LIMITED SERIES A/0(ZC)/124 NCD 29OT21 FVRS10LAC	123.0697	5.1000	2	150.00	123.0697	5.1000
INE540P07228	U.P. POWER CORPORATION LIMITED SR-I-E 9.75 BD 20OT23 FVRS10LAC	96.9087	11.4680	2	0.50	97.0100	11.4200
INE020B08CL6	REC LIMITED SR 190B 6.32 BD 31DC21 FVRS10LAC	102.2048	4.7200	1	25.00	102.2048	4.7200
INE860H07FP8	ADITYA BIRLA FINANCE LIMITED SR-B1 NCD 18MY21 FVRS10LAC	121.5555	6.1000	1	100.00	121.5555	6.1000
INE039A09PO2	IFCI LIMITED 58(C) 9.9 BD 05NV32 FVRS25000 LOA UPTO 04DC12	92.5900	11.0000	1	0.10	92.5900	11.0000
INE160A08076	PUNJAB NATIONAL BANK 9.15 BD PERPETUAL FVRS10LAC LOA UPTO 12MR15	96.9823	9.9610	6	1.90	96.6696	10.0500
INE692A08029	UNION BANK OF INDIA SR-XX 9.5 BD PERPETUAL FVRS10LAC	100.3733	9.3319	5	1.30	101.2819	9.1215
INE572E09486	PNB HOUSING FINANCE LTD SR-XXXVI OPT B 7.59 LOA 27JL22 FVRS10LAC	95.2706	10.2500	2	0.20	95.2706	10.2500
INE140A07476	PIRAMAL ENTERPRISES LIMITED SR4 9.70 NCD 24DC20 FVRS10LAC LOAUPTO21MY19	99.8391	10.0000	1	1.00	99.8391	10.0000
INE848E07BM6	NHPC LIMITED SR AB STRPP D 6.80 LOA 24AP29 FVRS2LAC	102.5680	6.4000	1	4.70	102.5680	6.4000
INE020B08CX1	REC LIMITED SR 199 7.96 BD 15JU30 FVRS10LAC	104.0989	7.3563	3	8.90	104.0800	7.3589
INE036D08015	THE KARUR VYSYA BANK LIMITED TR A 11.95 BD 12JN29 FVRS1LAC	100.9500	11.5650	2	1.00	101.0000	11.5500
INE020B08CO0	REC LIMITED SR GOI-IX 7.14 BD 02MR30 FVRS10LAC	104.1843	6.6500	1	5.00	104.1843	6.6500
INE01E708032	ANDHRA PRADESH CAPITAL REGION DEVELOPMENT AUTHORITY STRPPs C 10.32 BD 16AG26 FVRS2LAC	99.7770	10.7720	6	15.30	99.7896	10.7700
INE540P07343	U.P. POWER CORPORATION LIMITED SR-II-H 10.15 BD 20JN27 FVRS10LAC	94.8789	11.8000	1	0.30	94.8789	11.8000
INE028A08182	BANK OF BARODA SR XI 8.99 BD PERPETUAL FVRS10LAC	103.1000	8.1000	1	0.10	103.1000	8.1000
INE906B07FE6	NATIONAL HIGHWAYS AUTHORITY OF INDIA SR III 7.17 BD 23DC21 FVRS10LAC	104.0702	4.2000	1	25.00	104.0702	4.2000
INE115A07OM1	LIC HOUSING FINANCE LIMITED 392 7.79 NCD 18OT24 FVRS10LAC LOAUPTO25FB20	103.5000	6.8000	1	4.00	103.5000	6.8000
INE540P07335	U.P. POWER CORPORATION LIMITED SR-II-G 10.15 BD 20JN26 FVRS10LAC	95.6580	11.7500	2	0.20	95.6580	11.7500
INE001A07RG8	HOUSING DEVELOPMENT FINANCE CORPORATION LTD SR-U-001 9.05NCD6OT28 FVRS10LAC LOAUPTO24OT18	112.7909	6.9500	1	5.00	112.7909	6.9500

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The above extract gives a fair idea of the risk-return on a corporate bond. It is simple thumb rule, "higher the risk higher the return".

Under Category III of Investment: Short-term Debt Instruments and Related Investments

This is an optional category, as the minimum prescribed investment under this category is 0%. The instruments qualifying under this category are liquid mutual funds, commercial papers, certificates of deposits, and bank deposits of a tenor less than 1 year.

Under Category IV of Investments: Equity and related instruments

The permitted instruments under this category are as below:

- Equity shares listed on either National Stock Exchange (NSE) or Bombay Stock Exchange (BSE) with a market capitalisation of not less than Rs 5000 crs
- Derivatives with the shares as underlying traded in either of the exchanges, NSE/BSE
- Units of equity mutual fund, where the exposure to equity is not less than 65%
- Exchange traded fund that replicates either the BSE or the NSE Index

Under Category V: Asset-Backed, Trust Structured and Miscellaneous Investments

This again is an optional category where the PF Trust may opt for 0% of the investment of its investible surplus

Following securities qualify under this category of investment:

- Commercial mortgage-based Securities or Residential mortgage-based securities.
- Units of securities issued by the Real Estate Investment Trusts regulated by SEBI
- Asset-Backed Securities regulated by SEBI
- Units of Infrastructure Investment Trusts regulated by SEBI

Not many corporates have raised funds issuing securities which qualify under Category V. ILFS had raised some funds in the past which qualified the investment under this category

Investment Strategy

Now that the regulatory provisions are explained, I would touch upon, the investment strategy that an Investment officer/Fund manager managing the investments of PF Trust could follow. The strategy normally reflects the Fund manager's views on the market, his philosophy (aggressive/ passive/ safe bet). Each investment decision of the Fund manager/ Investment Officer will have to be approved by the Trustees who ideally should have safety as their guiding principle. They are entrusted with the responsibility of safekeeping the employees' retirement fund. Loss of revenue to PF Trust on account of incorrect investment decision/fraud etc is to be borne by the employer.

A PF Trust under Investment Category I may prefer investing in GOI securities, though the yield maybe a little lower than a State Development Loan paper (SDL). Here the guiding philosophy is the safety of the investment. Normally the yield difference is 50- 75 bps (One basis point is equivalent to 0.01%) for a like tenor. The Trust may also invest in SDLs issued by states with good credit quality. This may help in enhancing the overall portfolio yield. Category I has the highest percentage allocation of the investible surplus.

Under the Investment Category II, which permits investment in corporate securities, the investment manager must do a thorough analysis of the promoters/ Balance sheet analysis/ track news items, etc. The investment ,manager may invest for the bare minimum mandated by the pattern i.e. not less than three years. Higher tenor in corporate

bonds could be avoided unless exceptionally good credit. Preferably stay away from perpetual, sub-debt, unsecured papers, etc.

Under the Category III, the PF Trust may invest in liquid mutual funds. The investment manager must do a thorough analysis of the liquid fund portfolio also. Preferably stay away from commercial papers or use the same checks and balances viz. promoters, balance sheet analysis, etc.

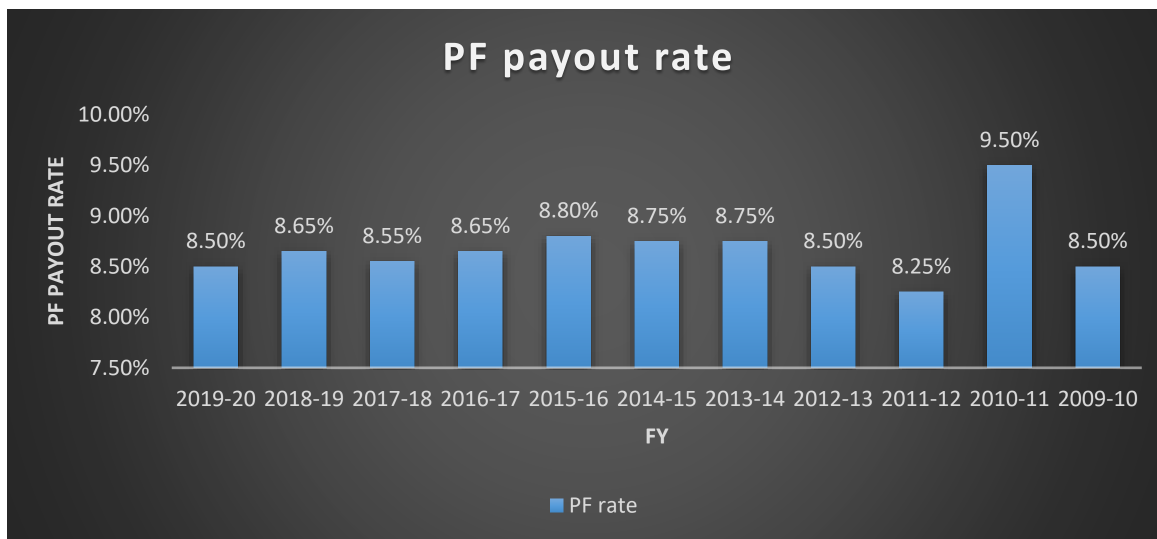
Under Category IV, Equity and related instruments, it may be safer to invest in Exchange Traded Fund (ETF), corporate officers managing the investments may not have the skill sets to do a thorough analysis for equity investment. So the Trust may adopt a NIFTY or a Sensex ETF. It is easier as these ETFs replicate the NIFTY 50 index or the Sensex. The Nifty 50 comprise of the Top 50 companies, so automatically the ETF replicates the investment in the Top 50 companies by buying an ETF unit.

Under Category V, still not fully developed in India so I may not express my views. Not analyzed a lot of papers under this category.

The investment strategy is largely dependent upon the expected pay-out rate by EPFO, as any PF Trust will have to match the rate declared by EPFO even though they may decide to manage investments in- house. They may opt to pay higher than the mandated. Since the Investment pattern permits the sale of securities the Investment officer may book profits during the year depending on his view on interest rate/equity markets. Adequate care has to be taken as every sale faces reinvestment risk. The sale of securities is a good way to build a surplus for the PF.

Over the years, EPFO has declared PF pay-out rate depending upon the interest outlook over the years. Based on the pay- out rate, I have prepared the pay-out graph to analyse the interest credited to employees' provident fund account each year. [14] EPFO pay-out rates for last 10 year are as follows (PF pay-out rate for FY 20-21 is not yet declared):

[14] The provident fund pay-out rate data is taken from https://www.epfindia.gov.in/site_docs/PDFs/MiscPDFs/InterestRate_OnPFAccumulationsSince1952.pdf



I now assess how the performance of an investment officer managing the PF may be evaluated. Primarily his performance would be assessed on surplus generated by the PF fund, portfolio yield, whether the PF Trust is able to match EPFO pay-out rate or the Trust can pay higher interest credit than mandated by EPFO.

Having explained the Investment Pattern that is required to follow by either EPFO or a PF Trust (which has decided to manage the funds in house) and also explained the investment strategy that may be adopted by the PF Trust, it is entirely the decision of the PF Trust (provided it gets approvals from EPFO) to manage PF funds in-house. This decision will be crucial as it is necessary that the investment officer has the necessary skill sets and expertise to safeguard the retirement fund of its employees.

^ References to Economic Times article

^ PF Act and related guidelines

^ NDS OM- ccil.com

^ bricsonline

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ALUMNI CORNER

Underwriting in India – Art or Science?

Rohit Arora

Rohit Arora is a Chartered Accountant by profession and has close to 18 years of experience with Banks and NBFCs. He started his career with Kotak Mahindra Prime and has worked with ICICI Bank and Reliance Capital. Presently, he is with BMW Financial Services, a captive arm of BMW Group. His areas of experience include credit underwriting, risk management, financial planning and analysis, project management, internal control systems, etc.

The landscape of doing credit underwriting in India is changing almost every ten years or so, and this shift is moving credit underwriting from art to science. Art here means more of experience and individual judgement of a credit analyst while sanctioning loans. By contrast, science means lesser human involvement and leaving it for machines to decide like scorecards, artificial intelligence, development of APIs, etc. Let us explore some pages from recent history and try to look into the future for understanding the change of Credit buying process in India.

The Past:

Lending money is a complicated task, especially in India. I started doing underwriting of retail loans way back in 2003. These were the times when a couple of private sector banks started the trend of expanding their Balance sheet and increasing their share in loan business specially on the retail side. This was also the time when aggressive Private sector banks and NBFCs grabbed market share from Public sector banks.

Those were also the days when there was hardly any technology at the disposal for underwriting jobs, and the intuition of a Credit analyst played a significant role in decision making. CIBIL (Credit Information Bureau of India Limited), without which today's times cannot be imagined, did not exist.

Business or personal discussions, for large loan requirements, were widespread during which bank personnel (especially credit analyst) would interview the customer and seek multiple levels of information to decide upon the loan application. Judging financial health of a customer involved reading and understanding of lots of things

outside financial statements like the type of residence locality, living status, ownership of properties, place of business, estimating cash flows, type of business, etc. Reference check of a new customer, from an existing one used to be a big stamp on a customer's credibility.

The methodology included preparing of physical CAM (Credit appraisal Memo), doing detailed telephonic verification, catching fraud in ITRs and banking, resulting in every aspect being completely manual.
The credit underwriters were trained to find the anomalies in documents submitted by customers like Income tax returns, Driving license, Bank statements, etc. to catch fraudulent ones. Later, this job was taken over by specialized RCU (risk containment unit) agencies.

Then, 2006-07 onwards, came the era of entering loan application and customer details in system, CAM was automated along with policy rules which were in-built in the system. This was supported by RCU task being performed by outsourced agencies which involved checking certain customer documents for authenticity. There were some foreign banks which started using scorecards for small ticket size personal loans during this period as well.

The Present:

The present age of credit underwriting, let us say, started five years ago in 2013 and is expected to continue until 2022-23 when the new set of bold reforms are expected to occur.

During recent years, banks and other financial institutions in India have started using scorecards generally. Experiments began with smaller ticket size loans, and once proper use cases were established, scorecards are used for small to medium ticket size loans. Also, with advances in technology, there has been the birth of companies that can check the authenticity of the documents submitted by customers online, within a few minutes. With the introduction of the GST regime, getting the topline details has become easy.

During the last five years, we have also seen other credit bureaus apart from CIBIL gaining ground in India. The tools provided by them are sharp and further strengthen the underwriting and collection processes. Besides, Google has become a very good assistant of underwriters and is very helpful in providing positive as well as negative information about any party to the loan contract.

However, does all of this mean that can the underwriters entirely rely on the information which the tools have started providing? Maybe, it is a bit early to comment.

In the coming years, Fintech companies will start providing strong social-scorecards as well. Scores would be based on the behaviour of a consumer on social media, the number of messages received by a customer for reminders of various payments (such as EMIs and utility bills), etc. Thus, such information would cover the aspects beyond financial statements and information provided through documents submitted. Already several Fintech companies are working in co-opetition with banks. And the same looks like to be in the future as well. The missing piece in the technological puzzle of banks has been found in the form of Fintechs.

Thus, the element of judgement made by an underwriter is going down as more and more scientific methods like scorecards and artificial intelligence tools by Fintech companies are getting launched. However, for big-ticket size loans, the human factor is still needed for a deeper understanding of customer profile and will continue in short to medium term.

The Future:

For sure, the future belongs to analytical tools, artificial intelligence, Robo-advisory, and a lot more data-driven complicated early warning indicators using APIs. And all these would be available at the disposal of a credit underwriter for arriving at a sound decision. These tools will not only aid in better judgment but also reduce overall TAT (Turn Around Time) from days to hours to minutes.

The widespread phenomenon of field investigation (visit to residence and office are done by a hired external agency) and RCU (agency hired for checking fraudulent documents) done by all banks and financial institutions will cease to exist. The financial statements will carry more information to decide. Various new technological tools will give real-time information about customers (even after a loan has been disbursed). AADHAR will become one point of truth just as social security numbers are in developed economies. All this will lead to the entire underwriting pattern shifting dramatically from art to science. Thus, the bias of an analyst in deciding an application will gradually fade away.

However, I feel that personal discussions with customers and developing an overall feel about them will continue to remain valuable in big-ticket size loans. The same is also relevant for maintaining customer relationships.

With more and more NTC (New To Credit) customers coming under the umbrella of financial inclusion and with the availability of credit behaviour of these customers in the near future, taking lending decisions regarding these customers would also become objective.

All these changes will come from both directions -- New age FinTechs, banks, and financial institutions further strengthening their risk management and early warning tools.

Conclusion:

In the long run, the art of deciding about the right customer onboarding from the loan perspective will shift towards science. The future jobs in lending business will require (1) Ability to calculate PDs (Probability of Defaults) and LGD (Loss Given Default) as the ECL (Expected Credit Loss) methodology of calculating risk provisions will pick up; (2) Data scientists to derive meaningful conclusions from Big data available; (3) Finding the right partners in terms of FinTechs and simultaneously enhancing existing technological capabilities; and (4) Awareness of new methodologies coming up in developed markets as the ideas now move cross-border with lightning speed.

It would be necessary for risk management teams, boards of financial institutions and promoters/ investors to develop comfort with this paradigm shift in credit buying. It goes without saying that any such change has to result in lower delinquency, healthier portfolio, higher cost efficiency, and better due diligence.

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STUDENT CORNER

Excessive debt build-up and risk of a global debt crisis

Ali Pulavwala

Ali holds a Bachelor's in Commerce from Ahmedabad University. With a keen interest in finance, he is currently pursuing an MBA from the Indian Institute of Management, Calcutta (IIM-C) and has completed his internship with Arga Investment Management this summer. He spends his leisure hours reading novels, articles and has a huge passion for Quizzing.

The investor psychology goes like this. If entities with surplus money are confident that entities with deficits will repay their debts, financial transactions will take place and debts will be easier to refinance and roll-over. But if something shatters this very confidence, then transactions stop and hopes of refinance are lost. And it takes only one card to pull down the whole house and infuse chaos. This is the crux of the rising global debt in the current environment.

The Global Financial crisis left many countries in turmoil. Economic growth slowed, unemployment rose, confidence in business decreased and economic output took a severe hit. To fuel growth and spur investments, interest rates were lowered, and since then, utilization of debt as a major vehicle of fueling economic growth has continued to work wonders – till 2018, increase in debt was 50% from a decade ago[i]. Going by recent numbers, world's debt-to-GDP ratio is on its way to reaching peak levels of 322%. In absolute terms, the number has crossed $250 trillion and that turns out to be $32,500 of debt for every human being on earth.[ii] However, in recent times, global growth hasn't really supported the cost to-be-incurred for this increasing debt which has gradually resulted into stretched asset valuations. But the financial world has resorted to solving this problem by its own root cause – More debt. The increase in borrowing from different sectors is a bit skewed and calls for a mention. Government borrowing has accounted for almost 43% of increase in the past decade led by mature markets mainly for reasons such as financing bailouts, stimulus programs, assistances during crisis, etc. Another 41% increase has been accounted by non-financial corporate debt.[iii] Delving in the same numbers, it is interesting to note that this wave of debt accumulation is quite different from earlier ones; it has seen different sectors raking up more and more as compared to just one sector being at the forefront of debt accumulation as seen in the earlier three waves.[iv] What drives this change is deepening of financial ecosystem and better access to capital markets. Since 1960's, In the aftermath of the global financial crisis, commercial bank lending turned subdued and hence, the

corporate bond market has witnessed a three-fold expansion at the global level led by a rapid growth in emerging markets. As of 2018, bonds formed 19% of global non-financial corporate debt, up from 10% in 2007. Global non-financial corporate bonds outstanding have increased 2.7 times over the past decade reaching a value of $11.7 trillion.[v] In China, bond issuance jumped from $33 billion in 2007 to $357 billion in 2017.[vi] Emerging market economies have also seen an increase in external debt – 2018 saw external debt reach 26% of GDP on average as compared to just around 15% in 2010.[vii] While we can attribute a variety of reasons for rising debt in different countries, one reason that draws a common thread across the world is an environment of prolonged low interest rates. With short term growth prospects not being really robust, the latter will be here to stay in the near future. Once the credit cycle turns and interest rates rise, whether the bond issuances stays robust or not will be interesting to see. For now, we have several of examples from the last century that tell us the ruckus that debts create if they cross a certain limit – Latin American Debt crisis of 1997, Greek government-debt crisis of 2010's. So, are there signs around the world that signal to us something unusual going on in this space which may lead to the next blowup?

As an aftereffect of low interest rates, insurance companies, pension funds and other institutional investors with set return targets have been compelled to invest in riskier and less liquid assets. As a result, the percentage of non-investment grade i.e. high-yield or junk bonds has increased. In US, almost 40% of all non-financial corporate bonds come under the latter category, up from 31% in 2000. In India, companies sold $3.7 billion in high yield bonds in the past year which was an increase of 187% from 2018.[viii] In the first 11 months of 2019, China's default rate among private issuer of bonds climbed to a record 4.9%. In India, the cases of IL & FS, DHFL, etc. tell about the worsening atmosphere of financial system. In the earlier released RBI's bi-annual Financial Stability report in December 2019, it predicted an increase of 60 basis points in GNPA ratio in Sep '20 from Sep '19.[ix] The risk of contagion is invariably high in the financial ecosystem. Drawing an analogy from the recent NBFC crisis of India, one firm's actions wrecked the entire financial industry eventually affecting the overall economy and this is a unique trait in the financial industry – When Jet Airways shut shop, it didn't have any contagion effect; instead other firms like IndiGo and SpiceJet actually reported a better business performance. The rise of external debt has increased current account deficits a huge margin – in 2018, 55% of emerging market economies had weaker current account balances than in 2010.[x] Integration of these economies into the global financial ecosystem have a potential to lead to huge contagion effect should a distress be witnessed in any one region. Recent happenings around the globe such as US and China fighting over trade issues, uncertainty around Brexit, suffering economies in the Eurozone, stress in some emerging market economies, crisis in the Middle East, etc. too have increased concerns about repaying capabilities of entities including several sovereign governments. The idea that governments can always print their own money and repay back any amount of debt is truly possible but it doesn't come without disastrous consequences such as hyperinflation. And that in itself will bring many more issues to

the existing debt market. In fact, rating agency Moody's cut its global sovereign outlook for 2020 to 'negative' from 'stable' saying disruptive and unpredictable world politics would slow growth and increase risk of economic or financial shocks.[xi] The International Monetary Fund has identified 32 countries which are at high risk of unsustainable debt.[xii] Financial vulnerabilities have increased not only for sovereign debt but also for corporate debt. And it's seemingly looking a grim picture for now. This again makes us go back to the thin thread that connects the whole financial ecosystem – sentiments. As earlier mentioned, even a small crack somewhere in those sentiments can shake the whole world and lead to the collapse of the entire financial ecosystem.

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STUDENT CORNER

Understanding Growth Equity Investment Strategy

Anshul Kothari

Anshul Kothari is a commerce graduate from Mumbai University. He is a Chartered Accountant and a CFA Charterholder. He is also awarded the CFP Certification from FPSB, USA. An MBA candidate at IIM Calcutta (class of 2021), He recently completed his summer intern at a private equity firm Gaja Capital. Prior to his MBA, Anshul worked for 6 years as an entrepreneur experience in the test-prep sector as the owner of T.I.M.E. Udaipur franchise. He is also a certified Mutual Fund distributor and currently manages a portfolio of INR 3 Cr for his clients. He is a research enthusiast, and has been awarded PhD in option strategies. He has also authored/co authored 7 research papers in finance.

Abstract

Growth Equity has emerged from the shadows of Venture Capital and Private Equity as demands for growth offerings are rising at a rapid pace. This article introduces growth equity and establishes a comparison between Growth Equity and PE and VC. It is then followed by statistics highlighting its global rise over the past decade and how technology has emerged as a driving force behind it. Using data from Pitchbook and CB Insights, the article aims to establish how growth equity as a preferred investment strategy is likely to stay for the near future.

INTRODUCTION

Growth Equity has successfully emerged as an established private market strategy on its own. Growth Equity fund count has more than doubled in the period 2005-2019. Their funds raised have almost tripled during the same period. This article provides an overview of the strategy, related global trends and then distinguishing it from VC and PE and comparing its performance from other asset classes. North America and Europe, two of the markets where Growth Equity originated, still constitute the majority of the growth equity deals with the former leading among the two.

GROWTH EQUITY

Definition

To understand the Growth Equity Investment Strategy, it is essential to understand Growth Equity and its related terminology.

Growth Equity (henceforth, **GE or Growth Equity Deals**) falls between Private Equity (PE) investments or Buyouts and Venture Capital (VC) investments in the risk versus returns metric.[15] It means making investments (mostly minority) in relatively mature, founder-owned companies to facilitate their growth through expansion, restructuring or strategic acquisitions. Such investment is referred to as Growth Capital and the funds making such investments are called Growth Equity Funds. The underlying companies where the funds are invested are the target companies. These companies usually need funds to scale an already successful business model further.

Features

1. Growth Equity has distinct risk-reward characteristics compared to Private Equity or Venture Capital Investments for the Limited Partners (LPs).[16]
2. Target firms are mature, owned by the founder(s), leaders in their respective markets, and have no or minimal prior institutional investment.
3. Target companies are either EBITDA positive or expected to be so in the short run. [17]
4. Growth Equity investment involves little or no debt.

Difference between PE/VC and Growth Equity Investments

Although similar to late-stage VC and PE buyouts, Growth Equity still has some unique and distinct characteristics. Unlike PE investments, which are venture-backed, Growth Equity Investments are made in companies that are still founder-owned and have little or no prior institutional capital. Unlike VC deals, which invest in companies in their initial growth phase, Growth equity invests in the target companies that are relatively mature and have proven unit economics, cash flow and significant organic growth (10%–20%). Another significant difference is that Growth Equity investment comprises of little or no debt whereas both VC and PE have witnessed deals dominated by debt.

The table below can summarize the differences between the three.

Basis	Growth Equity	Venture Capital	Private Equity
Stage of Investment	Medium or Late-Stage	Very Early to Late Stage	Late Stage
Ownership Status	Founder Owned	Founder Owned or VC backed	Mostly VC backed or Public Company
Status of Business	Profitable or near profit generation	Revenue Generation	Profitable
Status of the Firm	Mature	New	Mature
Types of Investment	Mostly Equity	Debt and Equity	Debt and Equity

[15] A Private Equity investment in which more than 50% stake is acquired is called as a Buyout.
[16] Limited Partners or LPs are investors who commit capital to a Private Equity or Venture Capital or Growth Equity Fund. Limited Partners generally consist of pension funds, institutional accounts and wealthy individuals.
[17] EBITDA or Earnings before Interest, Tax, Depreciation and Amortization is a measure of company's overall financial performance and is used as an alternative to net profit in many financial analysis.

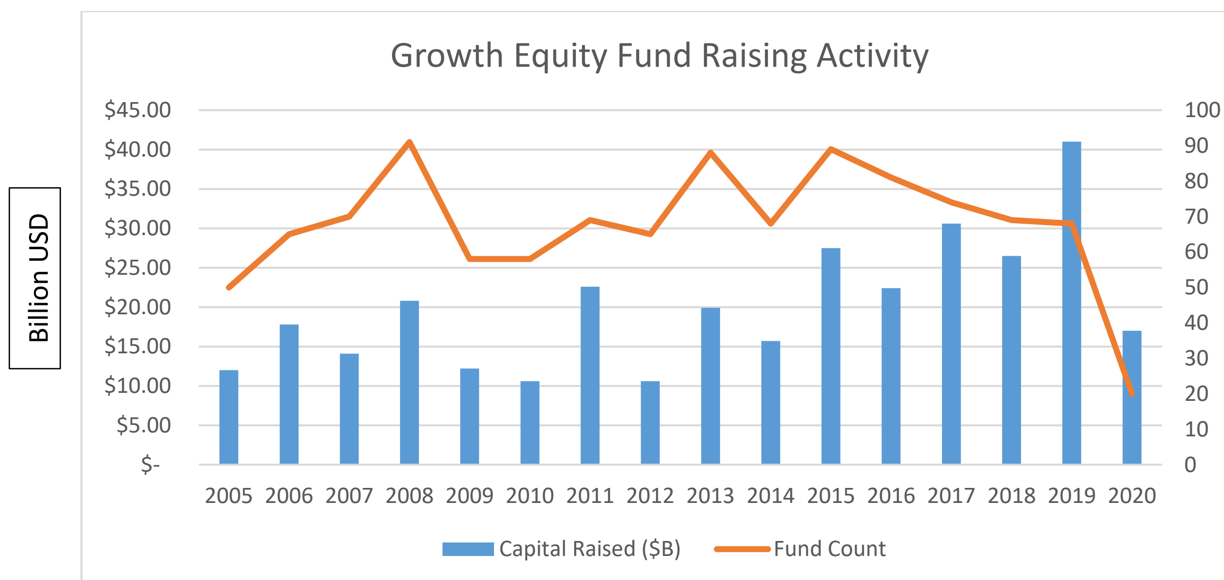
Amidst the differences, there is a significant overlap between Growth Equity and PE and VC investments. For example, Growth Equity deals include redemption rights (a common feature in VC deals) and protective provision (a common feature in PE deals).[18, 19] Looking at the historical deals, we can see that many growth equity funds participate in late-stage VC rounds and also PE Buyouts. Insight Partners' flagship GE fund known as Insight Venture Partner X, mostly participates in VC rounds, whereas TA associates flagship growth fund majorly deals in PE buyouts.

These similarities make it very tough to draw clear boundaries between the three. However, despite the overlaps, Growth Equity has emerged as a stand-alone private investment strategy. Investing in late-stage companies avoids the risk compared to VC and lack of leverage provides a lower capital loss ratio than PE buyouts.[20] Thus, Growth Equity presents an investment with an upside similar to that of VC but with lower losses than PE buyouts.

Recent Trends

Since the 2010s, there has been a substantial rise in the number of growth equity funds. In 2019, taking figures from North America and Europe, the two most dominant areas in Growth Equity, GE funds raised a total of $41 billion across 68 funds (source: Pitchbook). The inclination of Limited Partner investors (LPs) towards this strategy is evident from the fact that Growth Equity fundraising grew at a CAGR of 8.5% in comparison to 6.2% for all PE Deals. The fact that dry powder for these funds has reached $190B (source: Pitchbook), which as a share of all PE dry powder, has risen from 6% to 16%, as of Q3 2019, is a testament to the boom.[21] Parallelly, we have seen an increase in median growth equity fund size since 2005, from $115 million to $328 million, an increase of over 180%. The statistics indicate that the growth equity space has matured and that LPs are comfortable in allocating funds to growth equity fund managers. In terms of geographies, North America and Europe are two of the largest markets for Growth Equity both in terms of deal count and capital raised.

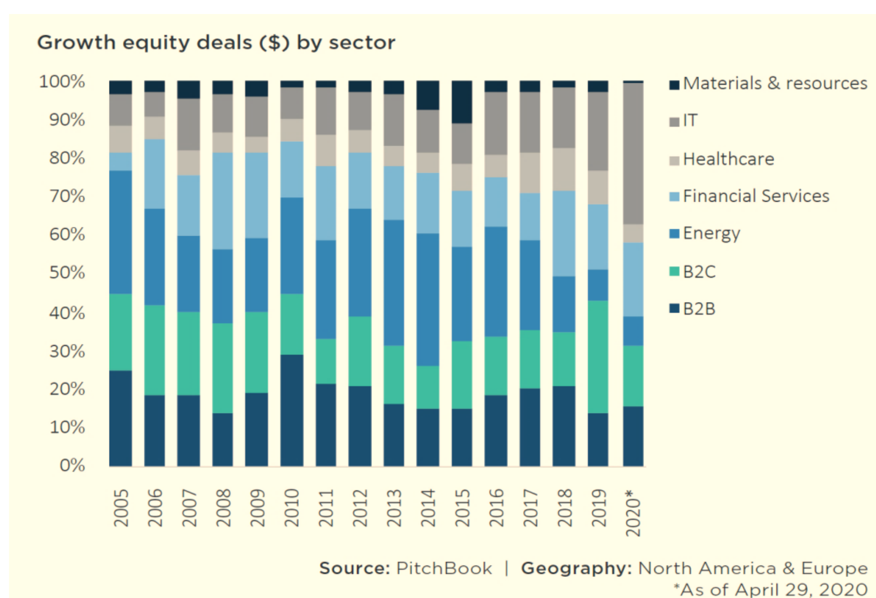
[18] Redemption rights allow investors to force the company to repurchase their shares after a specific amount of time has elapsed, if there has been a default, or if a company has not satisfied performance milestones.
[19] Protective provisions are guidelines that govern what the issuer of an equity share may or may not do without prior approval of the shareholder. An investor entitled to protective provisions essentially has veto rights over company actions.
[20] Capital Loss Ratio is defined as the percentage of capital in deals realized below cost, net of any recovered proceeds, overall total invested capital.
[21] Dry Powder refers to amount committed but unallocated that a investment firm has on hand. It is the cash which is waiting to be invested.



Source: Pitchbook | Geography: North America & Europe

Growth Equity Investment Profile

Investing in Growth Equity means exposure to private companies of sectors which are well suited for expansion. Taking Growth Equity deals by sector from North America and Europe, it is observed that investors in this category have generally favoured the IT sector. Using data sourced from Pitchbook, in 2019 alone, the contribution of tech deals was second among total growth equity deals (Business to Consumer or B2C sector was the highest) at more than 20% of the total growth equity funding. Even the B2C sector, which leads the total growth, consists of companies such as Verisure, which are technological solution providers. This gives an exposure to the digital economy which many perceive to be the driving sector for the future.



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The increase in size and number of GE funds has led to a surge in competition for assets, as General Partners (GPs) from Private Equity and Venture Capital firms look to expand their strategy by coming up with more GE funds. Some of the factors for the increase in the competition are

a. Private Companies tend to remain private longer than they did previously.
b. It is not unusual for a late-stage targeting VC company to move towards growth equity space. For example, General Catalyst, a VC firm, raised $1 billion in its growth fund in 2020.
c. It is common for a larger fund manager to move down and raise a GE fund to increase offerings for their limited partners. A typical buyout focussed firm KKR recently closed their second Growth Equity fund at more than $2 Billion, a three times increase over its predecessor.

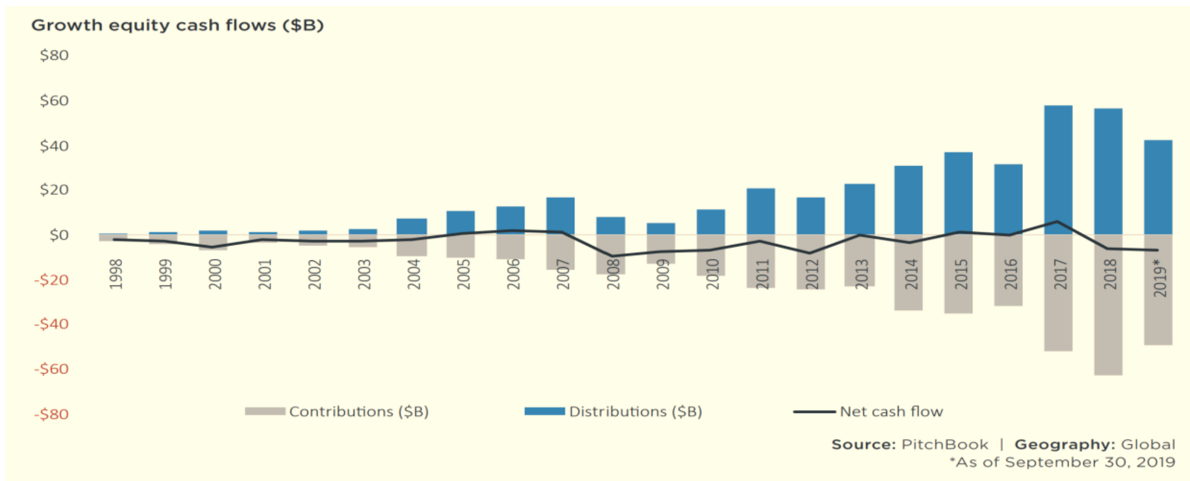
This competition has led to an increase in prices for entry values. Since 2010 the average EBITDA multiple (last twelve-month) for GE investments in North America and Europe has reached 18x, an increase of 75%. The increase for PE investments was just 30%. A probable reason for such growth could be that since such growth firms are devoid of institutional investments that suppress their EBITDA multiple. Hence these valuations employ revenue multiple similar to late-stage VC investments rather than buyouts. The trend is likely to continue as the Covid-19 pandemic is leading control-seeking General Partners or GPs to seek minority control with the option of purchasing the firm at a later date.[22] From the seller's point (the target company), such investment adds to their growth capital but also avoids the sell-off at a suppressed multiple. While the uncertainty persists, the Limited Partners know that GE targets are uniquely positioned to tackle downturns due to their proximity to profitability and high-growth.

Growth Equity Cash Flows vs. PE and VC Cash Flows

Growth Equity's rise as a prominent strategy is also observed from the rise in both contributions and distributions. The net cash flow is negative. However, it is attributable to more fundraisers than distributions. Pitchbook data indicates that Total Value Paid In multiples for vintage GE funds across the globe are above 1x implying that they are cashflow positive. [23]

[22] General partner or GP is the one that invests the fund's committed capital in public and private companies, manages the portfolio of investments and seeks to exit the investments in the future for sizable returns.

[23] or Total Value Paid In (TVPI) multiple or simply Investment multiple is a widely used multiple in private investment space. It is calculated by dividing the fund's cumulative distributions and residual value by the paid-in capital. It provides insight into the fund's performance by showing the fund's total value as a multiple of its cost basis.



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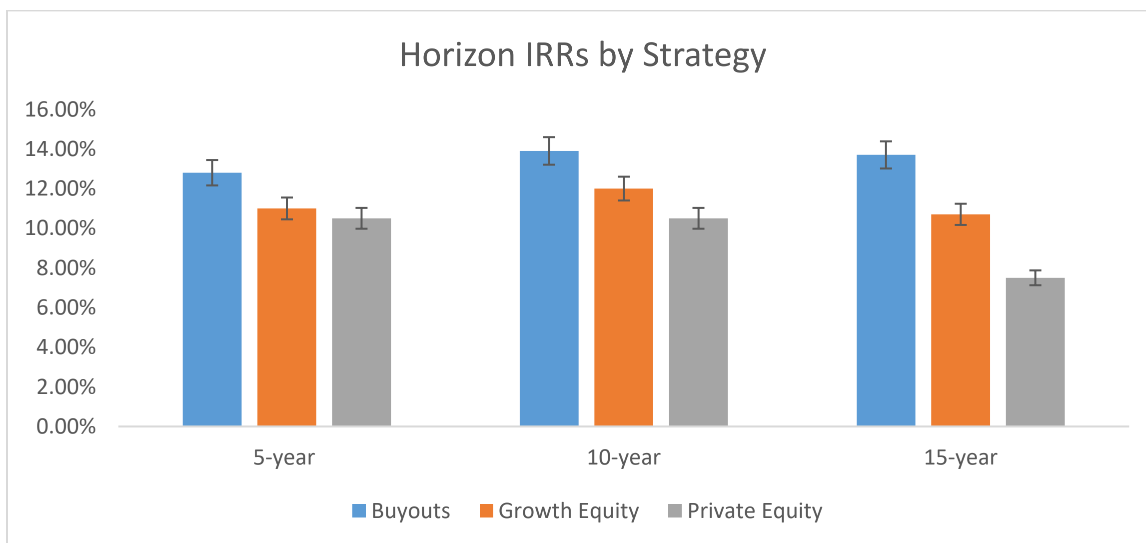
GE Fund Performance

Pitchbook data suggests that the global 5-year, 10-year and 15-year horizon Internal Rate of Return or IRR for GE is higher than VC but lower than PE.[24] The IRR lies between 11% and 12% irrespective of the horizon. Overall, GE investments give Limited Partners a similar return like VCs and PEs but at considerably less leverage than PEs and lower loss-risk than VCs. Thus, it is a strategy that is somewhat of a hybrid of VC and PE in terms of performance. By bucketing IRRs of vintage years, both Buyouts and GE funds have relatively higher IRRs in 2002-2007 than the more recent one in 2008-2015. Contrastingly, VC exhibits higher IRRs in later years, attributable to their Mark to Market gains and higher valuations through fundraising.



Source: Pitchbook | Geography: Global

[24] IRR or Internal Rate of Return is an important evaluation metric used in deciding investment decisions. It means implied rate of return of a project given its initial cost and estimated/actual revenues.

LOOKING FORWARD

It is expected that the benefits of GE's unique risk-reward profile, together with the growth of private equity markets will facilitate the expansion of the strategy. Fund managers will continue entering the space, targeting high growth companies. VCs will also continue to move up to target companies with similar profiles in addition to their late-stage VC investing.

Note: The statistics, graphs, and figures presented in the article are from Pitchbook and CB Insights.

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