December 2020, Volume 6, Issue 3

INDIAN INSTITUTE OF MANAGEMENT CALCUTTA

Editor
Dr. Sudhir S Jaiswall
Faculty Member (Finance & Control Group)
Coordinator (Financial Research & Trading Laboratory)

Editorial Office
Ms. Priyanka Dasgupta
Assistant Manager (Financial Research & Trading Laboratory)
Email: artha@iimcal.ac.in

Indian Institute of Management Calcutta
Diamond Harbour Road
Joka, Kolkata-700104
West Bengal, India
+91-33-7121-1141

A NEWSLETTER OF THE FINANCE LAB

Indian Institute of Management Calcutta

Contents

1 Editorial

Sudhir S. Jaiswall

---

2 Corporate Governance in India: Understanding the History and Peeking into the Future

Asish K. Bhattacharya

---

12 The Role of Credit Risk in Proactive Risk Management

M. Kalyanaraman

---

18 Indian Insurance Industry 2021 and beyond: The art of the possible

Surjeet Mishra

---

27 Coronavirus and the interplay of the systematic, systematic risks, and *Catch-22* on business and economy at large

Saraswat Bhattacharya

---

32 Sustainable Development: Changing Winds & Way forward

Yash Sharma

Note: The views expressed by the authors in their article published in this issue of Artha are personal and do not necessarily represent the views of their employer, or that of Artha, FRTL and IIM Calcutta. Authors are responsible for any permission needed for copyrighted material used in their article.

Editorial

In this December 2020 issue, we have five articles spanning corporate governance, risk management, insurance, and COVID-19 related issues. The contributors are our former faculty member, PGP alumnus from Batch 24, MBA-EX student, a risk management professional and a chartered accountant.

The *first* article is the first part of an extended essay (to be published in three parts), which traces the historical development of corporate governance in India and offers a perspective on the future of governance practices. The article discusses the governance practices in India before independence and during the command capitalism period (1950–1990) after India's independence. In the *second* piece, the author discusses the vital role of credit risk control in the risk management system in the financial sector. In recent years, not only data-driven risk modeling has become more acceptable in India, but also the Indian regulator has firmly extended the role of risk management to both banks and non-banking financial companies. The *third* article reviews the impact of the pandemic and lockdowns on the global insurance industry. These effects will spill over to India and change the landscape of the Indian insurance industry. In the *fourth* piece, the author shows how the COVID-19 induced economic crisis is different from previous economic downturns and how an interplay of systemic, systematic risks and catch-22 scenarios will severely affect the economy. The *last* article explores the current investment in sustainable development in general and on the environmental part of Environmental, Social, and Governance (ESG) in particular, along with the opportunities and challenges arising from the COVID-19 situation.

I hope that you will enjoy reading it and look forward to your feedback, suggestions, and contributions. Please email them to us at artha@iimcal.ac.in.

Stay safe and in good health!

Sudhir S. Jaiswall

Editor

Corporate Governance in India: Understanding the History and Peeking into the Future

Asish K Bhattacharyya

Asish K Bhattacharyya is the founder of Nonlinear Insights. He was a Professor at the Indian Institute of Management Calcutta and Indian Institute of Corporate Affairs. Also, he was Director of the Institute of Management Technology Ghaziabad and the Head of the School of Corporate Governance, Indian Institute of Corporate Affairs. Dr. Bhattacharya started the Centre for Corporate Governance at IIM Calcutta. He is a regular columnist for Business Standard for the last 12 years.

INTRODUCTION

The objective of this essay is to share the author's perspective on the future of corporate governance practices in India. According to Iggers (2005, p 4)), historians agree that there are continuity and direction in history. With that notion, it is essential to understand the past and current practices in developing a perspective on how a particular construct or practice will take shape in the future. Governance practices depend on the internal and external contexts in which business firms operate. This essay endeavours to understand India's corporate governance journey to develop a perspective on the future of corporate governance in India.

The essay will be published in three parts. Part I, included in the current issue, covers the governance during the colonial era and during the command capitalism (1950 – 1990). Part II will cover the governance practices from 1991 to 2020. Finally, Part III will present a perspective on the future of corporate governance in India. The full bibliography will be included in Part III.

Part I

Hindu Undivided Family and Business Group

Understanding the constructs 'Hindu Undivided Family' (HUF) and business group is important to understand the business structure and corporate governance in India. HUF is an Anglo-Indian construct that is governed by

personal law. In British India, HUF was identified as a separate legal entity to govern kin-ship based capitalism and for taxation. In independent India also the income tax law recognises HUF as a 'person' separate from its members for income tax assessment. We shall use the term joint family or simply, family to refer to HUF.

Simply speaking HUF is 'joint property relations of the household'. HUF evolved from ancient Hindu law. Under Hindu Law, a HUF is a family that consists of all persons lineally descended from a common ancestor and includes their wives and unmarried daughters. A HUF cannot be created under a contract, rather it is created automatically in a Hindu Family. Even though Jain and Sikh families are not governed by the Hindu Law, they are treated as HUF under the Income Tax Act.

There are two schools of law governing HUF: *Mitakshara*, which governs virtually all the commercial casts, and *Dhayabhaga*, which is prevalent in Bengal and Assam. Under the Mitakshara, the household's ancestral property and any addition to that is the joint property of the father and sons. Sons, grandsons and great-grandsons inherit the property immediately on birth. Distinct share emerges only in the event of formal partition. Karta is the senior male or female member who manages the property. Under Dhayabhaga, the son's right to inheritance begins on the death of the father. Birla (2009) observes that "colonial legislation deployed the HUF as the universal model for the customary organisation of trade".

Hazari (1966), as quoted in Khanna and Palepu (2005) defines a business group as, "area over which decision-making authority sway". Khanna and Palepu (2005) elaborate that "the decision-making authority in question was almost always a family, though it could be a close-knit ethnic community as well." They further observe that the group exercises control through nonequity channels – for example, through family ties or manipulation of the boards of directors. The unit of decision-making was a business group and not an individual joint-stock company.

GOVERNANCE OF COMPANIES DURING THE COLONIAL ERA

The story of corporate governance during the colonial era is the story of the transformation of merchant capitalism to industrial capitalism. European entrepreneurs led this transformation and Indians joined later. Our focus is on the Indian business community, as we shall discuss India's journey of corporate governance beyond the colonial era and Indians dominated the scene in independent India.

Emergence of the limited liability company

In ancient India and during the early years of the East India Company, Indians were engaged in trading and money lending business. A joint family was the family unit and the business unit at the same time. Karta was the head of the family and also of the business. However, the networking was vast and much beyond the boundaries of the

joint family. The currency was 'trust' among the members of the community and clan spread across geographies. Formal partnerships were absent. Infrastructure in the pre-colonial period was fragmented. The British constructed infrastructure and unified India. The unification extended the boundary and the business horizon. Some families got attracted towards setting up industry, primarily due to the demonstration effect of industrial ventures set up by Europeans, proximity with English entrepreneurs and opportunity to import plant and machinery from the U.K.

However, the families did not have enough investible funds for setting up the industry. They devised the instrument called 'company'. This was a new form of organisation structure for doing business. The pioneering family created a partnership with other families and individuals for mobilising capital. The term and conditions were predefined and often permitted a free transfer of the shares. The Karta of the pioneering family secured the right to manage the business by contributing a larger amount of capital than other families. This structure was in complete sync with the practice prevalent at that time – the Karta of the joint family heading both the family and the business. In India, a company was not a legal entity until the first Companies Act was enacted in 1850 and companies received a legal sanction. It was conferred legal liability by the Companies Act 1857. This encouraged the formation of companies without disturbing the family structure. The Companies Act 1857 did not grant limited liability to banking and insurance companies. Only in 1860, a limited liability was granted to them.

Managing Agency system

The company form devised by the Indian merchants for pooling funds and sharing risks for setting up industry blossomed into the managing agency system. Managing agent was a partnership firm or a private limited company formed by an entrepreneur, having financial strength, with family members and friends. It floated a company for setting up industry and pooled money from investors. Immediately after the company's formation, it entered into a long-term managing agency contract with the company for managing the company. They earned commission on sales and profit (later) for managing the company. In addition to managing the company, it provided various agency services to earn a commission. The managing agency was the need of that time when both capital and managerial skills for managing complex organisations were scarce. The renewal of contracts was easy. Shareholders had no option but to renew the contract, as organizational skills to run the company were scarce. Dynamic managing agents devised a mechanism to promote and control more than one company. Once the first company was established, they would reduce their investment in that company and float another company using the fund raised by selling the shares and using the resources of the established company. It would enter a managing agency contract with the second company. Through this mechanism, large managing agents controlled a chain of companies with small capital investment.

Although the managing agency system helped in economic development, it earned criticisms on several counts – conflict of interest, deterrent in developing professional managers, diversion of funds and misuse of controlling power to enrich itself. This is the typical agency problem that is inevitable whenever the control and ownership of an enterprise are separate. The boards of directors (Board) of companies were rubber stamp boards. There was no mechanism to monitor the managing agent. The managing agency was abolished in 1970.

GOVERNANCE OF COMPANIES UNDER COMMAND CAPITALISM 1950 – 1990

The business climate

Immediately after India's independence, a new business climate emerged, and the government decided to intervene in the allocation of both the public and private capital. Private capital was scarce, infrastructure was inadequate, capital goods were not available indigenously, and most businesses were engaged in producing consumer goods. Therefore, the government decided to reserve core sectors for public investment. Private capital would flow to unreserved sectors, albeit within the framework of regulation and control. The government devised two instruments: five-year plan and industrial licensing. Five-year plans would set up the development strategy and priorities and need of capital in different sectors and different geographic locations for balanced regional development. The Licensing system would ensure the allocation of private capital appropriately for achieving plan targets. It was implemented through the Industrial (Development and Regulation) Act 1951. Existing firms and entrepreneurs were required to secure a permit to start a new industry or to enhance the capacity of an existing plant. Although foreign collaborations were encouraged, they were approved by the government through the licensing system in order to preserve the foreign exchange. The government also assumed the power to control the price and distribution of products. In order to conserve scarce foreign exchange, the government restricted the import of consumer goods and emphasised import substitution, which facilitated the inflow of plant and machinery for priority sectors and a preferential treatment to small and medium industries.

In 1969, the Monopolies and Restrictive Trade Practices Act (MRTP) was enacted to control monopolies, check the concentration of economic power in the hands of a few, and prohibit monopolistic and restrictive trade practices. In August 2009, the MRTP Act was repealed and was replaced by the Competition Act 2002, effective from September 1, 2009.

Foreign Exchange Regulation Act (FERA) Act was promulgated in 1974 and was implemented in 1976 after the issuance of amplified guidelines in May 1976. Under FERA, foreign companies functioning in the non-priority sector were required to dilute their equity holdings in a domestic company to 40 percent. Multinationals responded differently to the FERA. Some sold their businesses to Indian entrepreneurs, some diluted their equity holdings, and some could secure a concession from the government. In general, FERA hurt foreign companies.

The Companies Act 1951 gave powers to the government and courts to intervene in the management of companies. A new Companies Act was enacted in 1956, which enhanced those powers and included a number of provisions to protect the shareholders' interest.

Industrial financing

During this period, banks were financing working capital but not long-term credit. The emergence of government-sponsored credit facilities through Development Finance Institutions (DFI) was a great support to private enterprises. With the establishment of the Industrial Finance Corporation of India (1948), the Industrial Credit and Investment Corporation of India (1955) and the Industrial Development Bank of India (1964), companies could obtain long-term loans on easy terms. During that period, state governments also established state financial institutions to provide long-term finance to industries in their states.

Although the Bombay Stock Exchange (BSE) became the first stock exchange to be recognized by the Government of India in 1956, till around the late 1970s it had a marginal role in financing the industry. Dilution of equity under the FERA activated the stock market (Nagraj, 1996). Much of the growth in the capital market was in the debt segment. About a third was for convertible debentures. The proportion of equity capital in market capitalisation came down from about 90 percent in the early 1970s to about 30 percent two decades later, although in absolute terms (nominal value), fresh equity capital grew by 18 percent (Nagraj, 1996).

The mutual fund industry started in 1963 and has undergone growth in phases. In phase I, the Unit Trust of India (UTI) was established by an Act of Parliament. The phase II started in 1987 when public sector banks, Life Insurance Corporation of India (LIC) and General Insurance Corporation of India (GIC) established mutual funds. Phase III started in 1993 when private sector mutual funds entered the industry. Figure 1 shows that before phase III, the growth in assets under management was sluggish. The growth accelerated only when private sector mutual funds entered the industry. Phase IV started in 2003 with the bifurcation of UTI into two separate entities: Specified Undertaking of the UTI and the UTI Mutual Fund.

Figure 1: Growth of the mutual fund industry in India[1]

With the emergence of mutual funds, private investment started flowing to the corporate sector. Another source of equity was the DFIs. However, the debt remained the main source of external financing. Table 1 reflects the composition of external financing:

Table1: Composition of corporate sector's external finance, 1960-61 to 1990-91

Years	As a per cent of total external finance		
	*Paid-up capital**	*Borrowing*	*Trade credit*
1961-62/64-65	17.3	52.6	30.00
1965-66/69-70	10.9	56.4	32.5
1970-71/74-75	5.7	40.9	54.5
1975-76/79-80	4.4	46.6	48.7
1980-81/84-85	4.0	52.2	40.2
1985-86/89-90	11.3	55.7	35.5
1990-91/91-92	11.8	54.5	33.6

*Includes share premium; (Source: Nagraj R., 1996)

[1] Source: MF History: Association of Mutual Funds In India, Available at: https://www.amfiindia.com/research-information/mf-history; Extracted on November 24, 2020.

Business houses preferred debt financing and used the stock market cautiously because of the anxiety that any expansion in shareholding could amount to losing control (Roy, 2018, p 201), which made investment costlier and restricted investment capacity.

Selective liberalisation of the economy during the 1980s

The change in government attitude and slow change in the economic policy toward liberalisation encouraged entrepreneurs to set up new industries. Regarding liberalisation of 1980s, Panagariya (2004) observes, "The fragile but faster growth during the 1980s took place in the context of significant reforms throughout the decade but especially starting in 1985. While this liberalization was ad hoc and implemented quietly ("reforms by stealth" is the term often used to describe them), it made inroads into virtually all areas of industry and laid the foundation of the more extensive reforms in July 1991 and beyond. The liberalization pushed industrial growth to a hefty 9.2 percent during the crucial high- growth period of 1988–91." Mehta (Mehta, 1988, p 212) observes, "there are positive benefits which have already begun to accrue. We have no doubt whatsoever that the decade of 1980s, with its emphasis on the slow and steady process of liberalisation, will show a performance in terms of production, productivity and investments in Indian industry of a type distinctly better than that achieved in the decade of the 1970s."

This change in government attitude and policy encouraged entrepreneurs to start new industries moving away from traditional industries. Pharmaceuticals and communication (including IT) industries and were most favoured by the new entrepreneurs.

Impact of government policy and legal environment

During the period 1951-1965, private capital allocation was guided by a combination of market forces and administrative direction and business activities used to take place in a traditionally free environment (Hazari, 1967). This continued thereafter. It implies that once the license was granted, there was no restriction on how firms managed the business, although the Companies Act 1956 gave the government and the court the right to intervene if a company failed to comply with the law. Although price control was imposed on 17 commodities, firms were free to decide the selling price of other products (Shah, 1965).

Chakravarty (1987), while analysing the experience of India's development planning during 1950-1985, observed that the licensing policy reinforced entry barriers and resulted in a lack of domestic competition in the product market. Thus, 'inward-looking planning' and licensing policy created a sellers' market and an economy of scarcity. The licensing policy gave undue advantage to large business groups. They could jump the queue to secure licenses. There was no pressure to perform in the product market. Therefore, securing a license either to

expand the business or to block the entry of others for killing the competition was enough to succeed in terms of growth and profitability.

Socio-cultural change

Although the joint family structure continued, it started experiencing strain because of various factors such as increasing complexity of business models, urbanisation, spread of education and change in the socio-economic structure (Tripathi and Jumani, 2013, p 192). This strain got aggravated due to the changes in the business climate after independence: abolition of the managing agency system resulting in the appointment of family members as managing directors, who could test the autonomy of managing the business; enactment of the MRTP Act 1969, which led to setting up of separate business by younger members of the family to circumvent the act; the weakened position of the family to finance growth and new projects; and availability of easy finance from DFIs reducing the dependence on family for financial capital aggravated the situation. However, the licence raj delayed the inevitable split in the family, as license would be more easily obtained on the reputation of the group or family (Roy, 2018, p 233). During this period, business families diversified into unrelated businesses to achieve the objective of keeping peace in the family by settling the sons in unrelated businesses so that they do not compete for the rest of their lives (Roy, 2018, p 233). Despite all the efforts by the Karta (patriarch), a split in business families became a norm after 1979 (Tripathi and Jumani, 2013, p 194). The split took away the shine of many business families and disarrayed some families, resulting in the destruction of family wealth. Many of the separated components could not be managed well.

Emergence of professional managers

During this period, something valuable emerged – professional management. Although controlling shareholders continued to tighten their grip on the companies under their control, they realised that partnership with professional managers was important to steer the company. Moreover, they started grooming their heirs for management positions through formal management education and apprenticeship in companies from their younger days. Economic liberalisation initiated in 1991 opened up new opportunities and brought new challenges in managing the business. This further strengthened the dependence of controlling shareholders on professional managers. We may consider the period from 1980 till now as the period of the ascent of professional management.

Organisation structure and corporate governance

Abolition of the managing agency system did not reduce the controlling power of the families on the companies, which they managed as the managing agent, because controlling investments were not disturbed with the abolition of the managing agency. A controlling family appointed its members as salaried chairman and managing director with a separate board in each company under its control. Group management remained intact. Moreover, business

families used the pyramid structure of ownership and a complex web of intercorporate investments to have control over a number of companies with small voting rights and investments. The managing agency system continued in different avatars – control with low cash flow right. Hazari (1964) observed that the managing agency system perpetuated family control and conferred a birth-right upon the managing agency and the right to participate actively in routine management. The technical and managerial deficiency of hereditary management continued even after they employed professional technicians and managers as family members were placed above them.

The system of control with low cash flow right continued with the support of the development financial institutions (DFI). DFIs allowed a Debt-equity ratio of 2:1 and sometimes even 3:1. Most business groups began to control several large listed companies under their wing with equity ownership of 15 percent or less (Goswami, 1916, p 202). During the 1980s, companies preferred loan and equity investment by DFIs and used internal resources for expansion. There is a vast literature (such as Fama, 1985) providing support to the proposition that lenders actively monitor the borrowers and improve governance of the borrowing companies. In India, the reverse seems to be true. Investment by government-owned financial institutions (such as DFIs) had led to misgovernance. In the event of systematic default, they would reschedule the debts in the name of financially rehabilitating sick companies. DFIs were supportive of the promoters and therefore, promoters were ensured of the support of one-fifth to one-third of the voting rights in their companies. In a way, promoters' control rights vastly exceeded their cash flow rights with the support of financial institutions. Consequently, the Indian corporate sector was dominated by highly diversified family businesses with poor corporate governance practices (Patibandla, 2006). The boards were a rubber-stamp board. Another reason for poor corporate governance was that the market was closed and it was a sellers' market resulting in a lack of market pressure for improving corporate governance.

In a nutshell

The government policies during the period of command economy did not provide any incentive to improve corporate governance. The policies and legal environment helped business groups to grow. During the period of early liberisation of the 1980s, some investments in new sectors were made by the first generation entrepreneurs in new sectors like pharmaceuticals and communication. DFIs supported the perpetuation of family control over companies with low cash flow rights. Unrelated diversification and family split wasted and in some cases destroyed shareholders' wealth. At the end of the era, India had a very large and active industrial sector ranging from complex petrochemicals to simple toy manufacturing, but a combination of licensing, protection, quotas, high gearing and poor board-level accountability had created an environment that didn't punish poor corporate governance (Goswami, 2001).

Part II and part III of this article will be published in the next two issues of Artha.

References

Birla, Ritu. Stages of Capita – law, culture and market governance in late colonial India. Duke University Press (2009). p.15

Chakravarty, Sukhomoy. Development planning – the Indian experience. Oxford University Press, New Delhi (1987). p:57

Fama, Eugene F. "Agency problems and the theory of the firm." *Journal of political economy* 88, no. 2 (1980): 288-307.

Fama, Eugene F. "What's different about banks?." *Journal of monetary economics* 15, no. 1 (1985): 29-39

Goswami, Omkar. *Goras and Desis*. Penguin Random House India (1916)

Hazari, R. K. The structure of the corporate private sector: A study of concentration, ownership and control. Bombay: Asia Publishing House (1966).

Iggers, George G. *Historiography in the twentieth century*. Wesleyan University Press, Connecticut (2005)

Khanna, Tarun, and Krishna Palepu. "The evolution of concentrated ownership in India: broad patterns and a history of the Indian software industry." In *A history of corporate governance around the world: Family business groups to professional managers*, pp. 283-324. University of Chicago press, 2005.

Mehta, Fredie A. Growth, controls and the private sector in The Indian Economy-recent development and future prospects (ed. Lucas, Robert E.B. and Papanek, Gustav F.). Oxford University Press, Oxford (1988)

Nagraj, R. India's capital market growth – trends, explanations and evidence. Economic and Political Weekly, Special number, September 1996. Pp 2553-63

Panagariya, Arvind. India in the 1980s and 1990s: a triumph of reforms. International Monetary Fund Working Paper (March 2004), Pp 7. Available at: https://www.imf.org/external/pubs/ft/wp/2004/wp0443.pdf; Extracted on November 24, 2020

Patibandla, Murali. "Equity pattern, corporate governance and performance: A study of India's corporate sector." *Journal of Economic Behavior & Organization* 59, no. 1 (2006): 29-44.

Roy, Tirthankar. A business history of India. Cambridge University Press, Cambridge (2018)

Shah, V.C.. "Price control in Indian economy – do they hamper growth." *The Economic Weekly* (1965): 1097-1100.

Tripathi, Dwijendra and Jumani, Jyoti. *The oxford history of contemporary Indian business*. Oxford University Press, New Delhi (2013)

****

The Role of Credit Risk in Proactive Risk Management

M. Kalyanaraman

Kalyan is currently the Chief Credit Officer at Ujjivan Small Finance Bank Limited. Prior to that he was the head (outreach banking) at Equitas Small Finance Bank, leading a small team to help create a sticky network of partners within the prevailing regulatory, internal and market context(s). He is from the 24th batch of PGP program, IIM Calcutta and has experiences across different parts of the India BFSI spectrum.

Prudent risk management, especially credit risk control, has always been the mainstay of successful banking institutions. In an interview given to the Hindu in October 2020 upon his retirement as the Managing Director & CEO of HDFC Bank, Shri Aditya Puri aptly stated, "The challenge now was to grow without compromising on asset quality, taking undue risks or succumbing to the latest fad. This is where the risk management system of the bank came into play. Insulating the credit function from business was a critical call in this regard." [2]

The context here is the late 1990s when two simple principles laid the basis for any extension of credit. First, looking at the borrower in the eye and establishing the veracity of the transaction. Second, proper reference checks on his/her antecedents to establish a track record with both the market and other lending institutions. Any banker who has lent pre-2000 would testify to these simple ways to establish the ability and intent of a potential borrower. So many cases were rejected due to the tongue of a past-lender scorned and an equal number of entrepreneurs would have faced this heat. And the term "Risk Management" mainly referred to Credit Risk in its entirety, pre-2000.

Come the dawn of this new century and credit depositories such as consumer, commercial bureaus were taking shape. Lender participation started getting formal. Initially, the larger lenders looked suspiciously at whether their monthly submissions of customer credit history would be misused by competition to cross-sell competing products. Such was the starter hiccup. By the time the Global Financial Crisis hit, it was clear during 2009 that the swift & sure lending models need extensive data support. And pooled approaches were required by institutions; else, the fraudsters were ready to spring organised attacks on the ever-hungry lenders. Suddenly

[2] L. Mishra. 'Under penetration is biggest opportunity'. The Hindu, October 31, 2020. Accessed at https://www.thehindu.com/business/Industry/under-penetration-is-biggest-opportunity/article32992900.ece

internal deduplication alone did not build a sufficient wall, and identity frauds could easily wreak havoc with the strongest of lender evaluations. Risk Managers were now in demand, and Credit Risk would be subsumed in their roles since Financial, Operational, Legal, Reputation, Market, Compliance and Technology oversights now demanded individual share of Risk Manager's attention.

By the time the events of the last few years (2015-20) evolved, the regulator had firmly extended the role of risk to both banks and non-banking financial companies (NBFCs). NBFCs are now required to have a Chief Risk Officer who cannot be assigned any other responsibility.[3] This highlighted the need for good independent oversight in order to provide robust mitigation. To this extent, the Indian Financial System has been able to withstand many of the pulls and pressures such as the NBFC Crisis, cross border flows, Yes Bank - PMC Bank events, and last but not least, the current pandemic induced economic stress. The latter leading to pressure on individual institution's ability to disburse loans to chosen credit-worthy target segments while also stressing collections on past loans. Shri Rajnish Kumar, the earlier State Bank of India CMD famously commented, "As of June 30, 2020 we can safely state that our Portfolio is Asymptomatic."[4]

Consumer Credit Evolution in India: 1990 vs. 2020

The initial period was reliance on documents -- salary slip and Income Tax Returns; today there is a whole new procedure-set around Income Assessment -- Bank Statements, Voucher Verification, and Personal Visits.

Fraud was a black and white term then. Now there are hues and colours that are acceptable -- end use relaxation, tenure mismatch, socially engineered applications.

The availability of lenders and choices to the borrower have gone up many times. Hence there are lenders for Super Prime, Prime, Sub-Prime and New to Credit borrowers. Each jostling for space amongst competition to draw out the borrower.

The population's behaviour shift -- attitude to borrowing -- has not been factored in fully. (Almost every report on Indian Economy will start with "low credit penetration"). Yet, the methods for credit evaluation have got to dig deeper.

Today, since channels drive sourcing, the Credit Manager needs to understand the nuances of physical, digital and blended origination structures, in order to calibrate Credit Assessment accordingly.

---

[3] The RBI notification for NBFCs can be found at https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11557&Mode=0

[4] Refer earnings summary at https://www.thehindubusinessline.com/money-and-banking/sbi-q1-profit-jumps-81-y-o-y-to-4189-crore/article32238613.ece

Management of Credit Risk

Conventional credit risk management relies on two pillars:

1) Independent or Maker-Checker-Verifier oversight; and
2) Robust Monitoring of Portfolio.

While the individual portfolio becomes the first point of reference, the three high-level (borrower constitution based) segregation can be a convenient way to focus on credit risk management:

1) Corporate segment, generally defined as companies above a particular size say Rs. 2,000 crore of annual revenues;
2) Commercial portfolio encompassing different segments such as Agriculture, Real Estate, Medium size companies between say Rs. 200 and 2,000 crore of annual revenues; and
3) Consumer or Retail Lending portfolios covering Credit Cards, Auto, Housing, MSME (up to Rs. 2 crore of loans), Educational and Microfinance loans. [5]

Note that the above construct is neither exhaustive nor unique; individual institutions would choose to categorise their credit exposures in a form most suited to their chosen lending segments. The entire ambit of Investment Management, alongside the Capital Markets linkage thereof, opens separate vistas in Risk Management too. Plus, there would be cutovers across the boundaries, for example, a real estate operating company having annual revenue of Rs. 5,000 crore would find itself straddling all three segments mentioned above. Their suppliers would need Supply Chain Financing solutions (Commercial or FinTech play). Buyers would need Housing and Property Purchase Financing options (Consumer Lending). The company itself would need Construction Finance choices (Corporate Bank).

Credit vs. Risk

Credit Management does not end typically once the customer is on-boarded. Early Warning and Portfolio Quality Management are roles played by the Risk Department. On-going portfolio collections and customer service management are two important pillars that pulse the health of the portfolio. A pipe from Early Warning to Collections Management ensures that overdue receivables are managed efficiently too.

[5] MSME refers to micro, small, & medium enterprises.

Typically Credit Underwriting delegation and Gross Non-Performing Asset budget adherence are credit functions primarily under the responsibility of a credit manager. [6]

CREDIT RESPONSIBILITIES	RISK ROLE
Evaluate and Process Loan Applications	Set Policy & Process Guidelines
Carry Location Surveys to further Loan Disbursal	Study Industry Segments where the lender can grow business sustainably
Make available tools to evaluate Individual Credit Decisions	Scan the market for the best tools and constantly test the efficacy of existing methods
Ensure proper hands-in from Originator Department and robust hands-off to Operations Team	Study the gaps across multiple internal stakeholder departments and plug the same
Use Peer Audit, Concurrent Checks, and RCSA procedures to self-correct	Use of Internal, Statutory, Regulatory audits to establish feedback
Grow or Accelerate the Lending Business	Periodic checks to ensure that the Vehicle is Road-worthy

How independently and objectively each of these is performed ultimately decide the pace at which the organisation climbs the risk-reward slope and the boundaries for the same. Equally, how consistently the credit decisions get taken (say across 23 states or 600 branches, for instance) determine the quality of the Portfolio. And underlying these would be the basic Process, Technology, Training inputs that the organisation functions on. The Risk Overlay adds to the sheen of comfort and how seamlessly Origination-Credit Evaluation-Risk Management are stitched determines the extent to which the gates are manned.

The best organisations embed Risk Management into their functioning. There is no difference in the way they manage risk and grow business. For a young or growing financing company, the CEO of the small-sized firm would herself perform the role of a Chief Risk Officer role until the organisation grows. The other end of the spectrum, in a large financial organisation, sees Risk Management Committee of the Board, periodically evaluating that the controls are in place, functioning. Such a firm is likely to have a Chief Risk Officer to monitor and manage risk actively. Having an able Chief Risk Officer frees the CEO of a large firm to focus on tackling the market, competition, and different stakeholders.

Blending Risk Management into the Customer Life Cycle Management

[6] A 'non-performing asset' (NPA) was defined as a credit facility in respect of which the interest and/or instalment of principal has remained 'past due' for more than 90 days. The regulator's IRAC norms cover the related definitions fully at https://www.rbi.org.in/scripts/BS_ViewMasCirculardetails.aspx%3FId%3D449

It is worthwhile for banks and non-bank financial companies to blend their risk management practices into the management of customer lifecycle.

A Peek into the Future

During the last few years, both digitisation and digitalisation have gained importance causing a shift towards instant credit evaluation and online risk management.[7] As a result, the margin for error has gone down, and simultaneously, both detection-time and reaction-time have crashed. Post-2000, analytics play an important role in any function. On-the-fly dashboards and scorecards are useful tools to help Credit Managers supplement their decision and make the entire process replicable.

Such a backdrop means that understanding the risks is the first step. Step two is to agree on the identified risks. Now starts the interesting journey of mitigating the individual risks identified. Measuring the risks, laying down the controls, and periodic risk review complete the Risk Management journey.

Circa October 2020, understanding and living within the COVID-19 pandemic calls for some more measures:

1) Understanding the pandemic's impact on a borrower;

2) Placing the borrower's business in the global (or national) supply chain;

3) Weatherproofing the borrower to disruption;

[7] Digitisation is closer to automation and work-flow ease while digitalise refers to the ability to convert data and information into analysed buckets. A good discussion on this is available at https://www.forbes.com/sites/jasonbloomberg/2018/04/29/digitization-digitalization-and-digital-transformation-confuse-them-at-your-peril/?sh=4ae812392f2c

4) Assessing Capability of the borrower to ride successfully the 2-Ds -- Digital and Digitise;
5) Building more intuitive and self-use capability into offerings for existing borrowers.

Interesting Days Ahead!

To sign off, it would be useful to remember the following quote from Charles Dickens' famous novel A Tale of Two Cities:

> "It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to Heaven, we were all going direct the other way – in short, the period was so far like the present period, that some of its noisiest authorities insisted on its being received, for good or for evil, in the superlative degree of comparison only."

****

Indian Insurance Industry 2021 and beyond: The art of the possible

Painting a post-pandemic landscape

Surjeet Mishra

Surjeet is a student of the MBAEx program at IIM Calcutta with over 12 years of industry experience in digital strategy consulting and customer relationship management. He has spent over 6 years in executing enterprise-wide strategic programs for major Insurers in the USA. Apart from solving industry problems, he enjoys playing sports, solving puzzles, and working on CSR projects.

Every crisis, whether personal, social, or global, makes us look at things differently and possibly changes our way of life. In the past, a global emergency like a recession or a pandemic had forced our societies to adapt and change our course. The year 2020 has presented us with both a pandemic (social crisis) and a related recession (financial crisis). As a result, we are forced to look at the way we lead our lives, run our businesses, and plan our economic policies, so that we can do course correction for the future in a completely new light. The economies of more than 100 countries have cracked and many major industries – entertainment, automobile, travel, tourism and hospitality – have been negatively impacted due to the coronavirus (COVID-19) pandemic.

The April 2020 report of World Economic Outlook (WEO) projected the global economy to contract by -3 percent in 2020 due to COVID-19. The projection was lowered to -4.4 percent in the October 2020 report. In April 2020, the global economy was projected to grow by 5.8 percent in 2021 (figure 1), and the projection now stands at 5.4 percent.[8] The global economy is expected to recover more gradually than previously expected.

[8] https://www.imf.org/en/Publications/WEO

Figure1: World Economic Outlook's 2021 Growth Projections released in April and October 2020

Recently, the Indian economy has entered a technical recession for the first time in history as per the Reserve Bank of India. In August 2020, the economy was reported to have a 23.9 percent contraction in its Gross Domestic Product (GDP) for the April-June quarter. The GDP for the July-September quarter has been reported to drop 8.6 percent, leading to the Indian economy shrinking in two consecutive quarters, the identifier of a technical recession.

The COVID-19 pandemic adversely impacts most industries. There is one industry which works around hedging against these kinds of unforeseen situations and provide assurance. Insurance companies hold about USD 20 trillion worth of assets in North America, Europe, and Asia-Pacific (figure 2) and around USD 33 trillion world-wide according to FSB 2020 report.[9]

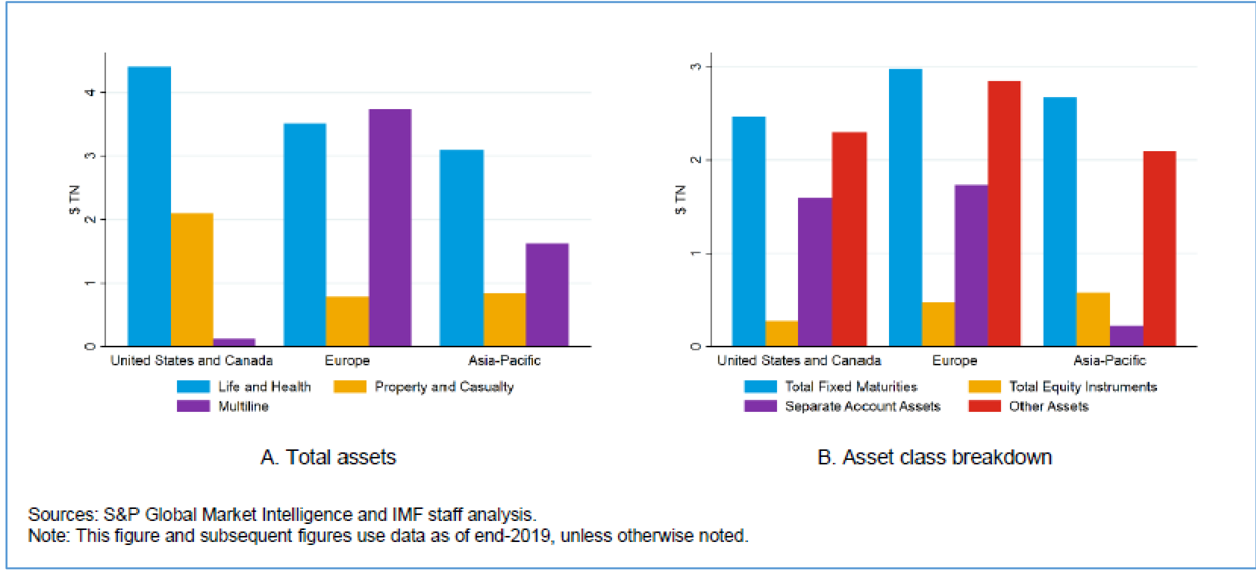


Figure2: Asset valuation of Global Insurers by Region and asset-class

[9] https://www.fsb.org/wp-content/uploads/P190120.pdf

1. Impact of COVID-19 on global reinsurers:

The pandemic and unexpected lockdowns have impacted the global insurance industry. The industry has been affected by the escalation of healthcare costs and the cancellation of major events. Insurers will get affected by the COVID-19 pandemic both directly, through the health shocks (increased mortality and morbidity), and indirectly via the financial shocks of higher credit spreads, widespread downgrades, and lower equity prices and interest rates (both short-term and long-term). The financial impact of the epidemic has been far greater as compared to the health impact. The automobile insurance segment, which accounts for over one-third of the overall insurance premium collection, witnessed a slowdown before the COVID-19 outbreak. The lockdown has severely impacted the auto-insurers across the globe. There have been similar effects on a few other non-life insurance businesses as well. In situations like hurricanes and wildfire, the losses increase for reinsurers as they insure parts of policies for multiple insurances. And in cases of major global pandemic and lockdowns, the losses go up significantly.

Though the two leading reinsurance companies – Swiss Re and Munich Re – posted profitable financial results excluding the pandemic-related losses, the impacts of COVID-19 on insurance companies across the global economies have cumulatively ensured some hard decisions taken by the reinsurers.

Swiss Re:

According to its 31st July 2020 report, the leading global reinsurer had maintained an industry-leading capital position in the first half of 2020 despite the pandemic related losses. Property & Casualty Reinsurance (P&C Re)'s renewals premium volume was up 6% - a significant rate hardening in the natural catastrophe business. The first half of 2020 captured a net loss of USD 1.1 billion owning to the Group's COVID-19-related claims and reserves of USD 2.5 billion. Swiss Re sold its subsidiary ReAssure to Phoenix Group Holdings plc for GBP 1.2 billion and a 13.3% stake in the latter. Swiss Re was able to keep its solvency test ratio above the target level of 220% as of 1 July 2020 with the sale of ReAssure and COVID-19 losses impacts.

Munich Re:

In the second quarter of 2020, the 1880-founded Reinsurer registered COVID-19-related losses of about €700 million in the reinsurance business. The bulk of these losses were attributable to cover for major events (cancellations and postponements). Lower impacts were reported in life and health business and other lines of property-casualty business, including business interruption. Munich Re declared it would not attain its profit guidance of €2.8 billion for 2020. This decision was made considering the greater uncertainty concerning the financial impacts and the macroeconomic effects of the pandemic and assuming a burden from major human-made and natural-catastrophe losses.

2. Impact of the pandemic on Indian Insurers

In the Indian insurance market, there are 24 life insurance and 33 non-life insurance companies at the time of drafting this article. The standalone health insurers have reported a 61% year-on-year growth in retail health in June 2020, according to a report by Kotak Equities.[10] As per a PwC report titled "COVID-19: Impact on the Indian Insurance Industry", the two productive months for the Indian insurance industry (based on corporate renewals) – March for life insurance and April for non-life – have been hit almost 30% and 15%, respectively.[11] Interestingly, inquiries about health insurance policies have increased by 30-40%. So the awareness of health insurance is rising in the Indian population (138 crores). Note that India continues to have one of the lowest overall insurance penetration: 3.69% according to the FY2017-18 annual report by the Insurance Regulatory and Development Authority of India(IRDAI). Further, the extended lockdowns due to COVID-19 had pressed Indian insurers to depend heavily on their digital framework from selling new policies to settling claims.

Looking at China, a recent survey done by McKinsey found that the broad economic view in the country may be encouraging.[12] But for the insurance industry, the position is somewhat complicated. While some lines of insurance businesses fared well, others suffered significant declines and are recovering. The general awareness of health insurance has increased in China, translating to a 17% YoY growth in sales in Q1 2020 compared to Q1 2019. But for life insurance (or mortality) products, there has been a decline of 1 percent over the same period.

Further, auto and liabilities policies slowed dramatically, affecting property and casualty (P&C). Almost two-thirds of agents who were part of the McKinsey survey experienced a decline in business performance due to the pandemic, whereas about one-fifth reported an improvement. Overall, the significance of digital is apparent to the industry, as the digital players were overall less affected than the traditional insurers by the crisis. Also, some digital platforms like WeSure recorded huge increases in their new user base. For example, WeSure added 25 million active users during the initial phase of the pandemic.

Before discussing the art of possible for the Indian insurance industry, let us first understand where did we stand in comparison to the overall global insurance market?

3. Indian Insurance: Pre-pandemic standing

[10] https://bfsi.economictimes.indiatimes.com/news/insurance/61-yoy-growth-reported-by-standalone-health-insurers-kotak-equities/77068092

[11] https://www.pwc.in/assets/pdfs/services/crisis-management/covid-19/covid-19-impact-on-the-indian-insurance-industry.pdf

[12] https://www.mckinsey.com/industries/financial-services/our-insights/what-insurers-can-learn-from-chinas-continuing-covid-19-recovery

According to the IRDAI, India had a meager share, just 1.92%, of the global insurance market in 2018.[13] This percentage is a little better, 2.61%, for the life insurance business. The Indian market witnessed a 9.3% increase in premium (inflation-adjusted), much higher than the 1.5% increase in the total global premium during 2018. The low maturity of the overall insurance industry in India is visible by the percentage of total premium collected in life and non-life insurance businesses. In 2018, the ratio of the share of life and non-life businesses in the total premiums collected globally was 54:46. But the same ratio for the Indian market in 2018 was 74:26 suggesting a larger bias towards life insurance.

Even though the Life Insurance business is leading the way in the Indian market, India ranked at 10th spot among the 88 countries for which Swiss Re published data in 2018. The ranking for the non-life insurance is 15th as per the same data. Though the recent picture does not look too rosy for the industry, experts have high expectations from the Indian insurance market. In mid-2018, Munich Re estimated that India to be one of the top growth markets and forecasted an average annual growth rate of over 9% (7% in real terms) in property-casualty insurance and over 10% (8% in real terms) in life insurance till 2030.

4. Indian Insurance: Post-pandemic possibilities

We may see the Indian Insurance landscape change very rapidly given that the pandemic and uncertainties that came along. The insurance industry must target the hugely unserved and vastly underserved customer bases to extract its full potential in the next 3-5 years. India has over 96% unpenetrated (figure 3) insurance market, which is one of the largest among its peer economies. The absolute numbers are mammoth due to the population, and there is an enormous growth potential for the Indian insurance sector.

[13] https://www.irdai.gov.in/

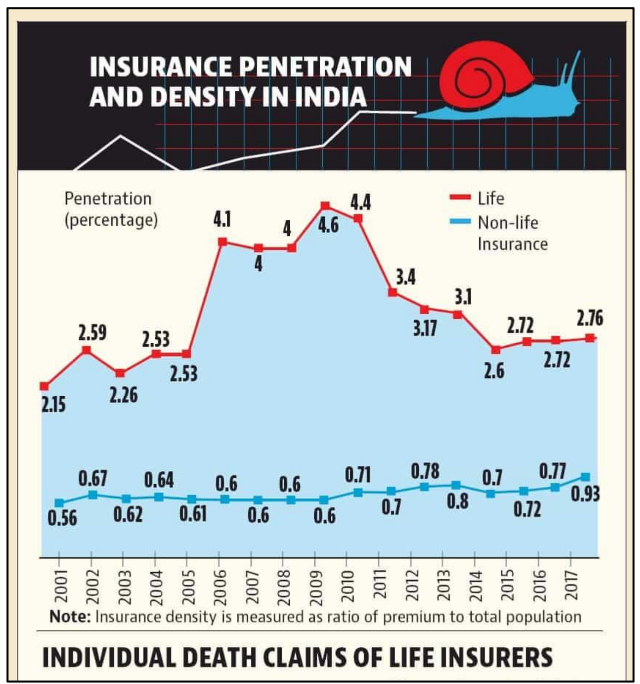


Figure 3: Insurance penetration between FY 2001-2017

(Source: IRDAI Annual Report 2017-18)

Improving customer awareness and touchpoints (channels)

Insurance companies need to find innovative ways to penetrate deeper and create non-traditional customer touchpoints in India. Looking beyond the traditional channels is also a need of the hour. In that context, partnerships like the one between BSE Ebix and Bajaj Allianz Life will be a necessary step towards increasing the year-on-year growth in New Business Premium (NBP) beyond last year's 37%. India's Insurance density is a meager USD 60 per capita, just one-sixth of China's insurance density.

Mergers and consolidations

We may see some key mergers between major players even though the government called off the merger of the three ailing PSU general insurers – Oriental Insurance Company, National Insurance Company, and United India Insurance Company – on 8th July 2020.

Becoming agile and digital

Further to that, there may be a shift that we may witness in the overall market size and share. Leading players may lose market share they have been so comfortably sitting on unless they become adaptive and introduce digital,

agility, and innovation in their services. We may see new regulatory policies introduced by IRDAI in the light of the changes and uncertainties related to COVID-19 including the remote working option for agents and digitization of many processes.

4.1 The Major League: Time to be agile and innovative

Adopting innovative agility

The leading insurers will have to change their cultures to promote innovative thinking and incorporate agility in their DNA. They will need to think like start-ups continuously bringing in innovative features and solutions to add new customers continually. With low awareness and penetration of insurance in the country, it is a perfect time to launch creative marketing campaigns to enter the consumers' evoked set.

Upgrading the underwriting process and product portfolio

Companies would like to explore new products and services targeted to the various customer segments. The current underwriting process and systems require serious revamp. Also, there is an urgent requirement for introducing more (flexible) products. We may see insurers introducing products in their offerings portfolio to meet a broader range of financial needs of the existing and new customer segments.

Building a robust digital backbone

Digital transformation/reinvention based on the disruptive power of ISMAC (digital) technologies will play a crucial role in transforming the Indian insurance industry - channels, consumer experience, and stages of the lifecycle.[14] Organizations will continue to invest in digital tools and advanced analytics. A newer and enhanced distribution model will allow agents to work with a broad set of digital capabilities to enable seamless interactions with customers across channels. Insurers may go omnichannel in a true sense, where consumers can drop and pick up their application and claim processes seamlessly at any channel they want. Agents may get enhanced remote-working capabilities with enhanced digital tools to perform product illustrations.

To meet the pandemic-driven customers' protection needs, insurers need to adopt technology to foster better communication with customers through features like screen-sharing and videoconferencing. Insurers will also need to meet the regulatory requirements, including identity verification and multi-party electronic signature collection through digital solutions like DocuSign.

[14] ISMAC stands for **I**nternet of things (IOT), **S**ocial media, **M**obility (mobile), **A**nalytics, and **C**loud computing.

4.2 The Minor (Start-up) League: The disruptors to work as the change agent

Mushrooming of smaller players and start-ups catering to specific areas and augmenting existing businesses. Existing banks and financial service providers may enter the insurance business by introducing innovative and customized products or by acquiring stakes in start-ups. It's also time to rapidly create and release innovative and custom products for the comparatively nascent Indian insurance market and consumer mindset.

The Insurance Technology (InsurTech) market can see rapid growth catering to specific types of insurance products. Examples like WIMWISure, which automates physical asset inspections through artificial intelligence using photos and videos in a few minutes, will be more common in the coming years. Social (Peer-to-peer) Insurance solutions may grow in specific geographies based on technologies (blockchain, internet of things, and artificial intelligence) to tap into the advantages as an incumbent onto the journey towards a cognitive enterprise while providing trust to the digital medium.

We may see significant funding in the InsurTech start-ups given the socioeconomic changes and increased awareness towards insurance. Recently Plum, an InsurTech that provides health benefits to corporates with high quality and affordable employee health insurance, has raised INR 7 Crores in seed funding.

4.3 Regulatory Changes:

Welcoming foreign players: Catalyst to expedite the industry growth post-COVID

In 2014, the central government had approved an ordinance to increase Foreign Direct Investment (FDI) limit in the Insurance sector from 26% to 49%, which helped attract investment. The Union Budget 2019-20 permitted a 100% FDI for insurance intermediaries. It may be interesting to see if the Government and IRDAI will provide sweet deals to foreign players to expand in the Indian market or partner with Indian insurers to penetrate the untapped Indian insurance industry potential. The pandemic has already helped consumers realize the need for insurance products. The international players may change the pace of the market growth – competing with existing players.

Mandating specific insurances products

The premium rates of health insurance are comparatively lower than those in developed countries since higher rates would discourage the already low number of policyholders in India. But as the voluntary insurance model is followed in India, in general, the employers do not have the liability for providing health insurance coverage to their employees. A mandated model similar to the US may be brought in for employers above a specific size.

As a result, providing health insurance coverage to employees is the employer's responsibility, not only during the period of employment but also during the period when the employee has resigned but is yet to find another job.

Conclusion

The insurance industry is at crossroads, ready to sprint ahead. Whatever be the final composition of the market, the evolution will be an interesting one to observe. And the evolution will be steered by answers to some fundamental questions. First, will the Indian insurance industry take the early adoption policy of experimenting with new technologies and transforming their business processes? Second, will IRDAI or respective insurance associations such as Life Insurance Council play a similar role to what the Association of Mutual Funds in India (AMFI) played for mutual fund growth in India? Finally, but most importantly, can we change the Indian consumers' mindset towards including insurance products in their balanced financial portfolios for risk hedging and not just for tax relief (saving) purposes?

****

Coronavirus and the interplay of systemic, systematic risks, and *Catch-22* on business and economy at large

Failure to take risk of disruption seriously

Saraswat Bhattacharya

Saraswat Bhattacharya is a Manager in Risk Advisory practice of Deloitte. He has over ten years of work experience in corporate planning and business strategy in capital markets and wholesale finance businesses. Saraswat is a postgraduate in finance and investment from Queen Mary College, University of London and accounting and finance from University of Calcutta.

The corona virus induced economic crisis is different from economic downturns that most of us have seen during our lifetime. A virus has crippled 'super humans' and their Earth; Humanity is beseeching The Almighty to end this misery. This virus has sent seismic waves across the globe, halting economic activities, affecting financial markets after supply chains and businesses came to a screeching halt. The crisis of this nature is a magnum opus in itself but without a certain ending. This is the very reason why this crisis stands out amongst other economic crises since the Great Depression. Like other economic meltdowns, this did not have any preceding economic shocks or financial market jugglery. Oil shocks of the 1970s culminated into an economic crisis in the 80s. Asian financial crisis has its roots to the untenable peg to the US dollar. 2008 financial crisis, also called the Great Recession, was the result of the bursting of the asset price bubble. 1990s onwards the economic downturns did have an increasing contagion effect on global economy and financial markets, largely due to globalization. During these periods of crises, the talks on risks, its nature and type, and mitigation came to fore and discourse goes on until the end of the crisis, to begin again when the *Next* emerges. This article aims to explore the interplay of systemic, systematic risks and *Catch-22 scenarios* because of Covid-19 on business and economy at large.

Simply put, systemic risk is an event that causes a collapse of a company, industry or even economy. Thus the definition is broad and encompasses micro business events like trading platform outage of a brokerage house during trading hours, or a failure of payment systems of banks or even a trading algo gone rouge. But generally, it means a risk caused by an event at a company level that is severe enough to bring about instability in the economic and financial systems. The most glaring example is 2008 Lehman Brothers bankruptcy that triggered market-wide collapse and put brakes on global economies. Systematic risk, popularly known as market risk, is an all-permeating risk that crops up from a variety of factors such as economy, interest rates, corporate wellbeing, geopolitical issues etc. and cannot be diversified away.

This is not the first time that world has seen a virus outbreak. In the last couple of decades, we have witnessed dengue, Saars, swine flu, anthrax, ebola and zika. Goldin and Muggah (2020) in their article "The world before this coronavirus and after cannot be the same" tells us that previous virus outbreaks were a harbinger of coronavirus disaster as outbreaks of infectious diseases are accelerating.[15] However, we have not learnt from these outbreaks and are still underprepared. In a little over last two decades, we have also witnessed three major economic downturns. But this time it is different! Those were not virus induced economic crises. In these unprecedented times, many records on economic, financial, business and public health fronts have been broken for all wrong reasons, mostly. In the light of general concepts of systemic and systematic risks, it seems that a systemic risk, Covid-19 originating in China, has ballooned into a global systematic risk and spread across the world in no time. Supply chains are in complete tatters. The economic engines across the globe have come to a screeching halt. This time the contagion seems to be more serious. These are the spillovers of Covid-19. Thus, terming coronavirus as systemic risk beyond the traditional definition comes from the fact that this event and its spillover is causing severe distress in global economic and financial system and will have a systemic impact of world functioning order.

In today's complex, globalized business environment, businesses are running in "all is hunky-dory" manner and paying little attention to the uncertainty and systemic risks that the flip side of globalization brings along with it. To reiterate, 2008 crisis can be referred in this context. While it is easy to blame globalization and its discontents, businesses are also operating in a manner that is emanating strong behavioral biases like overconfidence, hot-hand fallacy and representativeness. Excessive "animal spirits" are the mother of all crises. In spite of suffrage, businesses are yet to take this into cognizance. The tendencies of turning a blind eye to 'signals' are somewhat accelerating, putting the entire systems into threats at a much faster rate than earlier. The 'risk-free' attitude of the business exacerbates the risk further. Given the prevalent biases, the 'cost' of crisis is largely ignored.

Debate is on regarding the shape of recovery – whether it will be a V-shaped or a W-shaped one, when the light at the end of the tunnel is yet to be seen. It may be futile to procrastinate what the future will be when we do not have any comparable historic parallel. Pundits have compared this epidemic to Spanish Flu of 1918. However, this comparison needs to be looked at with a different lens. Francois Velde (2020) mentions that agriculture and manufacturing in the USA accounted for 61% of employment as compared to current 10%.[16] Velde (2020) concluded that in the US, the pandemic coincided with and very likely contributed to a mild recession from which

---

[15] Goldin Ian and Muggah Robert, *"The world before this coronavirus and after cannot be the same"*, The Conversation, https://theconversation.com/the-world-before-this-coronavirus-and-after-cannot-be-the-same-134905#:~:text=The%20world%20Before%20Coronavirus%20and,face%20the%20threat%20of%20pandemics. Accessed on 16th July 2020

[16] Velde, Francois R., *"What happened to the US economy during the 1918 influenza pandemic? A view through high frequency data"*, Federal Reserve Bank of Chicago working paper (WP 2020-11), Revised July 7, 2020

the economy quickly rebound.[17] The world economy and businesses were not so interconnected, integrated and complex at that time. When we compare Covid-19 with Spanish Flu, we see that there are large contradictions on both health and economic fronts. On the health front it seems that Covid-19 so far has been less severe than Spanish Flu in terms of mortality, thanks to advancement of medical science, while on the economic front it is far more severe than its lethal predecessor, considering the tremendous speed and severity with which business activities declined and unemployment rose. Moreover, we do not know whether there will be any further waves like Spanish Flu.

Another aspect that exacerbates the problem is the uncertainty that was prevalent before Covid-19. Intermittent tremors were felt with respect to, inter alia, geopolitical issues, an imminent full-blown US-China trade war, creeping up of inflation, stock market volatility. In the midst of these uncertainties, when an uncertainty of this magnitude strikes, the system starts to get paralyzed. In addition to this, a hidden coronavirus is in the anvil – (deflation/stagflation?).[18] Although (deflation/stagflation?) is a problem of tomorrow, it needs a well-thought-out plan to avoid the vicious circle. Uncertainties do not augur well with the economy. Starting with individuals, it moves to the business level and ultimately engulfs the entire economy. Certain level of "animal spirits" is required to keep the engine of the economy chugging along. Uncertainty makes the consumers and businesses 'cash' conservative, cautious and puts breaks on expenditure, investment and job creation. Thus, before being too optimistic about the shape of the recovery, the pertinent debate should be as to when the workers will return to production. In developing economies, where social security benefits and public healthcare are for namesake, labour supply is abundant, cheap, and expendable, and workers stay afloat from payday to payday, they may return early for subsistence. This may create further risks of infection spread. A perfect *Catch-22* situation.

Another *Catch-22* scenario that is in play is with China and global supply chain's 'dependency' on China. Tsunamis of 2004 and 2011 in South East Asia and Japan or floods in Thailand in 2011 had disrupted productions of many big firms. Recent threat of USA-China trade war is sending jitters. It is being argued that in spite of experiencing disruption and threat, the firms have done little and are still 'dependent' on South East Asia, especially China. Before we go into discussing this *Catch-22* situation and its possible mitigation – as resolution of *Catch-22* is not possible, let us discuss briefly, once again, why China and SE Asia is playing a dominant role in the global supply chain.

China has created a unique position for itself in the global economy. Mid-1985s onward they focused on domestic production. Focus on developing human capital in earlier periods augured well with this. Huge population, cheap

[17] Ibid

[18] The jury is still out on whether the epidemic will lead to deflation or stagflation. The conclusion, if drawn now, may be inconclusive due to lack of continuous and quality data – at least for three to four quarters. Moreover, the economic scenario may be different for developed economies and emerging economies, like India, as well. It may futile to procrastinate at this juncture.

labour paid social dividend. Domestic consumption increased. Domestic consumption is created by effective demand in the economy, which in turn, is a result of increasing standard of living. This solidified China's economic base and prepared the ground for further economic expansion. They started looking forward to becoming the 'manufacturer of the world'. Private capital seeks low cost input materials in a timely manner to keep the cycle of capital formation going. Private capital saw this as an opportunity, started flocking and became 'reliable' on China. This is pure economics. All the animated conversation on 'dependency' on China has political innuendos attached to this. There was an economic necessity and China fulfilled that necessity. Western developed countries at different points of time in their economic history did this. China replicated that but more efficiently and gained competitive advantage. Excluding China from the firm's supply chain was costlier. Earlier supply chain shocks of SE Asia were short-lived and hence the debate on 'dependency' died down slowly. But not this time.

Whether to rely on China or create an alternative source is the *Catch-22* scenario for most of the firms. Joseph Heller in his eponymous book introduced us to the concept.[19] Yossarian, the protagonist, is a bomber in the Second World War. He tries to find different ways and means to avoid combat missions. These combat missions have the potential to kill him in the long run. Only if a bomber is insane, he is relieved from his duty. However, "there was only one catch and that was Catch-22, which specified that a concern for one's safety in the face of dangers that were real and immediate was the process of a rational mind." If Yossarian is crazy, he is grounded. He just have to ask for it. But the moment Yossarian asks, he will no longer be crazy and is fit to fly more combat missions.

For a firm to be profitable it needs an efficient supply chain that is lean, cost effective and can replenish the inventory in a timely manner. When global competition is largely based on price competition rather than product attributes, an efficient hub for input materials that keeps the input and inventory holding cost low becomes the panacea. Thus, when a tragedy strikes at this strategically important node questions are raised. Shocks are likely and cannot be weeded out; at maximum, it can be mitigated.

It can be a matter of great debate whether or not traditional and contemporary risk management techniques have any effects on risk mitigation in black swan events like this or *Catch-22 scenario*. However, practice in risk management can at least prepare businesses for managing systemic risk that crops up due to the 'uncertainty' and may preserve financial and human capital to a large extent. A simple risk management technique in this type of situation will be to avoid concentration risk and diversify. But diversification requires that large firms build manufacturing plants across regions, source raw materials differently – use multiple suppliers, carry more inventory in hand than is necessary. This again contradicts the essence of an efficient supply chain and creates the risk of a bloated supply chain – another *Catch-22* situation. A contingency plan – an actual one and not a tick-

[19] Heller, Joseph, Catch-22, Simon & Schuster, USA, 1996

in-the-box, at every node of the supply chain, on the modalities of what to do when a plant goes down under or a source of input material is compromised is required. The scenario planning, stress testing of revenue-at-risk against breakage of raw materials lines or manufacturing plants, using early warning signals may help in avoiding a stock-out situation and dry plants. Nodes that are strategically critical – a plant or raw material source, and put significant revenue-at-risk, to have alternative fallback options.

To cite another fallout of this broken supply chain is the disrupted trade finance engine that will further increase the supply chain problem. The so-called mundane, unglamorous trade finance is an extremely critical piece of the global business and financial system. According to certain estimates, the size of global business debtors is about a fifth of global GDP. With supply chain being broken, the increased risk averseness by trade financiers in extending new credit lines out of fear that existing facilities have turned sour, has further complicated the problem. This has become a vicious circle. When credit quality is in question and the economy is slowing down, the financiers are also in a Catch-22 situation. If banks do not extend credit, there is a risk of collapse of businesses – that can create an economy-wide systematic risk. In the fear of it, if they extend wanton credits, there is a risk of bank failure, maybe later. The collapse of a bank is a systemic risk that can turn into a systematic risk in no time. A delicate balance of creditworthiness and credit growth is required to tide over this *Catch-22.* This may be taken care of, inter alia, by mitigating the equity risk, collateral risk, cash flow risk - tight monitoring/ring-fencing of cash flows, volatility of cash flows, using early warning system (EWS) to identify risks before cash flow stress. But before all these, an introspection into actual risk and perceived risk of giving credit is required.

So, what happens *Next*? Only time will tell whether the conspicuous affair with China will continue or not, or whether there will be a second wave or not. Nevertheless, the ultimate question that comes up is whether global business will understand the importance of risk preparedness and mitigation for one last time. Risk management has largely been a tick-in-the-box in the past for many firms. Business strategy was in the fore. With this epidemic, business strategy has made way for operations and business continuity now. Business continuity and disaster management policies were in place but rendered ineffective when Covid-19 struck.

It is for the managers to believe whether risk management, business continuity, disaster management as policies is to be activated when the lightning strikes or the risks can be mitigated by how the systems and policies are designed in the first place. Efficient methodology actually presupposes that a design is such that crisis can be broadly mitigated. Building nimble footed, change-friendly, less complex, and resilient organization is now the order of the day.

****

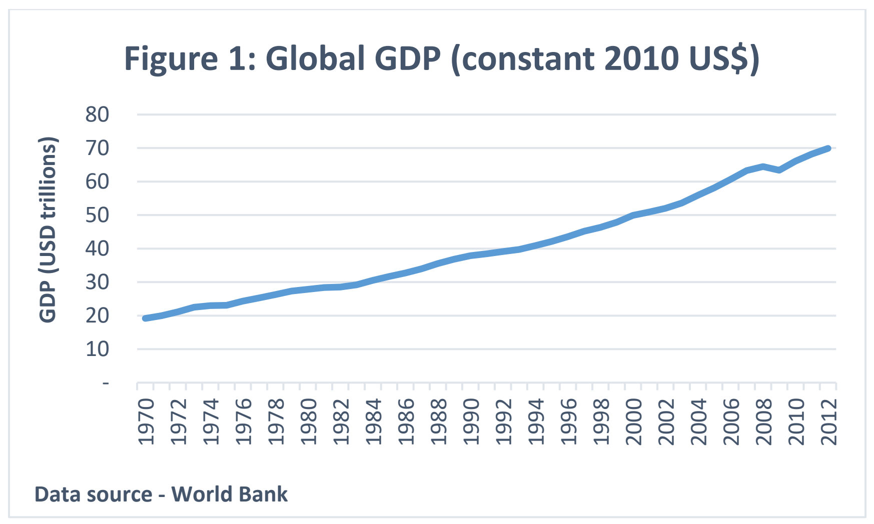
Sustainable Development: Changing Winds & Way forward

Yash Sharma

Yash Sharma is a Chartered accountant by profession, currently working as AM-Finance with Swiggy. He cleared his CA in 2018 and is interested in the world of startups and ecommerce. Outside work, he likes badminton & swimming.

This article explores the current investment in sustainable development in general and on the environmental part of Environmental, Social, and Governance (ESG) in particular, along with the opportunities and challenges from COVID-19.

Since the start of the first industrial revolution, humankind has seen tremendous growth in its standard of living. The last few centuries have given us various energy sources, coal, electricity, oil & gas, steam and nuclear. The concept of assembly lines and digitization of the same has catapulted the levels of production exponentially. As compared to the start of the third industrial revolution (around 1970-1975), the world GDP levels have almost quadrupled today (at 2010 prices). [20]



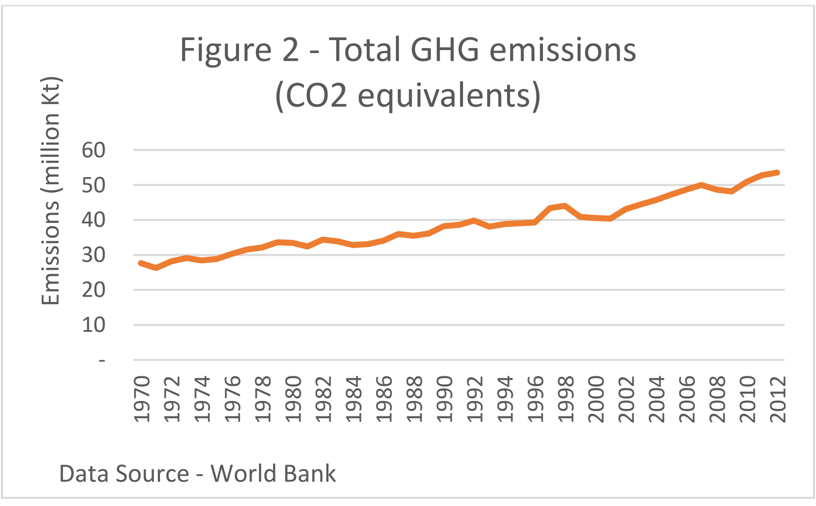
Advancements in communication & transportation have made the world smaller and today we have processes in place that can convert inputs into outputs with minimal or no human intervention. This growth and advancement

[20] https://data.worldbank.org/indicator/NY.GDP.MKTP.KD?end=2019&locations=IN-1W&start=1960&view=chart

have come with a tremendous strain on our natural resources and climate. The Environmental malpractices of corporates make headlines even today. But there are changes, happening for the better.

Global Warming

A reason at the heart of many environmental issues/climate change is global warming due to human-made pollution. As signaled in the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, "The greenhouse gas (GHG) emissions have increased since pre-industrial era and the resultant concentration of Carbon dioxide, methane and nitrous oxide are at levels not seen in past 8,00,000 years. This has affected the climate and are extremely likely the cause of the warming since the 1950s." [21] Figure 2 shows that GHG emissions have nearly doubled between 1970 and 2012. [22] Industries, agriculture, electricity generation, and automobiles are some of the significant drivers of GHGs. Corporate scandals by the likes of Volkswagen and ExxonMobil have also added to the woes.



But as mentioned before, the trends are changing. Let us now delve into how the current investments and policies address sustainable development and climate change.

Changing Winds

Traditionally, it has been a view amongst corporate leaders and investment executives that investment in sustainability runs counter to shareholder value creation. If an organization wants to be environmentally responsible, it must incur additional costs that would lower its earnings. This perception, however, is now changing.

A 2020 KPMG survey of hedge fund managers & institutional investors with total assets under management (AUM) of $1.65 trillion found that 85% of institutional investors are the biggest drivers of demand for ESG

[21] Climate Change 2014 Synthesis report Summary for Policymakers
[22] https://data.worldbank.org/indicator/EN.ATM.GHGT.KT.CE

oriented hedge funds.[23] For their part, hedge fund managers are well placed to respond to this demand due to their deep talent pool, technological capabilities, and nimble investment strategies. Furthermore, a 2019 article titled "The Investor Revolution" in Harvard Business Review by Eccles and Klimenko found that ESG issues were top of the mind of almost all of the 70 senior executives (at 43 global institutional investing firms) interviewed. [24]

Investors have translated their sustainability concerns into an enquiry of meaningful actions that investment firms and their investee companies are taking. "ESG issues have become much more important for us as long-term investors" noted Cyrus Taraporevala, president & CEO of State Street Global Advisors.[25] The numbers support this view. In 2006, upon the launch of UN-backed Principles of Responsible Investing, 63 investment companies (with $6.5 trillion in AUM) signed a commitment to incorporate ESG issues in their investment decisions. By April 2018, this number has grown to 1715 with an AUM of $81.7 trillion.

So, what are the drivers behind these changing winds?

- Size of the investment firms: The top 10 global asset managers hold 34% of externally managed assets amounting to trillions of dollars in AUM. These firms cannot mitigate their risk by investing in certain contrarian assets or doom stocks. Thus, each of their investments must be driven by a certain degree of sustainability, environmental, and social perspective for generating long-term returns. In short, they have become too big to let the planet fail.

- Brand perception & returns: End consumers, especially in developed countries, have become more concerned about the planet and future generations and want to do their part for a healthier world. As a result, they prefer buying from companies that go the extra mile to contribute to the environment and society. Such consumer preference provides companies an opportunity to deliver customer satisfaction, enhance brand image, increase demands, and higher stock returns.

- Changing employee perspective: The proportion of millennials in the workforce is continuously increasing. Millennials generally want the ESG principles to be a part of their work culture. When more employees are ESG aligned, there is a greater synergy between top tier management strategies and ground-level execution.

[23] Sustainable Investing – fast forwarding its evolution: A joint effort between KPMG international, CREATE research, AIMA & CAIA.
[24] https://hbr.org/amp/2019/05/the-investor-revolution
[25] State Street Global Advisors (SSGA) is the asset management division of State Street Corporation and the world's third largest asset manager with nearly $3.05 trillion (USD) in AUM as of 30 June 2020

- Investor attention: The change of perspective is not limited to Customers or employees. Investors also increasingly want ESG responsible investments. There are over 3300 ESG funds globally, and the number has tripled over the last decade. [26] In India, there are a handful of schemes focusing on ESG criteria as shown in Figure 3.

Figure 3 - Indian ESG focused funds

Name of the Fund	Launch date	AUM (in Cr)
SBI Magnum Equity ESG	01 Jan, 1991	2773
Axis ESG equity fund	12 Feb, 2020	1680
Quantum India ESG equity	12 July, 2019	20
ICICI prudential ESG fund	09 Oct, 2020	1415
Quant ESG equity fund *	15-30 Oct, 2020	N/A
Mirae Asset ESG Sector Leaders ETF *	27 Oct-10 Nov, 2020	N/A

** Date range mentioned is the NFO period*

Furthermore, alternative energy sources constituted roughly 11% of the world's primary energy (electricity, transportation & heating) source in 2019.[27] The reasons for the low share are the infrastructural costs involved and easier access to traditional energy sources. Hence, innovations in technologies that make alternative energy sources more accessible and economical would naturally garner investor attention.

Impact of COVID-19

As the world looks forward to a vaccine for COVID-19 and economies try to bounce back from the pandemic, there is an opportunity for nations to increase their reliance on renewable energy sources and strive to attain several Self Development Goals (SDG) such as SDG 7, 11, 13-15.

The COVID-19 pandemic-driven lockdown has reduced pollution levels and improved overall air quality, putting additional pressure on governments to continue this trend. As S&P global reports, the carbon emissions have dropped by 17% in April 2020 vis-a-vis a year earlier.[28] On the other hand, governments across the world have written official policies or enacted laws aimed at raising the amount of renewable power capacity installed by 2030.

[26] https://indianexpress.com/article/explained/explained-what-are-esg-funds-and-why-are-they-becoming-popular-6619234/

[27] https://ourworldindata.org/renewable-energy

[28] S&P global report - COVID-19 Daily update: May 20, 2020.

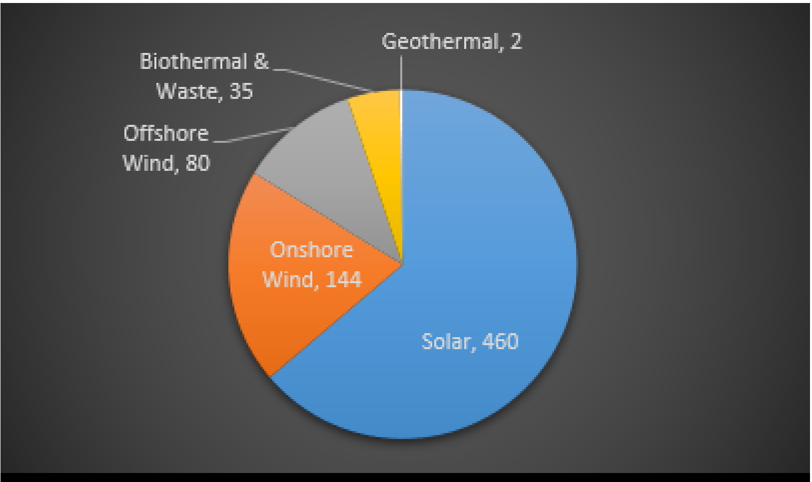
Additionally, governments are likely to introduce stimulus packages aimed at power infrastructure (like Rs 90,000 crore liquidity injection in power distribution companies announced in India on May 13, 2020).[29] Such a stimulus can be directed to renewable energy sources, thereby contributing to development and better climate conditions.

Renewable energy targets: Governmental & Corporate

We can broadly classify the causes of CO2 & GHG emission into three parts: (1) Electricity generation, (2) transportation, and (3) industrial & residential heating.

For the electricity part, let us run some calculations. Renewable energy targets for 2030 written by governments of 87 countries in their official policies would entail additional 721 gigawatts of renewable power infrastructure (other than renewable hydro energy). [30]

Fig 4 - Renewable Power additions required to meet government targets with deadlines between 2020 & 2030. Capacity in GW



Source - 'Global trends in renewable energy investment 2020', a joint report from Frankfurt School, UNEP and Bloomberg NEF

[29] https://energy.economictimes.indiatimes.com/news/power/pfc-rec-to-infuse-rs-90000-crore-liquidity-injection-to-ailing-discoms-nirmala-sitharaman/75719574

[30] These include not only high income countries that were early movers in green energy but also developing countries. This analysis is not based on NDCs prepared by countries in context of the Paris Climate Agreement of December 2015 but on what is written into official policy so far and hence has clearest momentum behind. Details from 'Global trends in renewable energy investment 2020', a joint report from Frankfurt School, UNEP and Bloomberg NEF.

Additionally, several companies have joined the RE100 group. Led by The Climate Group in partnership with CDP, RE100 is a global corporate leadership initiative bringing together influential businesses committed to 100% renewable electricity. As of the writing of this article, the group includes 263 companies with target years ranging from 2020 to 2050. [31] The group includes 22 of the world's 100 largest companies by revenues (in the Forbes Fortune 500 list for 2020) including Walmart, Apple & Google. From India, five companies have signed up to this initiative: Dalmia Cement, Hatsun Argo Products, Infosys, Mahindra Holidays & Resorts, and Tata Motors. Of these, Infosys has already achieved a neutral carbon footprint as per its commitment.

The RE100 companies may prompt the construction of additional 105 gigawatts worth of generation capacity.[32] Moreover, many companies have set up targets to meet their total energy consumption from renewable sources, which brings the tally to 826 gigawatts costing about $1 trillion (excluding hydro energy) over a span of the next ten years. The actual costs will vary with the mix of energy sources and technological advances which will make future capacity installation cheaper.

This is a modest target even if compared to what has already been achieved. During 2010-2019, the world added 1213 gigawatts of renewable energy spending $2.7 trillion (excluding large hydro-electric dams). If we look towards the future, countries, through the Paris Agreement, agreed to a common goal of keeping the global temperature increase in this century to "well below" 2 degrees Celsius. This would require an investment of $3.1 trillion by 2030 for an addition of 2,836 GW of new non-hydro renewable energy capacity (1,646 GW of solar, 1,156 GW wind, and 34 GW other non-hydro renewables). [33]

India has set an ambitious target of 175GW renewable energy sourcing by 2022 in line with its undertaking under the Paris agreement. Of this, 100GW and 60GW will be contributed by solar and wind energy respectively. As of 31 Dec 2019, Renewable energy constituted just over 23% (85.9GW) of total installed energy generation capacity in India as per the Annual report 2019-20, Ministry of New & Renewable Energy.

[31] https://www.there100.org/re100-members
[32] This assumes that the energy requirements will keep on increasing in line with their current levels for these companies and the same will be fulfilled by Power Purchase Agreements for renewable energy.
[33] 'Global trends in renewable energy investment 2020', a joint report from Frankfurt School, UNEP and Bloomberg NEF

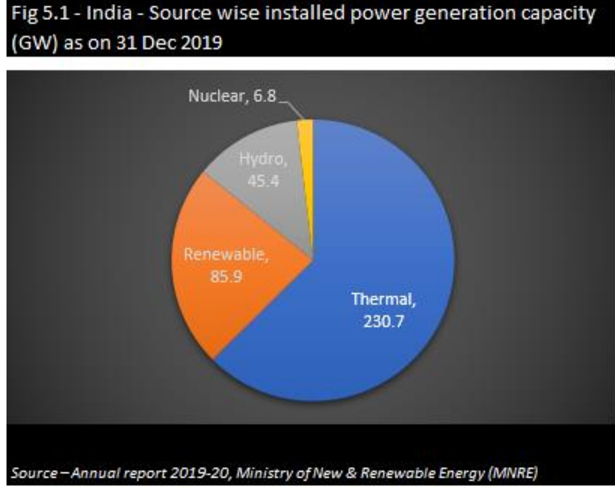


Fig 5.1 - India - Source wise installed power generation capacity (GW) as on 31 Dec 2019

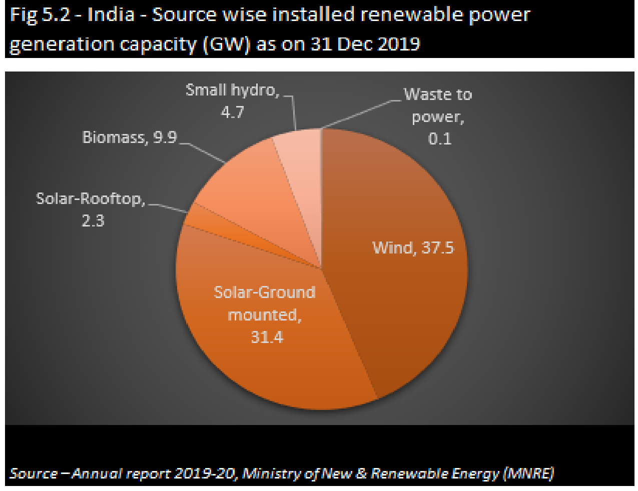


Fig 5.2 - India - Source wise installed renewable power generation capacity (GW) as on 31 Dec 2019

With respect to transportation and corresponding emissions, world governments are following three approaches to reign the same under control: (A) Reduction in the overall number of automobiles running on Internal combustion engine, (B) Regulation of the emission levels and fuel economy of existing fossil fuel-powered vehicles, and (C) Increasing the share of Electric vehicles in total automobile population. India is following options B & C to tackle automobile pollution. Introduction of BS-VI norms directly from BS-IV rather than gradually moving from BS-IV to BS-V and then to BS-VI is a substantial effort to move towards better emission norms.[34] Moreover, the holistic approach by the Indian government for increasing EV adoption by the introduction of the FAME scheme is another significant step in this direction. It has provisions for incentivizing EV manufacture, charging infrastructure, EV component manufacture, and subsidizing EV purchases. All these measures show that on a policy level also, tackling vehicular pollution is getting greater attention in India.

And lastly, industrial & residential heating, which caused about 32% of global energy-related emissions in 2016, is by far the most notorious one to handle.[35] A large part of the reason is the non-availability of efficient alternatives to traditional gas-fueled heating solutions. A district-level centralized heating system powered by biomass or waste-to-energy plants can be one solution, but that depends on availability and infrastructure. Another option is biomass stoves which can be a bit costly without subsidies. Same biomass options can be implemented as alternatives in industrial processes also.

Looking ahead

[34] BS-VI is a vehicle pollution emission standard issued by Bharat Stage Emission Standards (BSES). It prescribes the maximum permissible limits of various GHGs for different type of vehicles.
[35] 'Global trends in renewable energy investment 2020', a joint report from Frankfurt School, UNEP and Bloomberg NEF

So far, we have seen general trends & data that underline the need for investment and policy intervention for climate change. A lot needs to be done still. Some key focus areas for impacting the rate of sustainability adoption are discussed below:

A. Availability of corporate funding: On the one hand, many startups engaged in relevant technological research and solutions do not have access to required financing, despite government subsidies and banking schemes. [36] On the other hand, companies are required to spend specific amounts of their profit on CSR activities.[37] Such CSR activities include a contribution to incubators set up by various institutions & government departments. Thus, accelerating the flow of corporate earnings to incubators is one option.

   Another option is to include under the CSR umbrella any direct contribution to startups fulfilling specific criteria. This will also help the larger corporations imbibe the resultant successful technologies within their organization, which can further help them reduce their own carbon footprint and the others by making the same commercially available.

B. Waste management: The waste generated by industries as well as agricultural activities contributes to GHGs in two ways: either by rotting or by burning. Better waste management systems, where the waste of one industry is used as raw material for another, can be a significant step towards tackling this problem. For example, Agricultural and biological wastes can be used in the fertilizer and biofuel industries. Red mud from bauxite mining can be used in the cement industry.

   With proper infrastructure and logistical support, waste management curbs not only emissions from waste but also the ones caused due to extraction of fresh raw materials where waste can instead be used. Cost savings on the waste management front can also be achieved.

C. Stakeholder alignment: Many companies, including those signed up to RE100, are striving towards 100% renewable energy or lower milestones within specific timelines. Large corporates enjoy a unique strategic place in the supply chain. Companies aiming to increase renewable energy in their overall consumption mix can impact their suppliers to be more environmentally responsible too.

---

[36] Kite power, Constructis, Nostromo energy and SEaB internationally as well as Carbonlites by Carbon Masters, Paterson Energy and Polycycl in India are a few startups working on such solutions.

[37] Section 135 and of Schedule VII of the Companies Act 2013 and the Companies (Corporate Social Responsibility Policy) Rules 2014 govern Corporate Social Responsibility (CSR) in India. Indian companies that meet net worth, turnover & net profit thresholds must form a CSR committee and spend 2% of their average net profits of last three financial years on CSR activities.

For example, as mentioned before, if a cement manufacturing company wants to change its raw material source, it must align its previous step in the supply chain, the supplier. Hence, the decision by the cement company will impact their suppliers also. And if enough companies do this, the supplier would have to opt into this trend even if earlier the loss of one client was not enough incentive from a business standpoint.

Secondly, organizations will have to spread awareness and impart training to their employees. Investors & CEOs create the space, but it is middle management that will create the products and thereby value for shareholders, customers and society at large. Hence, the middle management's involvement helps translate vision into actions.

D. Improved reporting & audit: There is an increased interest by investors towards ESG responsible organizations. But the issue they face is a lack of relevant information in this regard for decision making. Many organizations publish a report of the steps taken, but these reports are primarily for environmental agencies and NGOs.

A company can take various steps to help investors gauge its environmental activities and make informed decisions. These steps include: identifying environmental risk factors, identifying affected organizations, forming internal policies to address these, taking actions, building internal systems to monitor ESG performance, and issuing periodic reports measuring financial impacts of the same.

There is no set format for reporting in this regard. But there are headwinds in this direction also. The Sustainability Accounting Standards Board has issued 77 industry-specific reporting standards, which include the industry-specific key metrics, to assist companies in disclosing financially material, decision-useful sustainability information to investors.[38] Stock exchanges have also provided voluntary key reporting metrics in this regard.

Fig 6 - Key ESG reporting metrics

Environmental (E)	Social (S)	Corporate Governance (G)
E1. GHG Emissions	S1. CEO Pay Ratio	G1. Board Diversity
E2. Emissions Intensity	S2. Gender Pay Ratio	G2. Board Independence
E3. Energy Usage	S3. Employee Turnover	G3. Incentivized Pay
E4. Energy Intensity	S4. Gender Diversity	G4. Collective Bargaining
E5. Energy Mix	S5. Temporary Worker Ratio	G5. Supplier Code of Conduct
E6. Water Usage	S6. Non-Discrimination	G6. Ethics & Anti-Corruption
E7. Environmental Operations	S7. Injury Rate	G7. Data Privacy
E8. Climate Oversight / Board	S8. Global Health & Safety	G8. ESG Reporting
E9. Climate Oversight / Management	S9. Child & Forced Labor	G9. Disclosure Practices
E10. Climate Risk Mitigation	S10. Human Rights	G10. External Assurance

Source - ESG Reporting guide 2.0 released in May 2019 by NASDAQ

[38] https://www.sasb.org/standards-overview/download-current-standards/

Another issue is the reliability of the data presented. There is no regulatory push to get the ESG data audited. In India for example, ESG details form a part of other information in the annual report and the only responsibility of the auditor is to ensure that the information is not materially inconsistent with the audited financial results. Hence the question of accuracy and reliability of data is to be answered by investor due diligence for now.

Conclusion

Every benefit comes at a cost which, in the case of the development of the human race, has been the environment. Electricity, vehicles, industries, and heating have exacerbated GHG emissions and global warming. Earlier, buying products of an environmentally responsible organization or contributing to an environmental cause was associated with psychological satisfaction (from doing the right thing despite higher costs). However, this has now become necessary as climate change has started to affect us economically & financially.

Environmentally and socially responsible organizations are resonating well with customers and investors. Some companies may exceed their sustainability targets, while others may fall short. The same goes for government policies as well. A lot has to be done in all aspects be it renewable energy, EVs, financing or reporting. Changes are underway, and the outlook is positive for all that is being done collectively as a society.

****