

Combat COVID-19 Outbreak: a Survey

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Abstract: In late December 2019, Chinese health authorities reported an outbreak of pneumonia of unknown origin in Wuhan, Hubei Province. Corona virus disease 2019 (COVID-19) comes from corona virus family. COVID-19 is a spreading disease caused by severe acute respiratory ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). Humans or animals cause illness due to this virus. Now the world is facing global health crisis after World War Two as a result of this virus. COVID-19 was first originated from Wuhan, the capital of China's Hubei province in December 2019 and since it has spread worldwide as a result ongoing pandemic.

Keywords: COVID-19. Symptoms, Quarantine, Social distancing, Economic Risk

1. INTRODUCTION

Corona virus disease 2019 (COVID-19) [1] comes from corona virus [2, 3] family. COVID-19 is a spreading disease caused by severe acute respiratory ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) [4] and Severe Acute Respiratory Syndrome (SARS) [5]. Humans or animals cause illness due to this virus. Now the world is facing global health crisis after World War Two as a result of this virus. COVID-19 was first originated from Wuhan, the capital of China's Hubei province in December 2019 and since it has spread worldwide as a result ongoing pandemic. On 30th January 2020 the World Health Organization (WHO) declared COVID-19 storm a Public Health Emergency of International Concern (PHEIC) and on 11th march 2020 a pandemic. It is spread over 210 counties till date.

1.1 Symptoms of COVID-19

Fever, tiredness, and dry cough are the most common symptoms of COVID-19. Less common symptoms [6, 7] are nasal congestion, aches, and pains, conjunctivitis, headache, diarrhea, sore throat, discoloration of fingers or toes, loss of taste or smell, or a rash on the skin. In the initial stage these symptoms may not be shown but it begins gradually. Some COVID-19 peoples also get

seriously ill and breathing difficulty problems. Older people are at higher risk if they have medical problems like diabetes, high blood pressure, cancer or heart, and lung problems. People with all the age can be caught by the corona virus. So if anybody has cough or fever combine with chest pain/pressure, breathing problem or loss of speech immediately contact medical or can contact with the health care provider to give direction to the patient to the right clinic. Older and children should be more cautious because they have less immunity power. Figure 1 describes the symptoms of COVID-19.



Figure 1: Symptoms of COVID-19

1.2 Mode of transmission of COVID-19

People become affected [8, 9] by COVID-19 from other peoples who have the COVID-19 virus. Primarily this disease increases by small droplets from mouth or nose from person to person i.e. a person with COVID-19 sneezes, speaks, or coughs. If a person breathes that droplet from the infected person then that person catches COVID-19. Through surfaces and objects these droplets can get in around the persons such as doorknobs, tables, clothes, handrails, buses, etc. Although all the people who are affected by COVID-19 do not have symptoms but some people have symptoms. People catch with COVID-19 having no symptoms can also spread the virus to others.



Figure 2: Mode of transmission of COVID-19

1.3 Corrective Measures for COVID-19

The corrective measures [10] required to combat this global pandemic are taken different ways as follows.

a. Self-isolation

The first Corrective measure for health is Self-isolation where those who have COVID-19 symptoms will not infect to others in the society, including family members. Self-isolation is when a person having cough, fever, or other COVID-19 symptoms is recommended to stay at home and keep the distance from the society, not to go work, school, college, shops, religious places, or any public places. People should obey the recommendation of health care providers and government rules. If people are contacting with other wear a mask, hand gloves and keeps at least one-meter distance. Self-isolation person live with some following rules:

- Stay with large, ventilated with hygiene and facilities of toilet
- If it is impossible, keep the bed at least one-meter distance
- Maintain one-meter distance from your family member as well as from outsiders
- Regularly monitor symptoms and inform to the healthcare provider
- If facing any problem like difficulty in breathing then call immediately to the healthcare provider or admit in medial
- Do exercise at home
- Stay energized and positive

b. Quarantine

The second corrective measure is Quarantine that means separating people who have not any health problems but maybe caught to COVID-19. The aim of Quarantine is when people are just progressing with symptoms it will restrict the spread of disease.

c. Physical distancing

The third corrective measure is Physical distancing. WHO suggests that everyone maintains at least one-meter distance from others even if they are not affected with COVID-19.

1.4 Protecting yourself and others from the spread COVID-19

There are some simple precautions for protecting from COVID-19:

- Regularly use hand alcohol-based hand sanitizer, hand wash, or soap because it kills the viruses of hands.
- Maintain at least one-meter distance (3 feet) so that other person droplets from the mouth, the nose cannot reach.
- Do not go to crowded places where so many people are coming together and may be someone is affected with COVID-19.
- Do away with touching nose, mouth and eyes because the hand is touched with many places.
- When you have sneeze or cough then cover your nose and mouth with a tissue or bent elbow after that throughout the tissue immediately wash your hands cleanly by soap or hand awash.
- If you have any minor symptoms like cough, fever and difficulty in breathing then immediately contact with a health care provider for the right health facility.
- Children, adult and older should follow the rule of self-isolation and self quarantine
- Children should not be close contact with those who are in risk condition or any severe disease and with older people.
- Keep up to date news from WHO, National health authorities and local health authorities.

1.5 Safe use of alcohol-based hand sanitizers

Some guidelines of how to use alcohol-based hand sanitizer:

- Carefully use and store alcohol-based hand sanitizer
- Keep it away from children's reach suggest them how to use and monitor
- Don't use large amount of alcohol-based sanitizer use coin-sized amount in hands.
- In hand when you are using a alcohol-based hand sanitizer keep away from mouth, eye and nose.
- Avoid use of alcohol-base hand sanitizer before cooking because it is burnable.
- Monitor children do not eat or drink because alcohol based hand sanitizer can be toxic.
- Clean your hands with soap and water is also productive against COVID-19

2. ECONOMIC RISK IN THE WORLD.

An outbreak of the corona virus turns into the human tragedy which affects billion of people in the world. The economic risk [11-13] of a pandemic is very specific from its health risk. Absolutely the two risks i.e. public health and economics are parallel with each other. Financial and institutional capacity is a crucial part of economic power but this power is decline now due to the COVID-19 epidemic. These things express the economic downturn across the globe. As a result in most countries many people facing financial problems. They lost their jobs and occupations. Initially a survey said that countries like Vietnam, India, Italy, and China foresee large hit on personal finances. One survey says that economic risk high in Iran, Africa, south, and South East Asia. To handle health crises healthcare system is well implemented than the previous pandemic, but the globalization of labor and trade progress will be at risk to the world economy. Some countries face adverse economic effects because of not experiencing much morbidity and mortality. The report of Global Financial Stability shows that the financial system has already fallen down and furthermore it will affect more globally.

Sharp tightening of financial conditions
The speed at which global financial conditions have tightened is unprecedented.

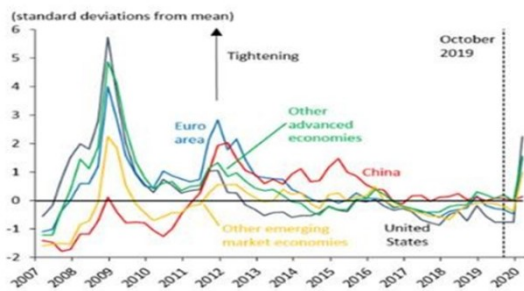


Figure 3: Statistics of financial conditions in the world.

The price of risk assets has significantly decreased since the COVID-19 outbreak. Recent risk assets, selloff deteriorate badly which had experienced in 2008 and 2009. Many equity markets in the small and large economies have fallen down more than 30 percent. It hit the market liquidity and also affects the global market for U.S dollars.

Global growth is at risk
The odds of global growth exceeding zero this year are now negligible.

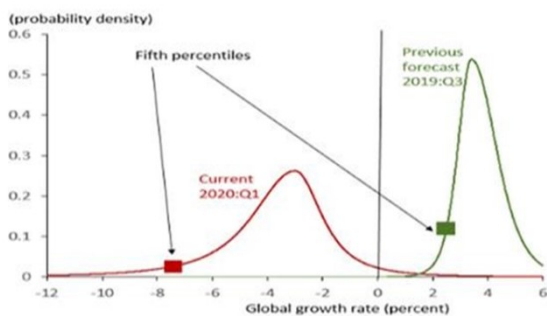


Figure 4: Global growth risk.

Lower bank capitalization
Measures of bank capitalization—capital relative to assets—based on equity market valuations have worsened significantly.

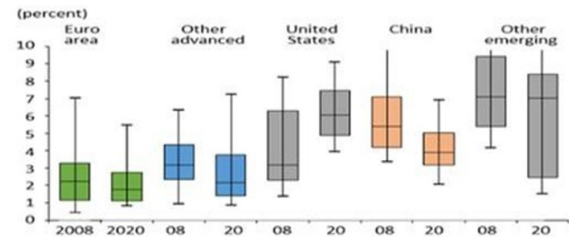


Figure 5: Statistics of Bank capitalization.

2.1 The Economic risk in India.

The economic damage in **India** [14] is already soaring after March 24 when government declares the whole nation will be in lockdown. 75 percent of the Indian economy is in this lockdown now. For India the rate of annual GDP growth will fall in the year 2019-20 is estimated between 1-2 percent. GDP growth rate is already struggling with 4.7 percent. Borders of states are sealed, labor movement is lessened, and Institute, college, school and training courses are formal closed for a period of time. Big companies in India temporarily closed or its operations are reduced. All the four wheelers and two wheelers company are not open their production. All the airlines including international and domestic flights are facing loss which is approximately \$600 million. In the month March and April the loss of tourism and hospitality industry will be minimum \$2.1 billion. RBI said that in India private consumption negatively affected by the COVID-19. Indian rupee fallen to a low value in the last few weeks.

COVID-19 has caused economic crises in all over the world such as USA and Europe and it may affect economic pitfall in India in CY21-22. ICICI Securities analysis said that nearly two-thirds of the Indian office demand emerges from the USA and European multinational companies. And the economic decline in this country may hit demand for offices in India. Office leases in India are typically long term in nature and are spread over 8-10 years with annual rental escalations of 5 percent. Two-thirds of Indian office demand has been driven by MNCs headquartered in USA and Europe over the last decade (CY10-19) especially to set up captive centres in technology, fintech, pharmaceuticals and consulting.

2.2 Corrective measures for Economic Risk

To give support and stability to the global economy central banks take a leading role. First they have softened the monetary policy by reducing policy rates. By cutting policy rates it will strengthen the future path of the economy. Second, additional liquidity is provided by the central banks to the financial system. Third, to increase the provision of U.S. dollar liquidity a number of central banks agreed through swap line arrangement. Whether India can avoid a large economic slump or not, the path back to growth will depend on a range of

drivers. It is reasonable to draw three broad scenarios. Such as, V-shaped, U-shaped and capital formation ability recovery [15]. V-shaped is a classic real economical shock recovery where, the growth rebound but displacement of output may occur. Resuming initial growth with shock persistent is called as U-shaped recovery. The third one is based on structural damage to Indian labor market. Approximately 5.3 million people will lose their employment.

On March 26 Delhi finance minister announced 25 billion crore rupee relief packages for the needed people who are highly affected by the virus. It will cover many categories like women and small businesses to organized workers, farmers and employee earning small salaries. They will get insurance cover nearly \$7,000. The RBI also reacted the credible and analytical decision by cutting the repo rate 75 basis points to 4.4%.

Get down to brass tacks: In the near term, the government should announce eye-catching schemes to invite companies to manufacture in India's eastern coast and traditional manufacturing clusters. To set the right tone, government should establish effective communication through business-friendly channels to convey easy availability of land in mega special economic zones (SEZs), ready-to-move-in facilities, sector-specific business-friendly regulations, a simple labor code, tax breaks, and other incentives aimed at bringing its manufacturing competitiveness on par with the most competitive destinations in Asia.

Target the low-hanging fruits: India should aim at targeting low-hanging fruits in the next six-to-eight months, winning major investment deals in sectors where the economy has domestic supply chains. Moving up the value chain is far easier when there is an underlying ecosystem. Targets could include pharmaceuticals, mobile phones, machinery, and other sectors where there is a robust network of small and medium-sized enterprises (SMEs). These rapid early successes will set the momentum in attracting subsequent mega manufacturing investments in other sectors.

Strengthen long-term commercial diplomacy: For the rest of his second term, Modi should place a special emphasis on India's commercial diplomacy, expanding diplomatic strength in key missions to engage business leaders with increased vigor. Often, India's commercial offices in prominent missions are understaffed. To this end, the government should enable the lateral entry of some of India's best private sector professionals with sectoral and negotiating expertise into the diplomatic corps. India should have its best commercial diplomats in friendly capitals like Washington, D.C., Tokyo, Seoul, and Singapore and in missions to important commercial cities, including San Francisco and Osaka, to reinforce India's position as the next big manufacturing destination.

3. CONCLUSION

According to the World Health Organization (WHO), no specific vaccine or antiviral treatment is available yet. The whole world is fighting against the global pandemic. However, many ongoing trials are conducted at different organization for the evaluation of the potential treatments. Until the vaccine is found we should practice hand, eye and respiratory hygiene to combat this disease. We should follow the social distancing and the guide lines announced by our government. Since some infected persons may not yet be exhibiting symptoms or their symptoms may be mild, maintaining a physical distance with everyone is a good idea if you are in an area where COVID-19 is circulating. Risk reduction solutions are needed across sectors such as water, sanitation and hygiene; education; health and nutrition; livelihoods; child and social protection; shelter and housing; and public open spaces.

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