

Executive

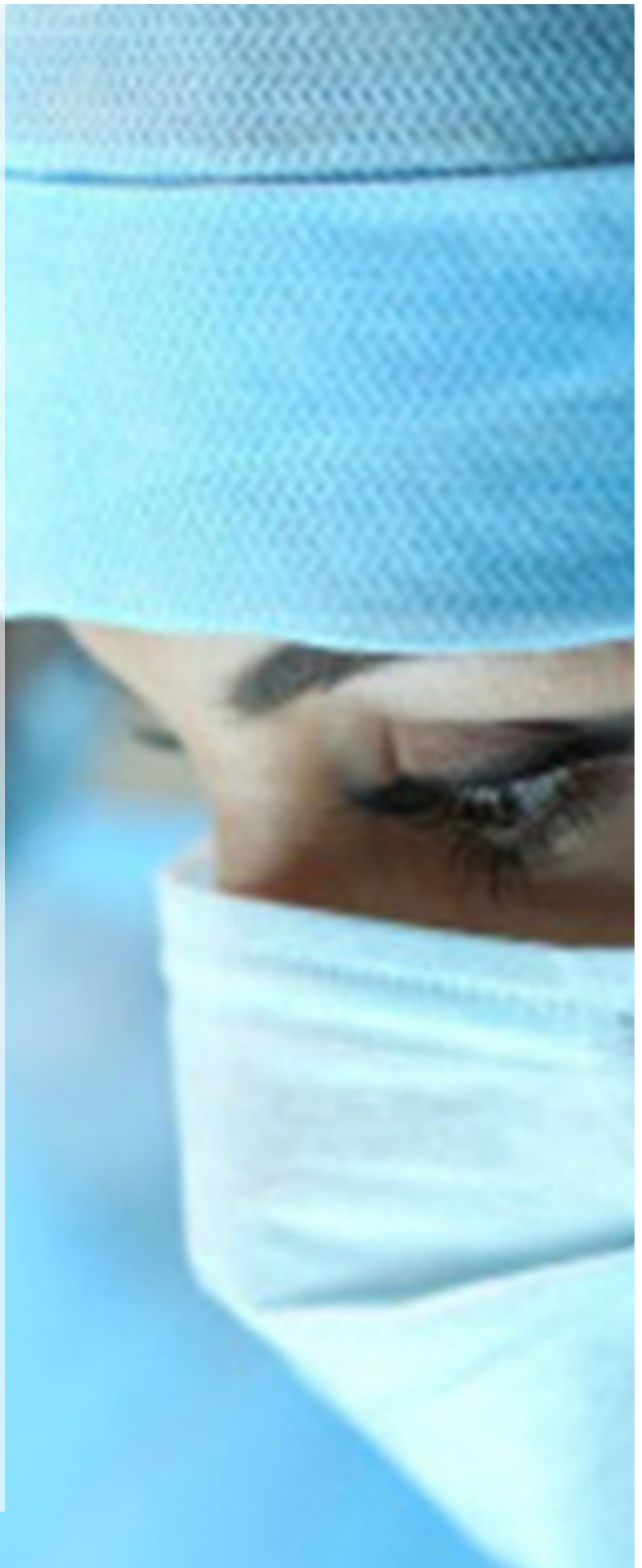
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April - May 2020

SPECIAL REPORT

CORONAVIRUS

- > Milestones in first responses to the pandemic
- > Outlooks and strategies to prevent infection
- > The pandemic's toll on the already struggling economy
- > Social stigmas and forgotten demographics in the pandemic



APOCALYPSE REDUX



How coronavirus could bring about a historic chance for change

About two months ago, the assumption was that in terms of viral speed, the only things spreading faster than SARS-CoV2—the coronavirus' official name—would be coronavirus rumors and fears. This view could pass as news of the month at the time when World Health Organization (WHO) Director General Tedros Ghebreyesus explained to the world that there was an infodemic going on, on top of the new epidemic—before the WHO's declaration of the coronavirus pandemic on March 11.

But tracking what are now the four dimensions of the coronavirus crisis trajectory—infection numbers and death tallies; data on markets and rescue budgets; social catastrophe indicators; and fixation on coronavirus news and rumors (as well as its Lebanon specific impacts)—as they speed ahead on a daily basis is the new impossible task. All four of these new dimensions, by the way, are first-class generators of pain and fear.

STAYING ON THE VIRUS'S TRAIL IN SPITE OF DATA UNCERTAINTY

The data on the virus itself, meaning its confirmed incident rate, its mortality, the time in which infections double in affected clusters or per country, its longevity or eventual seasonality, and the total count of unreported and unnoticed infections—is by now widely acknowledged to be overall uncertain, too much so to enable perfect decisions.

The least uncertainty has been assumed to exist in the mortality rate. But even in the reported deaths one encounters hidden data uncertainty. For example, the numbers of COVID-19 (the name of the disease caused by the virus) fatalities reported from G7 member country France, one of the most heavily affected nations in the pandemic's European epicenter, had a massive error margin.

It became a matter of wider awareness only in early April that the French death tallies reported throughout March did not include deaths in nursing homes but only deaths in hospitals. Under a revised reporting methodology, a retroactively amended tally in early April showed a different and substantially higher number of deaths since March 1, which indicated that over 25 percent of COVID-19 deaths were occurring in nursing homes (which according to reports in French media also have no testing capacities for the virus).

As to fatalities, question marks thus come into play under several perspectives. One emotionally unsettling, but for response planning necessary, angle is the need to consider how many of the confirmed deaths in a given cluster or country might have occurred without any outbreak of the COVID-19 epidemic. This does not subtract one decimal from the sense of total horror that is created by the increasing fatality numbers but it could have consequences for designing optimal strategies for fighting the virus and alleviating its impact.

Besides uncertainty over the accurate mortality rate in clusters of seniors in nursing homes in the developed world, it does not appear unreasonable to wonder if a deep information gap related to death tallies is to be found across poorer countries. To what degree do clusters of mortality exist in slums across the southern hemisphere that have at best informal governance, with deficient or totally absent state presences? How accurately will deaths from COVID-19 be identified and reported from human population clusters in MENA, whether in camps of migrants in North Africa, informal refugee camps in Lebanon, camps in conflict zones in Syria, or in densely populated Palestinian territories that are ostracized by the nominal national government, namely the occupation government in Israel?

Confirmed incident numbers moreover are not universally transmitted into a consolidated tally with the same rapidity, even within developed countries, which is complicating analyses of infection patterns in addition to the fact that infection numbers are rising very, very fast. Nonetheless, the big picture says that the spread of the virus will not slow down anywhere with any abruptness. No country and no individual is magically protected. This means containment measures need to be strong and lasting.

It also means that by end of March, it was a sure bet to predict that the line of one million confirmed infections and over 50,000 deaths would be crossed in the following days—in a ten-fold increase when compared with the 100,000 confirmed infections

tallied by March 6, a mere four weeks earlier. The tally of infections and deaths will continue to climb.

Venturing further into granular details does nothing to remove uncertainties. The location of the first reported coronavirus outbreak, China, was tallied to have 82,278 confirmed incidents and 3,309 deaths by March 31. Germany, France, Iran, and the United Kingdom were next in the gruesome statistics, with respectively 65,600, 45,200, 44,500 and 25,500 infections. Switzerland, Turkey, Belgium, the Netherlands, and Austria were shown as five countries that also counted more than 10,000 confirmed infections by the end of March, while earlier victim South Korea reported just below 10,000—not that the 10,000 infections line would make any difference. But as the numbers change and become more shocking by the minute, what is the value of such information for concerned global citizens by the second week of April?

From a perspective of policy-makers having to enact and adapt virus response plans, information gaps pertain to actual incident ratios in the pandemic, to existence or non-existence of seasonality, to the availability of tests, of emergency medical supplies, and to the time until vaccines and treatments will be available. Given the additional uncertainty about the effects and, inversely, potential short-term or long-term medical and economic detriments of one or the other containment strategy, the overall data insecurity and simultaneous decision-making pressure must be a living nightmare.

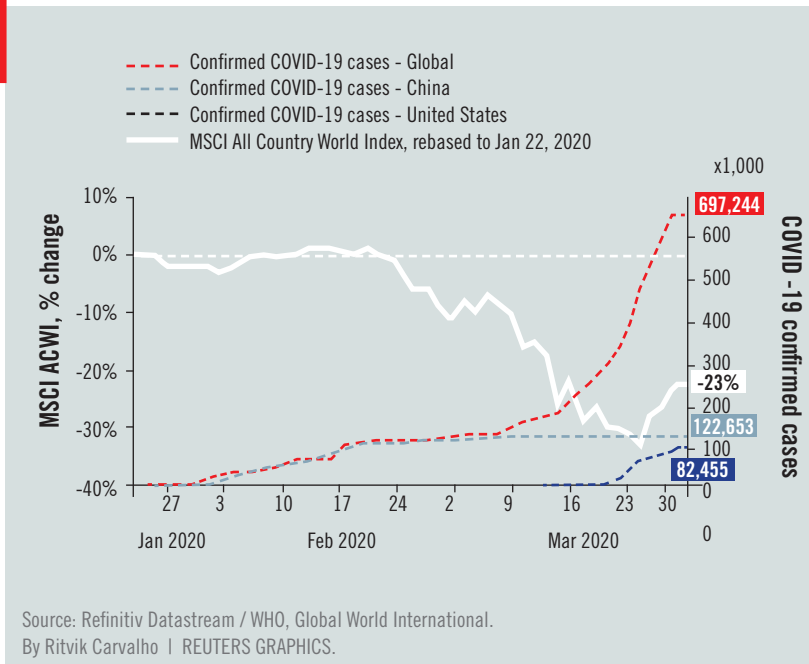
THE FINANCIAL WORLD: A FLOOD OF PAIN MIXED WITH DETERMINED RESCUE SIGNALS

The second, very powerful contender in the coronavirus race toward a global ground zero are financial market impacts, real economy impacts, and unemployment numbers. These doomsday notices are juxtaposed with signals of new governmental—meaning fiscal and legislative—measures and rescue packages, packages of monetary stimulus, bond buying and interest rate reduction by national central banks, and announcements of financing and debt relief initiatives by global financial institutions.

On the world's financial markets, stocks and their trading platforms are the most sensitive seismographs, signal givers of the first order when it comes to economic health. Beginning from mid-February and all throughout March, equities around the world were impacted by radical drops followed by uncertain movements, sideways trading, and resumption of drops.

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WORLD STOCKS VS. COVID-19 CONFIRMED CASES



Many noted recessions began in the financial world. By contrast, the corona recession of 2020 seems to involve factors in the real economy of production and repercussions to globalization and the complexification and extensions of supply chains.

Between record highs in American and some European stock markets on or around February 19 and market readings on March 20, lay steep drops of about 30 percent in leading US indices Dow Jones and S&P 500, 40 percent on the German DAX, a drop of over 30 percent on Italy's MIB, and more than 20 percent weakening on large Asian exchanges.

Sideways trading and minor temporary price recoveries made not only the indexes of equity markets show pictures of mayhem and uncertainty at end of March and into April. Markets for bonds, oil, commodities, currencies, precious metals, and cryptocurrencies were shaken into bouts of volatility. Many markets passed through phases of deterioration last month that in their sum defied comparisons and left it to the mind of the beholder whether to describe the various down phases in sensationalized terms as crashes or euphemize them as severe contractions.

Oil prices were caught between the rock of vanished demand due to the coronavirus pandemic and a hard place of a spat over production cuts between Russia and Saudi Arabia. Already subdued to levels below \$50 over the first two months of 2020, due to weakening demand, prices moved down by 25 to 35 percent relatively early in March under the added impact of the price war. Scratching a \$20/barrel price level that had in the oil price

cycles during the 21st Century only been recorded at a time when they were emerging from the \$10 dollar lows seen ten years earlier, oil climbed back to the \$30s by end of March and early this April. However, these signs of slight recovery were spiced with fears of possible further drops.

Dollar prices and currency exchange rates also had a wild and wily month—the latter in the fact that they were advantageous to investors who played their wiles best. For most countries in the developing world, the month was wild, as they were hit by capital flight and depreciating national currencies. In the confusing environments of fear and flight, even gold seemed less solid, swinging from gains to losses in coronavirus uncertainty. The supposed digital gold, bitcoin, had value sucked out of it as investors cashed out bitcoin positions to cover exposures elsewhere, and even as bitcoin and a few other cryptocurrencies were gaining some territory as markets moved in late March and into April, it seems crypto-hell was bent on demonstrating that virtual does not have the same tangibility as physical.

And so the sad markets stories went on and on. The data flood of bad and worse numerical signals from financial markets in March have in their volume and frequency rivaled the bad news on coronavirus infections and COVID-19 fatalities—the two crucial differences being that financial epi-

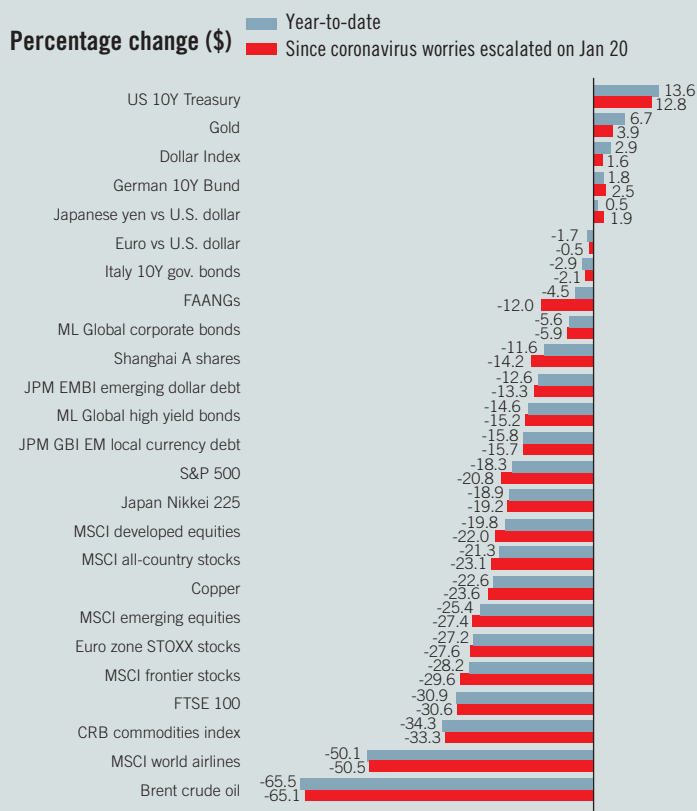
demics with inundation of deteriorating numbers do not imply growing risks of death and that the volatile financial signals reflected human behavior patterns. A crucial further element of financial signaling to the economy last month were the fiscal and monetary promises of countermeasures to the gathering coronavirus recession and ever-larger packages of support issued to themselves by leading economies.

EMERGENCY RESCUE PACKAGES IN THE RICHEST NATIONS

In money trails on the global emergency supply plains, the top developed economies of G7 status have constructed the largest virtual caravans. Their money wagons are equipped with supplies that other countries can only dream of. The United

States has legislated a \$2.2 trillion dollar package, signed into law by President Donald Trump on the last weekend in March—an upward revision of the package and addition of another \$1 trillion was later put on the table as parts of the program already looked insufficient to meet needs. Emergency packages worth double and triple digit billions of dollars were adopted by governments of the other G7 group countries. They were reported in early April as being: Canada (\$75 billion); France (€45 billion in emergency aid to companies alongside €300 billion state loan guarantee package); Germany (€156 billion euros, upping its 2020 budget by almost 45 percent); Italy (€25 billion euros fiscal package, expected to be followed by much larger package); Japan (package according to government announcement on April 6 will amount to almost \$1

CORONAVIRUS CRASHES FINANCIAL MARKETS



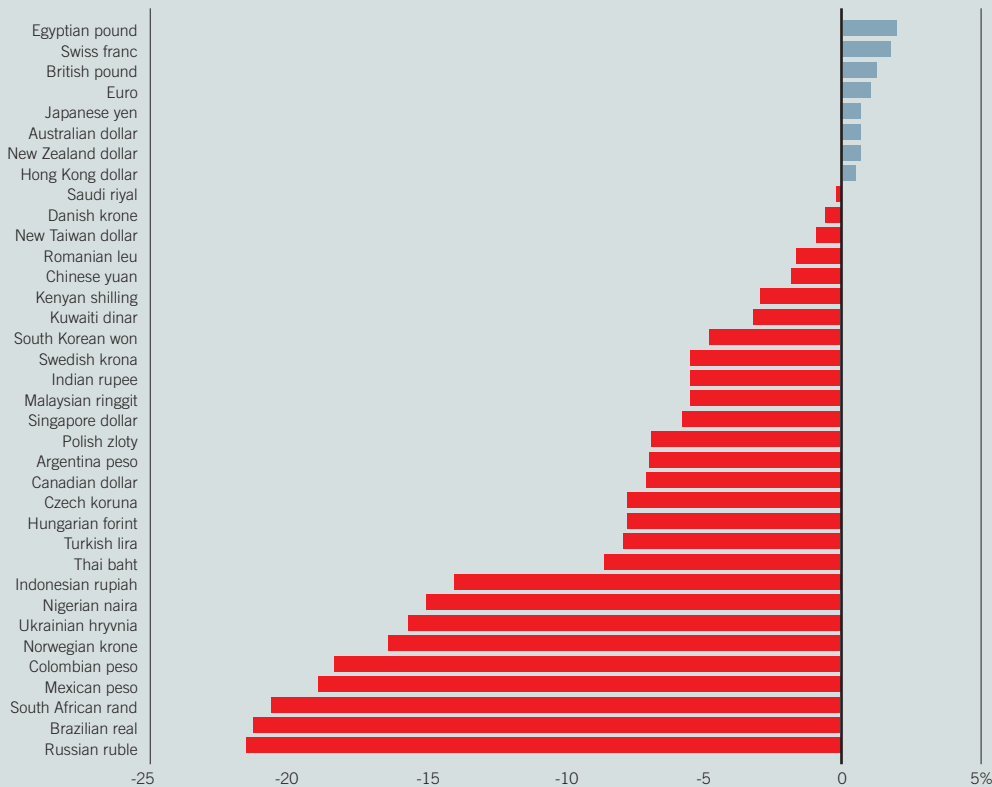
Source: Refinitiv Datastream / data to 30/03/2020.

By Marc Jones | REUTERS GRAPHICS.

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GLOBAL FOREIGN EXCHANGE RATES

Currencies against the US dollar, year-to-date change



Source: Thomson Reuters Datastream.

By Michael Ovaska | REUTERS GRAPHICS.

trillion); and the UK (£350 billion/\$430 billion under adjustable response framework with no limit).

On EU level, according to a statement of current European Central Bank (ECB) President Christine Lagarde on March 19, the Eurozone's central bank designed a €750 billion Pandemic Emergency Purchase Program on top of a €120 billion program adopted earlier in the same month. "We are fully prepared to increase the size of our asset purchase programs and adjust their composition," Lagarde assured.

It is predictable that these financial packages will not remain at these levels nor be nearly enough for doing what is needed, as already seen in the US context. A report in German newspaper *Süddeutsche Zeitung* said on April 5 that documents from the German finance ministry showed a total predicted cost of almost €1.2 tril-

lion for measures in the country when all public measures are included.

Using a phrase that reminds of the then-ECB President Mario Draghi's 2012 rescue assurance during the euro crisis, leaders of the G7 said in a statement on March 16 that they were "resolved to coordinate measures and do whatever it takes" to restore growth in their economies and avert downside risks.

Another early April news update: The United States' rescue armament according to the *New York Times* comes with \$454 billion in ammunition to enable Federal Reserve lending programs to small businesses, large businesses, local governments, individuals, and households. As a Treasury Department program for small business relief launched on the first Friday in April, the paper reported that over 10,000 applications for more than \$3.2 billion in loans were processed that day.

THE BIG MULTILATERAL MONEY GUNS

Multilateral development banks and international financial institutions (MDBs and IFIs) were in the first tier of engineering their responses to the coronavirus pandemic and recession. With a financing quiver holding \$1 trillion, the International Monetary Fund (IMF) signalled its readiness to mobilize all of its lending capacity, IMF Managing Director Kristalina Georgieva announced repeatedly last month, as the reality of a global recession projected at least as bad or worse than seen during the Great Recession of the 2000s dawned on international markets and global institutions.

While assuming a recovery of the global economy in 2021, the return to growth will require tremendous medical responses as well as extraordinary financial efforts, Georgieva stated on March 23 (after a regular G20 conference call), making appreciative references to efforts by major central banks and fiscal packages that had been declared by G20 countries.

After acknowledging the coronavirus-related economic relief measures taken by many G20 countries, she emphasized the continued presence of concerns over “the negative outlook for global growth in 2020 and in particular about the strain a downturn would have on emerging markets and low-income countries.” Early in March, Georgieva had announced that about \$50 billion in fast emergency IMF funding, 20 percent of it in interest-free facilities, would be mobilized toward support for low-income and emerging markets.

The IMF endeavors to facilitate better access to its emergency facilities, given that “some 85 countries” have indicated that they would need to rely on IMF emergency funding, the IMF chief said in a further, extraordinary conference call with G20 members on March 31. According to her, besides widening its emergency support umbrella the IMF is seeking to enlarge its capacities to help its poorest member nations and assist countries that experience foreign exchange shortages.

In related efforts, the IMF in March initiated measures asking member countries to replenish a special catastrophe fund that has previously been used to support Haiti in 2010 and countries affected by the ebola epidemic in 2015, to a size of about \$1 billion. Revising the catastrophe fund’s criteria enabled the granting of debt service relief for up to two years to poor nations as balance-of-payments support.

According to a World Bank press release from April 2, the group initiated a first wave of emergency support operations worth \$1.9 billion for 25 developing countries, including Yemen and Djibouti in the Middle East and North Africa (MENA) region. New operations are moving forward in over 40 countries under a fast-track process, in addition to redeployments of \$1.7 billion in already existing projects. Further redeployments of funds for countries with approved projects could reach up to \$160 billion over the next 15 months.

An earlier World Bank Group factsheet had announced in mid-February that the group’s immediate emergency response would be dedicated to life-saving operations, meaning support of healthcare needs, prevention and testing, medical research, and related development of community-based disease surveillance systems.

A list compiled by Reuters in the first week of April showed 28 countries in the developing world that were beginning to receive emergency funding in support of their efforts to fight the pandemic in these countries from the World Bank Group and IMF. Containing 13 countries in Africa, 10 in Asia, and five in Latin American and the Caribbean, the highest indicated amount was destined for the most populous country on the list, India, at \$1 billion, followed by Senegal with \$226 million.

Seven of the named countries, including India, were going to receive upward of \$100 million, five \$10 million or less. The smallest amount was earmarked for Sao Tome and Principe at \$2.5 million. The countries identified on the list were of different income levels and population sizes, without apparent correlation of either factor with the amount slated for emergency support. The Arab countries benefiting from the first wave of emergency funding by the World Bank or the IMF according to the Reuters compilation were Yemen, Djibouti, and Mauritania.

NOTABLE MDB/IFI INITIATIVES FROM AROUND ASIA AND THE MIDDLE EAST

The four-year old Asian Infrastructure Investment Bank (AIIB) announced in the wake of the March 27 extraordinary G20 summit by conference call to its directors the creation of a \$5 billion crisis facility for public and private sectors to alleviate financial pressures and support post-pandemic recovery. The flexible facility would be part of coordinated international response efforts and could be expanded, the AIIB said on April 3.

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Responses to the coronavirus pandemic from Islamic and Arab development institutions have come underway more recently and support announcements have been trickling when compared with the flood from global multilaterals. The Islamic Development Bank (IsDB) announced on April 1 that it would support implementation of “pioneering ideas in the fight against COVID-19” with a \$500 million fund designed to invest in startups and entrepreneurship.

Kuwait-based Arab Fund for Economic and Social Development (AFESD) on March 30 announced a \$3.2 million grant to assist Jordan in its fight against coronavirus impacts. The Kuwait Fund for Arab Economic Development (KFAED) said on March 25 that it would contribute 30 million Kuwaiti dinars (\$96.5 million) toward the country’s efforts in countering COVID-19. Kuwait announced its first COVID-19 fatality on April 4.

MULTILATERAL INITIATIVES WITH PRIVATE SECTOR SUPPORT ANGLES

The World Bank Group’s International Finance Corporation announced \$8 billion in support for private sector companies through its trade finance and working capital lines, in addition to support for clients and invested private sector companies in the agricultural, manufacturing, services, and infrastructure sectors. Commitments from the group also include \$6 billion in guarantees from credit insurance arm, the Multilateral Investment Guarantee Agency (MIGA), according to the press release.

The European Bank for Reconstruction and Development (EBRD), released a €1 billion “Solidarity Package” aimed at the countries where the EBRD is active. The measures are targeting support for private sector client companies that are in financing troubles through temporary credit problems.

In addressing the global banking system’s very specific challenges under the coronavirus scenario, the Bank for International Settlements (BIS) declared additional funding and supervisory support measures for banks on April 3. Alleviation of pressures on banks according to the Basel Committee on Banking Supervision at BIS will relate to expected credit loss (ECL) accounting frameworks and regulatory capital requirements linked to ECL frameworks, as well as margin frameworks and annual assessment of global systemically important banks.

On March 27, a preceding statement by the Basel Committee’s oversight body of central bank governors and heads of supervision (GHOS) endorsed measures to free up operational capacity of

banks and supervisors in the corona crisis by deferring introduction of Basel III standards, revised market risk frameworks, and revised pillar 3 disclosure requirements.

THE SPECTER OF A GLOBAL SOCIAL CRISIS—A CRISIS OF LABOR

What the entire relief army of fiscal and monetary initiatives in the G7 economies and the measures directed at the global economy’s countries in the “also-run” category could evidently not solve last month, was a scary momentum in the development of joblessness. The sad record in job loss news came from the United States with 10 million new claimants of unemployment benefits in the second half of March. Job losses in the first half of March,

reported at over 700,000, were high by comparison with earlier periods but paled in comparison with the latter part of the month.

This translates into a dichotomy between relatively benign US job loss numbers in the first half of March and the outlook for next month and beyond. The existing data up to March 12, while indicating that over 10 percent of the review period’s job losses actually occurred in the healthcare sector (in services not involved with the coronavirus pandemic),

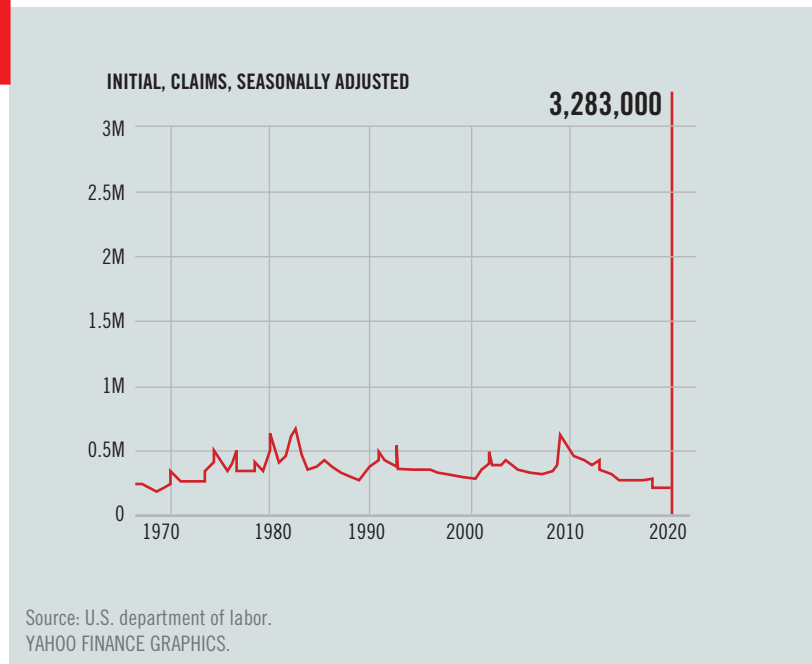
mainly showed that about 65 percent of jobs lost across the US during the pandemic’s initial social impacts were in hospitality-related sectors—most of them in restaurants—and that job losses generally affected younger and less educated employees.

The shockingly high numbers of US unemployment in late March had to be expected in view of the immediate emergency of a shut-down US economy. There also is no reason to think that employment numbers in the US will become better in the medium term where a deep global recession—with, at least temporary, history-making work paralysis—now is the dominant assumption.

Reasons why the US numbers have jumped so strongly last month and resulted in alarmed reports by news organizations might include the fact that employment preservation is less of a thing in the US than in Europe, which explains the higher spike of American unemployment when comparing these two economic areas. A perception bias is an-

■ The future is likely to experience new contributing factors to economic recession arising from natural catastrophes, including recurrent patterns of sudden epidemics and the impacts of climate change.

U.S. JOBLESS CLAIMS SKYROCKET AMID CORONAVIRUS OUTBREAK



other usual suspect. Job losses in China, which were in the millions in February, seem to be perceived in western media as a statistic, not a social catastrophe.

This is all unsurprising, and since surges in social challenges have kicked Washington into activist gear in March, the US Department of Labor in early April informed state-level authorities of a \$600/week boost to unemployment benefit payments for eligible groups and instructed them in perfect bureaucratic precision to what categories of benefit claimants these additional benefits are to be disbursed. Notwithstanding specificities of the American labor market and social response system, the indications from March 2020 as to the social groups most affected by unemployment in the US foreshadow where the enormity of social troubles is likely to be clustered in other, less affluent economies.

Overall, the outlook for restoration of labor prospects across developed markets and creation of jobs that can substitute for those lost in financially destroyed SMEs and long-term devastated sectors also appears rather dim, considering that design of emergency measures for workforces generally has been aimed at softening financial blows by compensating for losses in labor income. The most promising steps range from loan holidays, rent suspensions, and disbursement of survival cash to laid-off individuals. Regulated reduced-work ar-

rangements—Austria's and Germany's employment defense recipes via labor department substitution of a part of lost wages and salaries, if employees are forced to work fewer than their contractual hours but remain on payroll—will help, just as similar arrangements in countries where governments have announced they will be assuming responsibility for paying as much as 80 percent of wages if employers keep their staff members on even if they have nothing for them to do.

THE FUTURE LOOKS DIM

All these measures are beneficial and immeasurably superior to total absence of personal security—but they cannot negate the destruction of work in the coronavirus crisis or guarantee the creation of additional job opportunities for new labor market entrants during the interlinked national recessions that are expected to follow upon the pandemic and be unlike other cyclical downturns. Nor can the measures generate new jobs that would replace jobs lost in hard-hit sectors where, for a long time, no full recovery of pre-corona employment levels is expected, be that service jobs in travel, tourism and hospitality or manufacturing jobs in automotive and aviation industries.

Moreover, most countries in the world do not come near to the fiscal power of the US and other G7 countries. Yet it seems unpleasantly safe to as-

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sume that similar patterns to those of the March 2020 job losses in the US will be seen by the time when downward labor developments across the world will come to be analyzed for G20 countries as well as less privileged economies.

In a short-term outlook projection by the International Labour Organization, developing markets will be impacted more severely by evaporation of work than developed countries. Arab states will suffer the largest loss of labor that is being inflicted by the COVID-19 crisis on the world economy in the current quarter, the ILO said on April 7. The organization expects 8.1 percent of work hours to be lost in the Arab states, equating to 5 million full-time workers, which is 1.4 percentage points above the projected 6.7 percent rate of work hours that will be wiped out worldwide. Under the ILO projection, the global loss of work will be equivalent to 195 million full-time workers, 125 million of which will be in Asia.

Job losses beyond the current quarter are very hard to anticipate because they would, to a significant proportion, depend on the timing and speed of recovery from the expected global coronavirus recession—key open questions are if recovery would start as early as the third quarter or only later on and if the recovery will be fast (a V-shaped recession), slow (U-shaped) or marginal (as in a L-shaped recession). However, the residual unemployment that has to be expected even after the pandemic has turned into a bad memory means that repercussions from increased chronic unem-

ployment—including impaired physical health, increased emotional distortedness, and damaged mental stability—are likely to affect the entire globalized economy of the 21st century over decades.

Socioeconomic epidemics will affect countries with highly developed analytical methodologies and data on domestic labor markets but will be even more hurtful to countries where the domestic labor market is a job casino with crooked croupiers—a large group of countries that includes Lebanon, which is in no way unique in this regard.

The ultimate result of all this could be that job loss in the coronavirus crisis turns out to be a class of harmful societal bacteria prone to induce chronic illnesses in developed and poor countries alike, inflicting social pains and causing mental epidemics with unrestrained emotional infectiousness in all seasons and comparatively minor but unpredictable death rates.

THE FOURTH STREAM IN THE DELUGE

Such a social reality, unless balanced by a surge in social solidarity, looks to be no fun at all. Moreover, it links to the fourth swelling torrent that impacts and impairs daily lives in the form of a deluge of narratives.

This torrent combines several sub-streams. One is flooding the internet and social networks with inane conspiracy theories. These dystopian fantasies are too numerous and on average far too stupid but they command a lot of attention. They can traumatize listeners with artificial fears and

even lead to damages in the real world, as a brand new example from the UK demonstrates: burning mobile phone towers. Some towers were targeted by arsonists this month, apparently because of a conspiracy tale that fifth generation (5G) mobile networks have something to do with the spread of the coronavirus. Scientists were dismayed.

There are furthermore significant streams of deliberate fear mongering and disinformation. The disinformation stream's fake news can be state-sponsored or state-aligned, suggest observatories of such data, and are revealing digital frontlines that are culturally entrenched and throwbacks to Cold War times. Unimaginative horror movie scripts about villainous military leaders underwriting secret laboratories for biological weapons research that have set a virus loose deliberately or inadvertently, are an old hat. But such allegations recently seemed to be popular fake news grenades deployed by various global powers on their disinformation fronts.

A third detrimental sub-stream of the online information deluge is criminal with the objective of financial gain. Real world price gouging and criminal behaviors of seeking to exploit the desperate demand of municipalities, public and private healthcare institutions, and individuals by charging sky-high prices for—often substandard—emergency medical supplies from masks to ventilators for COVID-19 patients is a morally despicable and legally criminal practice that has surged with the pandemic.

Mirroring and even preceding these practices have been cybercrime syndicates and individual crooks who fraudulently promised to deliver medical equipment, virus tests, imaginary vaccines, and even miracle cures in online environments. Further fraud strategies include scams related to banking, financial services, coronavirus research, donation solicitations—the Action Fraud reporting system in the UK warned of soaring fake governmental emails asking for donations to the UK's National Health Service, in one example—and charities.

While real-world property crimes saw a downturn during the lockdowns, virtual crime in connection with the coronavirus pandemic soared into existence by February and ballooned in March, to the point that platforms for reporting such crimes, such as Action Fraud, were flooded and sometimes overloaded with requests by April.

“The pandemic opened up a business opportunity for predatory criminals,” said a report by Europol that announced the results from a global operation against counterfeit medicines, mostly

counterfeit surgical masks, which, according to the report, resulted in the dismantling of 37 organized crime operations and closure or some 2,500 online links. In the US, the justice department warned of rising online scams related to the coronavirus and the National Center for Disaster Fraud asked coronavirus fraud victims to contact a hotline. It is too early in the trajectory of coronavirus-related online crime to have meaningful numbers on average damages to victims or the accumulated financial gains of fraudsters during the pandemic, but as with all crime, this online scamming epidemic will leave behind traumatized victims.

THE RISE OF MAINSTREAM NEWS AND ECONOMIC FORECASTS

On the other end of the information spectrum are the not so bad guys—news organizations and individual journalists, academic research initiatives, for-profit consultancies, and individual economists, celebrity and otherwise. In this realm, the coronavirus has been dominating the attention of journalists for more than a month, which resulted in daily flows of virus-related news on every mainstream and niche media that EXECUTIVE accessed during the pandemic (including EXECUTIVE's own website and social networks).

Detailed and high-level economic research reports from academic institutions, bank research departments, and professional consultancies have flooded the global info sphere with studies, graphs, tables, projections, and guesses about the trajectory, severity, and outcome of the global coronavirus recession and nation-scale recessions. There was even a first “infodemiological study” by Chinese scholars about correlations between the COVID-19 epidemic and the COVID-19 infodemic.

It can and must be pointed out that the work of journalists and media organizations is driven largely by people's right to information on the pandemic and all that it implies (NB: Many for-pay online magazines and news sites have punched holes in their paywalls and are offering their coronavirus coverage pro bono, and advertising revenue at other media sites is down). This is the media's mission. However, with the rise in mainstream reporting, daily monitoring of the flood of journalistically produced news also nurtures concerns over imbalances in reporting, the nurturing of self-fulfilling prophecies, and the reinforcing of prejudices and misperceptions in absence of sufficient verifiable information.

Concomitantly, the relentless spike in production of economic opinions, analysis papers, and

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presentations suggests an increase in risks that the users of these reports will by way of selective perception chose to peruse materials that reinforce their narrow views and existing biases.

Many economic research departments and consultancies appear to compete in bringing out reports fast (as a non-representative example: the World Economic Forum's lineup of contributors and experts in April churned out over 25, often elaborate, online pieces in less than a week). Many such reports will have to come at the price of having to use preliminary, partial, uncertain, and not yet corroborated and robust data. Perhaps too many.

Casually put, the fourth stream in the corona environment of spring 2020 is a lavish information kitchen that allows economic addicts to overeat on a high-protein diet of advice and opinion, conspiracy theorists to indulge in nutty snacks with no nutritional ingredients and news junkies with a taste for the morose to feast 24/7. Given, however, that the torrents of so far mostly depressing SARS-CoV2 and COVID-19 data, discouraging economic data, and highly worrying social trend data in their confluence already make any previous experience of TMI look like a joke for preschoolers, the presence of the fourth stream in the deluge seems to transmute the combined mental coronavirus experience into something like a distributed denial-of-service attack on human brains—with no telling about the damages that might be inflicted.

In any event, as a long defunct economist and political philosopher wrote in an exchange with a fellow socialist one and a half centuries ago, "Every child knows [that] a nation which ceased to work, I will not say for a year, but even for a few weeks, would perish." It seems that the world will in due course find out if, per chance, Karl Marx was right on this one.

DEEPLY EMBEDDED IN THE CORONAVIRUS CRISIS: THE CASE OF LEBANON

And where is Lebanon in this global apocalypse that comes with the destruction of all human ability to predict what will happen to the world economy in the coming six, nine, 12, 21, 40 or even 120 months? The answer might be mostly one of cultural coherence and mental resilience.

In terms of infection count, Lebanon, showing 541 infections on April 6 on a continually updated list maintained by Johns Hopkins University in the United States and registers in the middle field of



the 183 countries that are included in the tally. The list on that day shows more than 60 countries with 10 or less infections each and just over 100 with more than 500 such incidents.

A world map at the site shows a not too large red spot in a world that is plastered with circles of red (one must assume that the size of the circles correlates with the number of infections but does not give information on the ratio of infections to national populations). Over 70 countries have reported higher infection counts than Lebanon. The world total that day is approaching 1.3 million confirmed infections and 70,356 deaths.

Lebanon's tally of 19 deaths seems elevated in relationship to other countries that show between 400 and 700 infections, as countries in the group

with a lower count outnumber those with a higher fatality count about three to one. The time for the doubling of infections in Lebanon is shown as about 30 days, with a stable trend and looks rather good in context of another visualization of the Johns Hopkins COVID-19 data. However, the overall robustness and depth of country data about most countries, including Lebanon, appears at a fleeting glance to not be sufficient yet to allow for real analysis and conclusions with a high degree of confidence.

CARNAGE AND MORE CARNAGE

The economic picture in Lebanon is not one of a country that has been ripped away from its healthy economic trajectory by a sudden external shock—as is the scenario in other countries that have come to regard a lockdown as the only way to avoid an unacceptably high loss of lives among their citizens. Lebanon's economic picture is one of sustained carnage, or rather the governmental self-dismemberment of the little that has remained of the country's political and socioeconomic integrity after a series of vacuums and utterly result-free policy cycles in the 2010s.

With transmission of guidance impulses into the economy through the administration's dysfunctional central nervous system frequently interrupted over the course of a decade, vital parts of the economy started to wither and die off. The resulting dismal state of economic and financial affairs, having become unmistakably clear in the third quarter of last year, is by now known perfectly well and has been documented almost to excess. There is no need to reiterate a description.

However, if one wishes to refresh one's memory on the entwined elements of the Lebanese mess, one only needs to glance across national and international assessments of this existential crisis, for example by reviewing the six joint statements which the International Support Group for Lebanon (ISG) has issued in course of the past seven months.

A meditation over such documents and the economic realities delineated therein gives the impression of only two possible approaches. In recognition of the persistent economic emergency that has only been exacerbated but not induced when the first coronavirus infection was discovered in the country seven weeks ago, the possible reactions to the twice cursed reality of pandemic and deep economic crisis are a realist's approach and a utopian one.

Realistically, and this is prudent, the country needs things: the virtue of hard work by mo-

tivated and determined business movers, shakers and makers—the kind of people who are investing themselves into the Lebanese economy and put their own fortunes on the line—and help from outside by whoever is willing and able to help. Leaders of industry and economists have reconfirmed earlier in the coronavirus crisis that they are determined to work with everything they have and that foreign help is vital and urgently needed, ascertaining at the same time that they would not expect the Lebanese government to be able to spend any significant own financial resources on alleviating the repercussions wrought by the coronavirus crisis or the economic malady. (See industry story page 44).

All that can be said at this moment with reasonable confidence about the search for foreign help, is that talks between the Lebanese government and interlocutors on the global level, such as the IMF, the World Bank Group, and stakeholders in the ISG, have been ongoing for months now. The details discussed in these talks are by and large less transparent than one would wish for and the outcomes appear not predictable, but the potential enablers, foremost the enabler of fiscal reform, are known.

In this regard, the latest communication between the Lebanese state and the ISG has reconfirmed this month that Lebanon is appealing for and depending on international support. The official message to the ISG reiterated baseline information on the Lebanese government's perception on the scope, roots, and growth of the national economic crisis, and the fundamental precondition for receiving aid that consist of empowering an efficient government that enacts reforms and disavows all corruption. The message contained the assurance that “the Lebanese state is currently working on putting up a comprehensive financial and economic plan, within a national rescue program,” and the promise that “the plan is about to be completed” as President Michel Aoun told ambassadors, EU, UN, and World Bank representatives in a April 6 speech.

An alternative utopian approach might reason differently, however. It might admit for example that unadulterated carnage of the Lebanese economy is just as strong as it was before the coronavirus struck—but continue to say that under the conditions of the coronavirus crisis, financial drainage, ballooning debt, currency blowout, poverty explosion, social emergency, and vanishing jobs are no longer just cluttering the Lebanese horizon but that these ominous signs now are looming over multiple countries.

Coronavirus

A utopian approach might further reason that the current outlook of a deep global recession represents an opportunity. With the entire world facing the possibility that new economic paradigms—a need that had also been debated toward the end of the 2007-09 Great Recession but that did not materialize then—a utopian Lebanese might argue that the financial and economic apocalypse is finally taking shape, but that in Lebanon it is the apocalypse of flawed finance and dysfunctional economy and does not mean the end of the world.

Utopians are raising their voices and concerns internationally, advocating for debt forgiveness or introduction of universal basic income solutions, stakeholder capitalism and new social contracts, replacement of outdated models for externalizing climate and environmental costs, for trying out Modern Monetary Theory, for better financial constitutions in the public economy, for central banks

that become pawnbrokers of last resort, or for ending the antagonism between markets and public administrations, societies and states.

A Lebanese utopian might see an opportunity for contrarian thinking to be effective in the country's redesign of the national economic strategy, perhaps by way of a new form for sustainable monetization of state-owned lands while retaining public ownership, or by encouragement of a creative revolution in design and tech entrepreneurship and a giant national leap into digitalization in pursuit of a moral economy, or by activation of a diaspora network for long-distance job creation, or by institution of a policy that would encourage restructured banks to deploy their knowledge into healthy banking sector growth, or, or, or. A determined utopian might even rejoice that the global powers that are, have been put under downsizing pressure by the coronavirus pandemic and its collateral recession so that they have less ability to deploy financial superiority for their own power gains, being false friends for countries that should realize that they have more than enough talent and more than enough own concentrated wealth to stand on their own feet.

ONE THING TO REMEMBER

The Lebanon apocalypse is unfolding but it will not be the end of the Lebanese and not the end of Lebanon. The economic apocalypse of 2020 is a chance and a double opportunity to learn from the country's systemic failures and step up to global challenges.

Henrik Mueller, professional observer of international business realities and professor of economic journalism in Germany, argues this month that the coronavirus revision of everything has just successfully refuted the old accusation that capitalism subordinates everything to the almighty profit motive. Some budding economists, meanwhile, blurted out in an Austrian School economics forum in the United States their ideology that, fundamentally, freedom is more important than security, or an illusion of security.

A Lebanese observer of such discourses might ask in response, "What is most valuable and important in and after the coronavirus crisis for a society that has neither security nor could benefit from past *laissez faire* capitalist freedom in a rentier state?" The answer, one hopes, is human solidarity and productive collaboration between utopians and realists.



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THE TWO-IN-ONE CATASTROPHE



Lebanon's economy and industry suffer under coronavirus impact

When seeking to fathom how Lebanon's pre-existing economic woes correlate to the newly unfolding global coronavirus recession, a first obstacle is posed by the extreme speed with which this recession is unfolding. In February, and even earlier in March, international agencies, leading economic powers, financial institutions, and noted economists assumed that the virus's impact might be sharp or moderate but limited to the short term.

By the end of the second week in March, however, the tone of assessments had changed dramatically. Expectations of recessions in leading economies such as the United States now see a recovery starting in the fourth quarter of the year—in optimistic scenarios marked by a seasonal pattern with the first wave of coronavirus infections peaking this spring. Less hopeful scenarios see no resumption of GDP growth in corona-stricken G7 economies before the first quarter of next year, and some

noted economists anticipate far worse, a deep recession of unpredictable length.

In a summary view, roughly three quarters of 41 Europe and US-based economists polled by Reuters in the third week of March said 2020 would see a global recession, and their sentiments reportedly grew still gloomier as the week progressed. Where does this leave Lebanon, struggling already with an historic economic crisis of existential proportion?

Frontline sectors of the Lebanese economy with reliance on uninterrupted daily business—from the marginally self-employed and informal workers to general retail, luxury retail, hospitality ventures, and hotels—are unquestionably the immediate victims of the standstill of economic activity forced upon them by the necessary containment efforts to counter the threat of the COVID-19 epidemic in Lebanon.

Beyond this portion of the economy that is exposed to short-term impacts, however, the situation has turned so dire for the entire economy, and the

Lebanese people as its stakeholders, that attempts to verbalize the disaster's scope can only choose between metaphors in the superlative range. Is it more appropriate to compare the state of economy to being faced with a volcano eruption on top of an earthquake, or is it more fitting to liken it to a tsunami that follows just after the devastation of a monster hurricane?

MONSTER CLOUDS OVER THE COUNTRY

Lebanese economists whom EXECUTIVE reached by phone confirmed the impression, albeit in less dramatic words, that the country is undergoing a two-in-one crisis. While the implications are especially severe in terms of further increases of poverty and social destitution of the population, it also impairs the motors of hope that had existed (when taking into account that a resurgence of the hospitality industry and tourism has shifted considerably farther away, and that new complications in the financial markets also appear to push prospects of development there farther into the future).

"The coronavirus effect will be catastrophic on the world economy, and the Lebanese economic situation will be more and more catastrophic, amidst the halt of economic activity," says economist Elie Yachoui, framing the picture in neutral words. But that phrasing makes his subsequent description of the economic outlook no less scary. "We can say that the middle class in Lebanon will be totally extinct. They will be the new poor," he says.

In Yachoui's perspective, the economic downturn will leave even the moderately well-off, those who have some savings in their accounts, in no advantaged state as they are not able to fully access those savings due to problems with banking and inability to obtain hard currency. He tells EXECUTIVE that only the top 10 percent of the population may find themselves to be better off, those who have deposits in accounts outside of Lebanon.

A similar assessment is voiced by economist Roy Badaro, who notes that a recent World Bank warning about the poverty level in Lebanon increasing from 30 to 50 percent of the population under the country's prior economic crisis may no longer be adequate for describing the scope of the malaise. "I expect an 80 percent poverty level," he says. "Only 5 percent of families will be able to keep the same level of consumption, and another five percent or so will be okay—all the rest will suffer a lot." According to Badaro, the scale of economic suffering will vary but the

relative poor of today will become very poor, and a serious threat of starvation could surface in about three months' time.

Notably, the exacerbating effect of coronavirus health crisis and economic recession is also affecting the country's manufacturing industry, a major driver of the economy. Fady Gemayel, the president of the Association of Lebanese Industrialists (ALI), tells EXECUTIVE: "It is indeed a very dramatic situation. We [industrialists] are all primarily concerned about public health and of the health of workers in industry and the whole [manufacturing] chain."

According to Gemayel, the immediate challenges, in addition to their human impact, have operational and economic dimensions. "We see

■ The situation has turned so dire for the entire economy, and the Lebanese people as its stakeholders, that attempts to verbalize the disaster's scope can only choose between metaphors in the superlative range.

that things are unfolding very dramatically as industry has been requested to limit their operations to basic sectors of food, pharmaceutical, necessary consumer product industries, and what is needed in the production of these products," he explains.

New operational challenges affect manufacturing enterprises that can continue to work, he

adds, because they have to take extra safety measures not only for their personnel but for all stakeholders involved in distribution of their products. "At the same time, there is a challenge as far as going ahead into the future as most [enterprises] are not working," he says. "This poses serious [economic] problems because it [compounds on] the previous problems that we had. As if we needed that."

NUANCED IN THE DETAILS AND UNSEEN OPPORTUNITIES

Despite this overall burden that the recessionary environment of the coronavirus puts on all industrial sectors, the picture turns more nuanced when delving deeper into industrial activity and subsectors of manufacturing. Some subsectors—namely those with a stake in the digital realm and orientation toward exporting their goods and services—are saying they see those silver linings on their horizons, even as they are hit by the coronavirus crisis in conjunction with the preexisting Lebanese economic crisis.

Coronavirus

Multilane, a company with wholly export-centric profile as supplier of infrastructure components for the global data center market, has been affected by the coronavirus on levels of work flow and its international supply chain but has been able to cope with these impacts, CEO Fadi Daou tells EXECUTIVE. “We are doing okay,” he says. “Everybody is, of course, working from home, not just here (at the Lebanese manufacturing site) but also in our global offices in the US etc. The company is still on a steady path.”

A challenge that Daou had to deal with specifically relates to the company’s reliance on an international supply chain. Generally, disruptions of work at factories—first in China’s Hubei province, then in manufacturing plants in South Korea, and finally in countries around the world—and disruptions of international shipping and cross-border transport. These disturbances notably represented an impediment that differentiated the downturn of the real economy triggered by the coronavirus pandemic from the financial upheavals that played the central role in earlier recessions, including the Great Recession of 2007-9.

“We are affected by global supply chain delays,” Daou says. “Much of our supply chain is sourced from southern China and some from Taiwan. That has been impacted.” What mitigated the disruption for Multilane, however, were two elements. The first such factor, according to Daou, was that the area of origin of supply for electronic components is centered in the southeast of China rather than the midwest, where the Hubei province, the most heavily affected by the virus, is located. Besides the better functioning of the supply chain on the Chinese end, the second factor aiding Multilane in its management of component supplies was its habit of maintaining some inventory because of the well-known vagaries of importing materials to Lebanon. “We do have one to two months delay in our supply chain,” he explains. “That could, of course, be increasing—and we would be impacted—but since we operate in Lebanon we typically don’t rely on [just-in-time] supply chain but keep two to three months buffer of material.”

The deepest problems that Daou faced in terms of his international dealings actually occurred at the end of last year and were caused by the Lebanese economic crisis’ sudden restrictions on financial transfers via Lebanese banks. The problem was acute until the company could start to rely on inflows of fresh cash, meaning hard currency

wired to its account after last October. “We did face some serious disadvantages when we were no longer able to pay our suppliers and our employees [in our offices abroad], so we lost quite a bit in the initial shock,” he says. “Banks did not give us three months to adjust and that was costly on our topline and our bottom line, which had a significant negative impact in the November/December

time period of 2019. However, we recovered by January and we were able to shift some business outside the country.”

■ “We can say that the middle class in Lebanon will be totally extinct. They will be the new poor.”

Another sector of industry to expect new opportunities are software companies that are currently anticipating a shift in corporate demand of

local companies in favor of local suppliers, says Joe Hatem, CEO of Lebanese software house Profiles. The company has been in business for some four decades and is specialized in enterprise resource planning (ERP) software. “We are right now under the shock of the corona crisis but once the shock settles, the software industry has golden opportunities,” he says. “One because it is an industry that can export its services or its goods using very little imported material—mainly no imported materials at all.”

Secondly, in the domestic market, an effect of Lebanon’s economic crisis was that companies suddenly—due to the impossibility of making the requisite international transfers—ran into big problems with paying for software licenses from the international suppliers that dominate global markets. In this scenario, local beats global. “We suddenly become a better opportunity, because we are selling locally [and] cashing locally,” Hatem says. “Thus [software purchasers in Lebanon] can do better business with us than with imported software. I foresee that this will be a factor to give us a boost. What remains is for us to be aware of this and make good use of this opportunity. We are working on that.”

Hatem says it is a blessing for his company during the coronavirus-induced economic restrictions that “its work is digital” rather than dependent on physical production of goods and physical deliveries. Similarly to tech company Multilane, Profiles could quickly shift its engineers from coming to the office to working from home. The ability to service at least part of its client base remotely as well as being engaged in exports and receiving some pay-

ments in fresh money enabled Profiles to manage the coronavirus shock relatively well.

However, Hatem voices a grave concern that is of specific importance to his activity and industry. “The internet has become crucial more than ever,” he says. “We can survive as far as dealing with banks even as things are slowing down. But if internet came to be in a situation of slow operation or no operation, everybody will be in trouble.”

This highlights how different industries with different specializations are exposed to singular bottlenecks and technical vulnerabilities, even if they are embedded in the digital economy. It furthermore illustrates how complex modern economic and social equations are, as a human or economic risk in one area of digital-era existence may have a less obvious tradeoff in another area.

According to Daou, online connectivity does not play as crucial a role for Multilane’s operations as it does for the software industry. Instead of focusing on short-term risks of higher internet consumption and resulting stresses on the existing infrastructure (some European countries saw a 10 percent increase in internet usage in just one week in March), he sees an opportunity in the fact that internet usage has been recently spiking. Providers of web conferencing, video streaming, and entertainment will, in the mid to long term, have to invest in their internet and data center infrastructure. “We don’t know how long this will take but we expect a very significant uptick in business activities,” Daou says.

SUPPORT OR SELF-RELIANCE?


One question where the industrialists interviewed by phone for this article were of one and the same mind was the issue of governmental support. Asked if they were looking for any fiscal assistance from the Lebanese state, something that would reflect even a small portion of the large fiscal and monetary relief packages that recently made news from governments in countries all over the world, they just laughed or sighed in exasperation. They all know too well how severe the financial limitations of the Lebanese state are, and how drained the coffers at the treasury and the central bank.

Referring to what the Lebanese government should do, the Association of Industrialists’ president tells EXECUTIVE that the government, at a minimum, needs to defer taxes to help mitigate the economic repercussions of the coronavirus pandemic, calling for a “lifeline for industry and for people.”

Gemayal continues, “I think the government should be very responsible in the sense of addressing the issues of dues to the public sector. What can they do with reference to this issue? [But also] there is a social issue that needs to be addressed, [and] a liquidity issue that needs to be addressed. How can the government [respond to these needs] and where can they bring funds from? I think it is necessary to solicit any specific aid from donor agencies that are not necessarily politically connoted.”

He concedes that it will put Lebanese industry at a competitive disadvantage internationally if they cannot benefit from direct financial support measures from the public coffers, whereas enterprises in other countries receive sizeable fiscal support under very large rescue packages. This is not what is on his mind, however. “We are not here to complain that their situation is relatively better than that of Lebanese industries,” he says. “We are concerned with moving forward and meeting the challenges head on. We need to limit the damage and take advantage of available resources.”

One further point of concurrence among industrialists and economists interviewed in the early stage of the corona crisis in Lebanon was that the beginning of the solution to their dual conundrum and emerging existential recession lies in the realms of politics and changing attitudes. Now, more than ever, a rethink of economic strategy for the Lebanese economy is needed and this enormous task requires universal investments of mental effort by political and economic decision-makers without regard for partisan political concerns, exclusionary views, or special interests on national level or even beyond. The coronavirus crisis is global and thus prone to generate long-term changes that can be opportunities to rectify misaligned political and economic patterns. As Hatem puts it, “We need to reengineer our minds as well [as our strategy for finance and economy], and our relation with nature and with the Earth.”

In this context of the overriding whole, the particular mood in the industrial camps of the Lebanese economy appears to be both defiant and desperate, but with an overall tendency of being determined to sustain industries against all odds in this two-in-one crisis of Lebanon’s mess and the global coronavirus recession. Even as he acknowledges that the pandemic is globally unique and that today’s obstacles to financing of raw materials similarly were never seen in Lebanon even in the days of the civil war, Gemayel says, “We do not want to give up. In Lebanon we have been through challenges in the past and lived up to them.” 

THE FATAL VIRUS HUNT



The need to develop an integrated approach on COVID-19

The real-life specter of SARS-CoV 2 comes across as existentially frightening. With the virus being as familiar as a seasonal respiratory disease and yet totally untamed by possibilities of existing immunity, it reminds many of a scary scenario in popular fiction (remember that Stephen King one about the bad dude living in Texas and the flu survivors in Colorado?). One must admit, SARS-CoV2 sounds high tech and ominous, much more so than any threat in a tale of hidden monsters under your blanket (I am not a toddler, you know), and much more threatening than a flu (yawn, got that last year), a velociraptor (cute), or an alien (unreal).

But after more than four months of living with the virus and reading a new story about it every two minutes, it seems inevitable that one develops a certain familiarity with this new monster in our life—but, dangerously, without actually having real knowledge about it. And acting on half-knowledge, in itself, is a serious threat—because, as the Alexander Pope couplet says about a mythological fount of scientific and artistic inspirations, “a little learn-

ing is a dangerous thing, drink deep, or taste not the Pierian Spring.”

Accurately determining all possible trajectories of the coronavirus threat in different national and cultural environments sounds like an impossible challenge. Its dangers lie in the absence of information on what variables actually play how much of a role in influencing the virus’ spread, what its real lethality is, and how the immunity created by a first-wave exposure might or might not nullify the risk of mortality when being exposed to the virus in a future coronavirus wave.

Correlating a full risk assessment of the virus with a full assessment of the economic risks that could emerge because of measures against the virus, sounds like mission mega-impossible. This modeling of these two unprecedented risk complexes would involve extrapolation of medical factors on yet to be obtained epidemiological knowledge in conjunction with assessments of never before measured social and economic risks pertaining to the death of social lives and slaughter of economic activities in course of implementing lockdowns and isolations of millions.

How to quantify the risks of increased morbidity and mortality associated with a chain of job loss/impoverishment/long-term unemployment – deterioration of general health – depression and a sense of uselessness that can be triggered as downward spiral through an economic hyper-recession not seen in almost a century? How to compute the thoroughly unexplored risks of social repercussions and lasting life impairments from an experiment putting the human “zoon politicon” (in the Aristotelian sense of humanity as a herd animal) indiscriminately into isolation not seen since the bomb runs and sequestering of masses in air raid shelters in London, Moscow, and Berlin during World War II? Modeling all those intertwined risks on a large numerical scale of affected individuals and over an extended period of time, appears to the non-scientist to be impossibility squared, or total delusion.

In the small factual base of knowledge about the pandemic and its direct human impact—not accounting for the indirect and induced impacts

over time—the confirmed infected percentage of populations such as China, France, Italy, and the United States is at time of writing is assumed to be in the two to three per mille range, meaning that 0.2 or 0.3 percent are infected in countries with, by global comparison, high absolute infection counts.

The total number of global COVID-19 deaths is horribly high, yes, but this is because the global population is unimaginably large. We humans are numerous—more numerous than ever before in the existence of planet Earth, whose accretion is estimated to have commenced an also unimaginable 4.6 billion years ago.

Zooming back into the present age of the coronavirus threat, the disease's mortality rate is moreover so different from country to country that some associated factors jump out—such as the variance in average population ages between a country such as Italy and a population-wise younger country such as Lebanon. As Lebanon's acting head of the Insurance Control Commission Nadine Habbal pointed out on the sidelines of an interview with EXECUTIVE (see page 74), when researching the extent of Lebanese insurers' likely exposure to the coronavirus she found to her surprise that the average age in Italy is 47 years, while the average age in Lebanon is merely 31.

Taking this case as example, it is correct that in a Wikipedia list of countries by median age, Lebanon is ranked in position 118 while just north of the Mediterranean, Monaco is noted as the country with the world's highest median age and Italy as the fifth-oldest. As a matter of fact, Lebanon is in spitting distance of the world average as far as median age of its population. Also with regard to the specific higher vulnerability of older men to the pandemic, Lebanese men would by conventional wisdom have better cards than their Italian peers, given that the median age of men in Italy is almost 15 years higher than that of Lebanese men.

However, assuming a direct correlation between median ages as single determinant in a national coronavirus propensity profile would be indefensible—Brazil (ranked 103), Turkey (110), and Iran (123), ranked among the world's 12 worst-infected countries as of April 20, are very similar to Lebanon in terms of median population age. The age factor, when taken alone, thus seems more than questionable for being suited as predictor of anything.

Besides the country's small size, the young age of the population, and the government's immediate decision to close schools, further advantageous fac-

tors cited by Habbal regarding Lebanon's response to the COVID-19 pandemic include the country's heavy reliance on individual modes of transport—“every family has two or three cars; we don't have a metro or tube we can use,” she noted—and the absence of large social gatherings in the revolutionary and restless months before the coronavirus crisis.

From the perspective of fighting the coronavirus, it was almost an advantage to have been in subdued spirits due to our Lebanese economic crisis, meaning, for example, to not have had events in February that would have been comparable in their effect to spectator sports events with ten thousands of visitors at football matches in northern Italy in mid-February or a major religious assembly in France's Alsace region.

But when taking a complex national specificity into account—even if this diagnosis includes factors that at first seem so thoroughly counterintuitive to national wellbeing as Lebanon's historical

■ Correlating a full risk assessment of the virus with a full assessment of the economic risks that could emerge because of measures against the virus, sounds like mission mega-impossible.

overcrowding with private cars or the new extreme detriment of the economic meltdown—and combining this with currently accumulating data on the spread of coronavirus infections and COVID-19 fatalities as percentages of popu-

lations that have been collated in countries with much more thorough testing than Lebanon, it does sound no longer like totally fake news or ignorant deception that official Lebanon reports comparatively benign coronavirus numbers.

WHAT'S IN A NUMBER?

It deserves to be repeated, however, that the data uncertainty on the pandemic is immense. With regard to known data, and without even venturing into questions of the distinction and relationship between crude global death rate (total number of deaths during a given time interval) and the cause-specific death rate (number of deaths assigned to a specific cause during a given time interval) related to the coronavirus, it is undeniable that the infection fatality rate (the proportion of deaths among all the infected individuals) of COVID-19—which appears to be more narrow than the cause-specific death rate but wider when taken as the mortality

Coronavirus

indicator for an epidemic as opposed to the case fatality rate (the proportion of deaths from a certain disease compared to the total number of people diagnosed with the disease for a certain period of time) will support a different sort of bias when the information is processed emotionally, given that infection fatalities are in ranges that will not ever conceivably threaten the survival of the human race.

The confusing ways of defining and accounting for fatalities makes you wonder if any of the data from any of these definitions would have been helpful to Homeric hero Achilles for answering his fateful question over eternal glory after a short life versus a long life of eternal boredom. Moreover, when compared with, let's say, statistics on minority rights or gender equality, death rates appear to be a topic that psychologically and philosophically has not been prominent on the agenda of most people in the postmodern age, including media professionals—with the consequence that imbalances in discussions of the pandemic in media sometimes seem to be magnified either out of ignorance or because of editorial or political biases.

Given that huge differences in confirmed infection rates and death rates have so far been recorded in countries around the world—and that among those very divergent accounts are adjacent territories with similar development levels and cultures such as Belgium and Germany where the population-adjusted COVID-19 fatality rates in mid-April were reported in the former as nine times those of the latter (452 versus 52 per million inhabitants) one can safely assume that people with predilection for rational arguments—meaning excluding those who consider metaphysical explanations as well as those who overenthusiastically jump on passing conspiracy wagons—will for much, if not all of this year, hypothesize, guess, and speculate about contributing and exacerbating factors in the pandemic.

This range of rational assumptions, judging from a scan of statements by governments and reports in media with fact-checking cultures, begins with explanations about statistical methodologies and governmental reporting standards in different countries, as well as testing capacities and health system factors such as available hospital staff and medical equipment. The laundry list of presumed influence factors continues with demographic, environmental, climate, and geographic items, such as age structure and general health of a population, the degree of air pollution, a country's role in in-

ternational transit travel, its seasonal climate pattern, and factors of urbanization such as population density, residential clustering, and dominant modes of urban transportation.

The list balloons further to a line of economic and social factors, the most influential of which is nominal GDP per capita “as proxy for several socioeconomic dimensions” according to Lebanese actuarial consultants i.e. Muhanna & co (see box

page 66 and Q&A page 76). The firm applied its actuarial exactitude this March and April to developing a tool for calculating and visualizing four factors of import in analyzing COVID-19

■ It deserves to be repeated, however, that the data uncertainty on the pandemic is immense.

mortality—infection rates, GDP per capita, number of hospital beds, and average age of population in a country.

But the list of economic and social factors appears to stretch much farther still, from the count of accessible water faucets and people's informedness in underprivileged areas in the developing world to smoking and lifestyle habits everywhere and eventually the atomization of families with segregation of the elderly into group accommodations in economically overdeveloped G7 countries.

All such assumptions and rational theories about factors that influence the pandemic have yet to be tested and verified or falsified but some already appear likely to become widely accepted as people's heuristics for estimating the coronavirus risk for years to come. However, the perhaps only thing that during the disease's first global wave can safely be said about this haystack of rational assumptions is that a multi-faceted look at a country's circumstances is preferable to a single-focus approach, even when based on factors as fundamental as the case-specific death rate or the number of testing kits that are available in a jurisdiction.

We are not living a dystopian horror tale where 99 percent of the world population die of a weaponized flu; we all are now actors in a, no less dystopian, play where the 99 percent do not die of a virus but are threatened by convergence of medical and economic risks and need to find their way to a sustainable future. A multi-factor analysis almost certainly will offer a better chance for untangling the complex yarn ball of economic, social, and medical risks that impend on us in the wake of the 2020 COVID-19 pandemic. ■

BUY TIME TO SAVE LIVES

LAU study on COVID-19 spread estimates extreme social distancing could save 150,000 lives

On March 19, the Office of Graduate Studies and Research at the Lebanese American University (LAU) released the results of a study (see below) on the effects of different levels of social distancing on the number of COVID-19 related deaths by June in Lebanon. One note of caution for these figures is that the lack of data and predictive model used means these results are speculative, based on an analysis of trends. Though the team behind them did consult with LAU's infectious disease unit when modeling the scenarios—and there are plans for collaboration across disciplines and universities in the future on the effects of COVID-19 on Lebanon—at the time of writing data is lacking. There is also a high likelihood that the number of cases in the country are above the official count, according to the researcher behind the study, Samer Saab, interim dean of graduate studies and research at LAU. He told *EXECUTIVE* that the numbers he has produced, if anything, could be considered a conservative estimate, given the trends being witnessed in countries such as Italy (see Q&A below). The primary purpose of the study, he says, was to raise awareness among the public and policy-makers of the effects of social distancing and to underline that this situation would not be over in the short term.

EXECUTIVE spoke over the phone with Samer Saab, interim dean of graduate studies and research and professor of electrical engineering at LAU, to learn more about the findings of the study, its limitations, and its implications.

E Can you please briefly describe the study?

These are projected or forecasted numbers where I am looking at the trends; it is not exact science. I put forward three scenarios: if everyone will go out [the free-for-all scenario], if one in four people go out [the moderate distancing scenario], and finally if only one in eight people go out [the extensive distancing scenario].

The free-for-all scenario is where people decide to live their lives normally. If we had had an infinite

capacity of hospital beds and intensive care units, then we would have a 3 percent death rate [under this scenario] but we don't have that.

I am assuming that when the number of infected people who need treatment in intensive care units (which is typically 10 percent of those infected) goes beyond 250, then the death rate would be 6 percent [due to the lack of treatment for COVID-19 and assuming that some hospital beds will be needed for other urgent cases].

E How did you arrive at 250 persons as the tipping point?

This is an estimate, based on what we hear about many of the hospitals not being prepared. If I change it a bit here and there, it is not going to change the numbers a lot. It's more to give an idea.

The advantage of the free-for-all scenario is that after June/July, you don't have to wait for a treatment to be developed because most people would have been infected and those who survived would likely develop immunity—though at this stage there are still many unknowns, like if the virus will be seasonal. Many governments initially tried to follow this scenario, as it would have the least impact on the economy with people able to work freely. Thinking has changed, however, as seen by recent measures in the UK to shut down schools despite initial resistance. The disadvantage of the free-for-all scenario is simple: Many people will die and health care systems will become overrun.

Whereas in the second and third scenario, if we maintain distancing until June/July, then it is possible that a treatment would have been developed and would be accessible to most people. If they get the virus then, they would be able to take medication and not suffer as much.

So this is the message we are trying to send to people: Please stay home and let us buy time. We are also trying to send a message to the decision-makers so that they don't think that we will be able to open schools and universities and basically go back to normal in the next two weeks.

COVID-19: EXTREME SOCIAL DISTANCING CAN SAVE 150,000 LIVES IN LEBANON

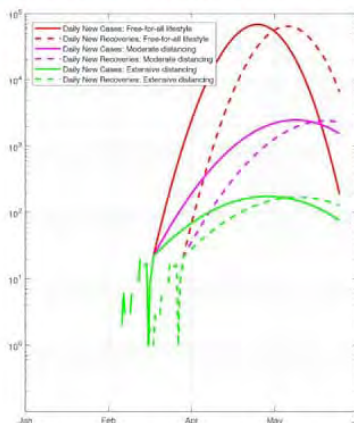
By the end of June

Total number of death of
free-for-all scenario: **153,885**

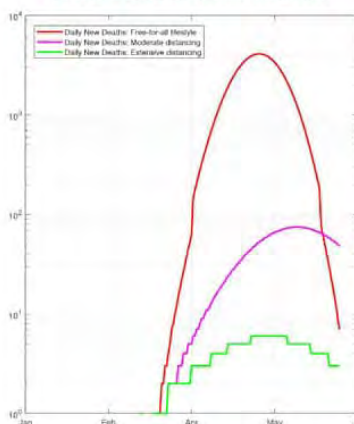
Total number of death of
moderate distancing scenario: **4,259**

Total number of death of
extensive distancing scenario: **454**

COVID-19 in Lebanon: Inflection point after mid-April



COVID-19 in Lebanon: Extreme social distancing can save 150,000 lives in Lebanon



LAU CORONAVIRUS & SOCIAL DISTANCING STUDY

FREE-FOR-ALL: No social distancing measures are followed, and normal life is assumed;

MODERATE DISTANCING: 1 out of every 4 people moves freely or resumes normal life;

EXTENSIVE DISTANCING: 1 out of every 8 people moves freely or resumes normal life. Forecast of the daily number of deaths (Graph 2).

The forecast is based on time-series analysis and uses the data before March 19 to predict the number of recoveries. The employed model assumes an initial death rate of 3% of the total identified cases, which increases to 6% once the total number of critical cases requiring intensive care exceeds 250 patients. The latter reflects the limitations of the healthcare system. The forecasted results do not consider confounding factors (such as lifestyle, environmental factors, consanguinity, etc.); however, the model is applied to Wuhan reported data and is shown to closely capture its trends.

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Source: LAU's Facebook page.

Coronavirus

E *What's the methodology used for this study? What model are you basing it on?*

I used time-series statistical analysis [to mark data trends over time]. However, it is not straightforward like a typical time-series: Whenever more people get infected, the rate of spreading becomes lower and lower. In urban areas—which is the case for Lebanon as most of us live in urban areas—each person can infect three people, while in the rural areas the rate is less (1.5 persons). But at the end, it doesn't matter much because it only affects how fast we will reach the peak and not the figures themselves.

But, there are a lot of factors I didn't take into consideration. A lot of people will still go to work or go out if their family is relying on them to not go hungry, right?

E *How feasible do you think it is, both psychologically and economically, to practice extreme social distancing until June?*

Excellent point. I cannot answer this question but I feel there are positive vibes and people are helping each other; they will not let people starve. But there will be bilateral damages, such as to the economy.

Still, 153,885 deaths in the free-for-all scenario versus 454 in the extensive distancing one is no joking matter. If our hospitals are overwhelmed, then our doctors will have to play God and decide who dies or not, which is catastrophic.

E *Were you able to account for the issue of under testing and potential under reporting in Lebanon in the study?*

Because we are publishing under the name of the Lebanese American University of Beirut, we had to rely on the official data reported by the government.


However, what would change—if we assume that there are more cases than what is reported—is the date of the peak. We would reach the peak faster if we had more cases than what is reported.

E *What are the limitations of the study?*

As I said before, there are many assumptions I had to take. The methodology I used does not take into account environmental or lifestyle factors,

which could mean that more people don't comply with distancing. The psychology factor is also important here: Will people stay home until June? They will probably cheat. People think the second case scenario is reasonable or doable (in terms of quarantine measures)

but 4,259 people would still die in it and that is a big number.

We don't know much about the virus and there are many unknown factors related to it so we need to stay at home and be patient. This outbreak is not going to end soon and the worst is yet to come. We need to buy time to learn more about the virus so less people will die. 

■ “This is the message we are trying to send to people: Please stay home and let us buy time.”

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BEING INDUSTRIOUS IN IMPOSSIBLE TIMES



Q&A with Fady Gemayel on the impact of the coronavirus crisis on Lebanon's industry

To gauge the extent to which Lebanese manufacturing industry, an often overlooked but crucial driver of the economy, is being impacted by the current global coronavirus pandemic in conjunction with the previous difficulties in Lebanon, EXECUTIVE conducted a phone interview with Fady Gemayel, president of the Association of Lebanese Industrialists.

E *How is Lebanese industry coping with the restrictions on economic activity that have been placed on the country? How serious is the situation for you and what measures were taken by the sector?*

It is indeed a very dramatic situation as [the response to the coronavirus] is affecting all the sectors of the economy. We are all primarily concerned about public health of everybody and of the health of workers in industry and the whole chain. We see that developments are unfolding very dramatically as industry has been requested to limit their operations to those basic sectors of food, pharmaceutical, and necessary consumer products, and what is needed in the production of these products. It is a big challenge even for those firms which can continue to work, because they have to take extra

safety measures, be it for their personnel, [or] be it for all stakeholders involved in the distribution.

E *Does the threat of the COVID-19 pandemic and the measures seeking to contain and limit its spread pose a threat to the survival of industrial enterprises?*

There is a challenge going ahead as most [enterprises] are not working and this poses serious problems because it [compounds on] the previous problems that we had. As if we needed that. We are already in a big problem and face many challenges. The way ahead is challenging and we don't know how long [this crisis] will take. Do we have a social responsibility to our workers, and how can we continue? It is okay if it is for a few days but how will it evolve if it continues? What will happen in general, not only in industry? How will daily workers or those who [rely on daily incomes] be affected? They have no revenue. How will they be able to sustain [their existence and their families]? Furthermore, the disturbance caused by the banking sector adds to the challenges.

E *Are you requesting fiscal support for industry from the government or asking it to instigate relief measures such as credit support or easing of monetary conditions?*

Deferring taxes I think is the minimum that is needed. For sure, the government should be very responsible in the sense of addressing the issues of

■ **"Deferring taxes I think is the minimum that is needed."**

dues to the public sector. [But also] there is a social issue that needs to be addressed, a liquidity issue that needs to be addressed. How can

the government listen [to these needs] and where can they bring funds from? I think it is necessary to solicit any specific aid from donor agencies that are not necessarily politically connoted. Something should be done. There should be a lifeline for industry and for people.

E *Besides the problems related to staying afloat financially, not being able to keep production running, and seeing demand weaken, companies in many countries face serious disruptions of their supply chains, especially when they are long and cross borders. Do manufacturers in Lebanon face significant problems with their supply chains?*

We were already faced with the issue for the sake of getting the proper financing for getting raw materials. Now comes, in addition, the issue of corona. But I must say that we have been in close contact on this issue with the government and the central bank; [we were engaging with them] about the highly needed raw materials for those [manufacturers] that are producing corona-related materials. There will be some urgent measures that will allow the imports of needed raw materials.

E *How about the supply chain scenario of your own company, to look at an example?*

It is in corrugated materials. We supply packaging for companies in food and pharmaceutical, for detergents and such. So far we are able to cater to their needs, mind you that there are also paper companies in Lebanon. The issue [of our supply chains] is not related to corona but to the possibility of transferring funds for purchase of raw materials. This was preceding the corona issue and we are trying to find solutions.

All industrialists have to face up to costs as they have fixed costs that they have to pay whether they are producing or not. This is a serious issue. In fact, the corona crisis is now for us two crises. It is a raw material crisis that is aggravated by the corona [crisis]. It is two-in-one. This is where we are now.

E *News of large and previously almost unheard of governmental and central banking support packages are coming from numerous countries around the world. Are you concerned that the companies benefitting from such lavish support will have an added competitive advantage in global markets when compared with Lebanese manufacturers?*

We are not here to complain that their situation is relatively better than ours. We are concerned with moving forward and meeting the challenges head on. This is why we are saying that we have to find the ways in which we can have damage control. We need to limit the damage and take advantage of available resources. Industry is one of the drivers of the economy. You can imagine [for example] that we are short of many medical supplies that could

have been made in Lebanon and that other countries now would not want to export as they reserve them for themselves as a priority. I hope this is a lesson for everybody for the future.


Now is not the time to complain, though. What we are concerned with is having an emergency mechanism for facing up to the situation and doing all what it takes. For this, the government should revert to the international friends of Lebanon. The International Monetary Fund is a political issue, so let's avoid that at this point in time. There are other agencies that are keen and that have been willing to help Lebanon. Already

three months ago we, as Association of Lebanese Industrialists, approached such institutions. As the banking system was not performing, we were telling them that we needed a lifeline solution. This is what I am talking about.

E *Do you think that France, for example, is in a position to help Lebanon at this time and specifically Lebanese industry?*

I don't want to narrow the scope to any particular country. France, Europe [collectively], and other countries have always been close to the Lebanese people and would not shy away from their responsibilities in this most difficult moment. Don't forget that we have three problems in one: We have the issue of the Lebanese, the issue of the refugees, and the issue of the Palestinians. We are assuming [responsibility] for all of them and should not be left alone.

E *As the industrialists' association, do you have a vision and determination on how to grapple with all these compounded crises?*

I want to assure you that we believe that Lebanese industry is called to play a better role in the economy in the future. We do not want to give up. In Lebanon we have been through challenges in the past and lived up to them. Although this one is unusual—the corona is worldwide unusual—and also the [previous crisis] of the need [to find finance] for getting raw materials was also unseen in the past in Lebanon. During the most vicious days of the war and those times, we never did have to think about inability to get raw materials, as it is now. It is a unique challenge. 

Coronavirus

By Nadia Hardman and Aya Majzoub

FEARS HAMPER SELF-REPORTING FOR CORONAVIRUS



Lebanon's refugee restrictions could harm everyone's health

Government responses to the spread of the COVID-19 virus have exposed the extra barriers to healthcare for refugees and migrants worldwide. But discriminating against already marginalized noncitizens not only erodes their capacity to avoid or survive infection, but inevitably has a negative impact on the wider society's health.

This is undeniably the case in Lebanon, home to nearly 1.5 million refugees—almost a quarter of its population. Both Palestinian and Syrian refugees have suffered from long-standing discrimination and marginalization as a result of Lebanese policies that deny them access to basic rights, including housing, work, education, and healthcare. The COVID-19 outbreak in Lebanon has only heightened the marginalization of both groups. Many municipalities have introduced unjustifiable, discriminatory movement restrictions and curfews on Syrian refugees that do not apply to Lebanese residents as part of their effort to combat COVID-19. And leading Lebanese politicians have fueled anti-refugee sentiment by implying that Syr-

ian and Palestinian refugees will be responsible for spreading the virus.

Yet, the Lebanese government's national response plan for COVID-19 depends on self-reporting. People are advised to call a national health ministry hotline for advice about testing and treatment. The United Nations Refugee Agency (UNHCR), which is responsible for Syrian refugees, and the United Nations Relief and Works Agency (UNRWA), which is responsible for Palestinian refugees, have both said that they will only cover the cost of testing and treatment of refugees if the refugee has first contacted the hotline and followed its instructions.

While it is widely acknowledged that testing and contact tracing are key to tackling this virus, Lebanon's response plan rests on an assumption that an individual experiencing coronavirus-like symptoms will feel comfortable enough to call a government-run service, travel to get tested and treated, and potentially share information about where they live, whom they live with, where they



■ Lebanon's response plan rests on an assumption that an individual experiencing coronavirus-like symptoms will feel comfortable enough to call a government-run service, travel to get tested and treated, and potentially share information about where they live, whom they live with, where they have traveled, and where they work.

have traveled, and where they work. However, Syrian refugees have told Human Rights Watch (HRW) and aid agencies of their fear of further discrimination and stigmatization if they contract COVID-19. Some Syrian refugees have even expressed fears of deportation if they exhibit COVID-19 symptoms. They cite these fears as a deterrent from seeking medical care, even if they experience symptoms.

Our interviews with Syrian refugees lay bare the government's failure to provide them with up-to-date and accurate information about the virus and the healthcare services available to them—a human rights obligation of the Lebanese government. More than a month into the COVID-19 outbreak in Lebanon, the majority of Syrian refugees that HRW interviewed said that they did not know what they should do in case they experienced symptoms, nor did they know of the existence of the health ministry hotline. Humanitarian organizations have cited similar findings.

At a time when that trust is most needed, the Lebanese authorities are conducting business as usual and adopting policies that fail to alleviate the refugee populations' mistrust of the authorities. This lack of trust could easily undermine efforts to prevent control and spread of the disease. Lebanese policies should guarantee access to healthcare for refugees, including testing and treatment for COVID-19. The government should simultaneously push an information campaign to provide refugees with all the facts that they need to protect themselves against infection and to seek healthcare

in a timely manner. The authorities should also proactively reassure refugees that they will not face retribution or stigmatization if they seek testing or treatment for COVID-19.

The international community must also step up. Lebanon has the highest number of refugees per capita in the world. While not an acceptable excuse for the discriminatory and abusive measures that marginalize refugees or endanger their health, the burden is something the international community should help carry.

UNRWA has suffered several funding cuts, including when its erstwhile biggest donor, the United States, cut its funding entirely, and is now running a deficit of over \$120 million. In 2019, only 55 percent of the Lebanon Crisis Response Plan for refugees was funded. Other states may have been able to stem the flow of refugees across some borders, sometimes in unconscionable ways, but it cannot do the same with this virus.

Lebanon and the international donor community should do better in assisting refugees to build their resilience by ending discriminatory practices and by ensuring that they are able to get healthcare and adequate housing. It should not take a global pandemic to force this position, but as the first case of COVID-19 was recorded in a refugee camp in the Bekaa on April 21, the authorities may soon realize that they have no other choice. ■

Nadia Hardman is a refugee rights researcher at Human Rights Watch and Aya Majzoub is the Lebanon researcher, both based in Beirut.

SOME LEFT BEHIND



Lebanese turn to distance learning amid coronavirus disruptions

We are in the midst of a global pandemic. The novel coronavirus that has swept across the globe is having far reaching ramifications for our health systems and for the global economy.

For Lebanese students, though among the demographic least likely to suffer severe health consequences from contracting COVID-19, the impact has been immediate and detrimental to a school year already besought with difficulties. Some institutions in Lebanon had sent students home before the Ministry of Education and Higher Education made the decision to close schools and universities on February 28 until March 9, a decision that has since been expanded into a country-wide lockdown until March 29 (NB: Since extended). Lebanese students who were already in catch-up mode from the school disruptions at the height of the protests last year are now facing further disruptions, cancelled exams, and increasingly uncertain futures.

This crisis requires drastic measures. In order to slow the spread of the virus and flatten the curve

(keeping cases at a manageable level so not to overwhelm healthcare systems) the Lebanese government has asked Lebanese to stay at home where possible. But these measures, while necessary, are also creating a crisis for our education system. Questions administrators, teachers, students, and parents are now facing are those over the fate of this academic year, of standardized tests, and of the viability of our current education system in the long run should pandemics such as COVID-19 become more frequent occurrences.

Comparatively speaking, Lebanese schools and universities have reacted quickly to this crisis and the need to ensure that students continue to learn and progress from home. The answer, at least as a short term measure to ensure continuity and stability in Lebanese education for all learners amid limited resources, was distance learning. Across Lebanon, stakeholders and school and university directors have instructed their teaching staff (supervisors, coordinators, and instructors) to swiftly activate an online

learning system to connect institutions to parents and students through educational platforms.

Several platforms have been adopted to ensure pedagogical follow up with students and minimize the disruption to their learning. Among them are: Google Classroom, a free web service that allows teachers and students to easily share teaching materials and teachers to continue grading students work; Zoom, a remote conferencing service that is being adapted by teachers to act as virtual classrooms; PRONOTE, an online system that links the school to the parents through a platform called KNED, which is being used by schools under the Institut Français du Liban umbrella; and ELearning, an app that allows for active learning through voiceover recordings or through use of Microsoft Teams and BBB (BigBlueButton), a communication and collaboration platform and an open source web conferencing system respectively.

Moving classes to an online, distance learning model was an immediate remedial solution to potentially long lasting problem, but it was not a universal solution. While many schools and universities have the capacity to teach students through remote learning, others do not, particularly less advantaged schools that are in remote areas with limited internet access or those experiencing severe financial restraints. Some schools simply do not have the technological capacity to adopt this model, others suffer from a shortage of resources (financial and staff) that compromises technological ones. Others still are currently working on building platforms that will be able to handle all lessons until the crisis is contained.

Another barrier to offering courses online is the scarcity of instructors who are trained in distance teaching and learning. Educational institutions did not foresee this crisis and so did not provide the adequate professional development to their instructors. This might come as a wake-up call to those who still believe that traditional methods of teaching are the one and only way to transmit knowledge.

Even when students have the means to connect online, sometimes you can have thousands of students trying to connect to a school or university's system at the same time, crashing the server and preventing access to lessons. Other students may find connecting to the internet difficult or impossible, especially if they live in a region that is facing several crises at the economic and health levels.

Increasing the bandwidth is paramount, but difficult in a country like Lebanon where connection speeds are notoriously slow.

The Lebanese government did announce that it was planning to double the speed of the internet as well as the capacity of consumption for internet service subscribers with the official Ogero network until April to encourage people to work from home. This is a good first step, but many Lebanese are not subscribed to Ogero.

■ Lebanese students who were already in catch-up mode from the school disruptions at the height of the protests last year are now facing further disruptions, cancelled exams, and increasingly uncertain futures.

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Coronavirus

Given the economic and financial crises that the Lebanese were facing prior to the coronavirus outbreak, is it even feasible to expect the government, bogged down as it is in its competing priorities, to open lines of access for students to compensate their inability to attend schools and universities. Is it capable of allocating budgets for training and equipment to less advantaged schools and universities who cannot cope with moving to an online model?

Holy Spirit University of Kaslik (USEK) launched a campaign on March 18 calling for all students to have access to free 4G internet to help with online learning amid this nation lockdown. On its Facebook page it posted: "Facing the huge difficulties of online teaching due to slow and interrupted Internet connection, free unlimited mobile data bundles for online teaching and e-learning tools are highly needed for all Lebanese students in these times of crisis." The university is encouraging other educational institutions to back this campaign and has launched the #4G4education hashtag.

At the home level, not all parents have the capacity to encourage online learning for their children. Perhaps they do not have the means or the knowledge to help them to connect online. In these circumstances, relying on tutoring or on the help of relatives and neighbors who are more tech savvy is key, though increasingly difficult given measures to keep Lebanese at home where possible.

CAN TECHNOLOGY SAVE WHAT'S LEFT OF THE ACADEMIC YEAR?

Distance learning is the best system we can adopt given the circumstances we currently face. It is possible, if adopted to the best of our abilities, that this model could help rescue what is left of the current school year. If, and assuming they will, schools and universities reopen and immediately put in place a summative assessment that would give them a reliable idea of what their students have grasped through distance learning. In the meantime, online instruction needs specific monitoring to insure its efficiency and equity toward all learners. Control should be implemented first on the level of the school/university administration, then at the level of supervisors, coordinators and finally instructors. Some schools in Lebanon have set a specific tracking time for online activities to monitor the interaction of teachers and learners. For example, the Elearning app used at USEK is tracking who is connected and who is not.

Teachers and lecturers should also be aware of compensation inflation and avoid overloading stu-

dents with work as a reaction to the new distance learning method. We are not in a race here. We are in survival mode, where quality matters more than quantity to insure a good grasp of the subjects on the learners' part and also to avoid exhaustion on the instructors' part, who are familiarizing themselves with the world of distance learning. It is true that almost anything can be taught online, but teachers must ensure that concepts have been properly explained and mastered before inundating students with exercises and activities.


Emergency situations require emergency measures, such as alleviating the curriculum of supplemental information without jeopardizing the quality of instruction. What is crucial now, is to make sure to vary

activities to keep distance learners motivated. Similarly, when schools reopen, we must implement a solid revision of concepts covered online to ensure proper knowledge acquisition.

This crisis has placed educators in charge of

curriculum design and strategic planning, forcing us to rethink our teaching strategies and encouraging us to be selective by providing our learners with the type of information that is absolutely critical to have. In the long term, we should be asking ourselves why this is not common practice all year round, crisis or not, to lift up the load of unnecessary information off the shoulders of our young students.

If we look at the spread of coronavirus from a purely health perspective, it is true that the elderly and those with underlying conditions are the most at risk. But there are impacts beyond health, and unless we preserve a sound education system it will be detrimental to the well-being of all our children. We have to protect the right and access to education for our future generations. This should be the main concern of educators.

The key issue here is to know how to adapt to the crisis, to a new mode of teaching and learning. This crisis could be an opportunity to help us achieve a 21st century profile for our learners (a well rounded, critical thinker, problem solver, and creative). The ultimate goal is to reset our educational priorities by offering our learners only what is pedagogically sound to help them face 21st century challenges with the power that comes from knowledge. 

Eva Hashem is the head of educational sciences at Holy Spirit University of Kaslik (USEK)