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Himalayan Capital
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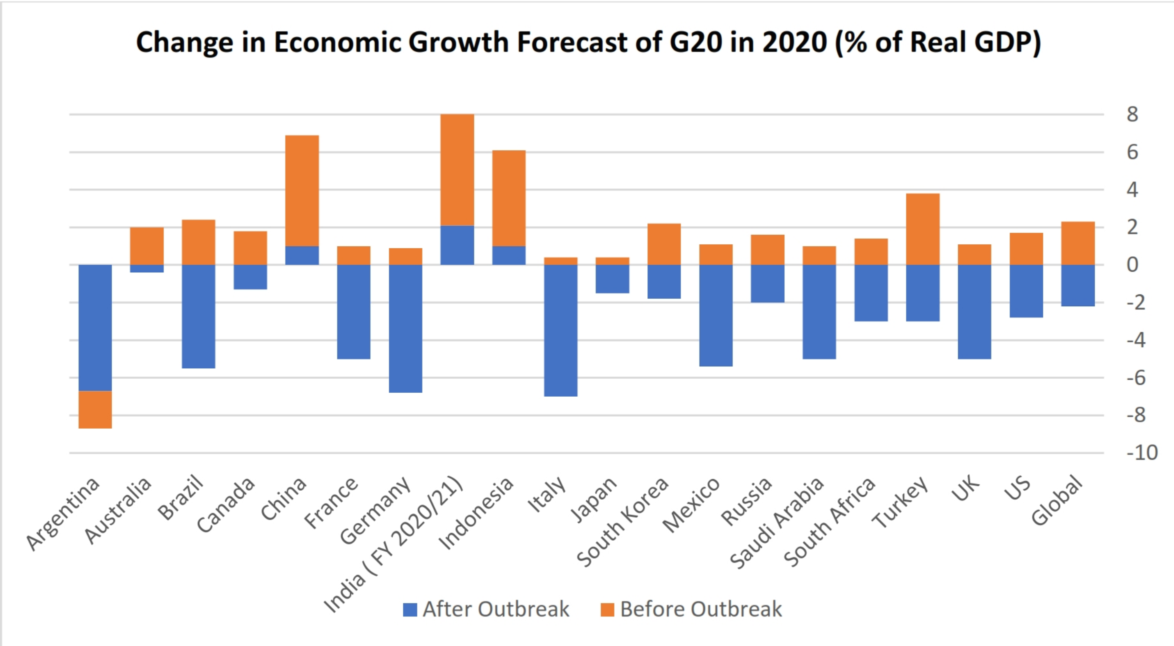
COVID-19 Impact Assessment (Tourism and Remittance)

-April 10, 2020

It started like any other new disease, in a certain part of the world, too fond on bushmeat and the consumption of exotic animals, COVID-19, a mild to severe respiratory disease can trace its roots back to the Seafood Market in Wuhan and is suspected to originate in bats and like other viruses that made the interspecies jump has been difficult to control. And now 1,520,000+ Infections and 92,000+ deaths later as of today, the virus has evolved into a full-blown pandemic and presents great challenges to the global and Nepalese economy.

The virus has been so potent because infected individuals may not show any immediate symptoms for up to 14 days but will continue spreading it. It is also highly reproductive and can transfer rapidly between people besides super spreading where someone can even spread it to hundreds of people, and it has low lethality meaning preventive measures came out too late.

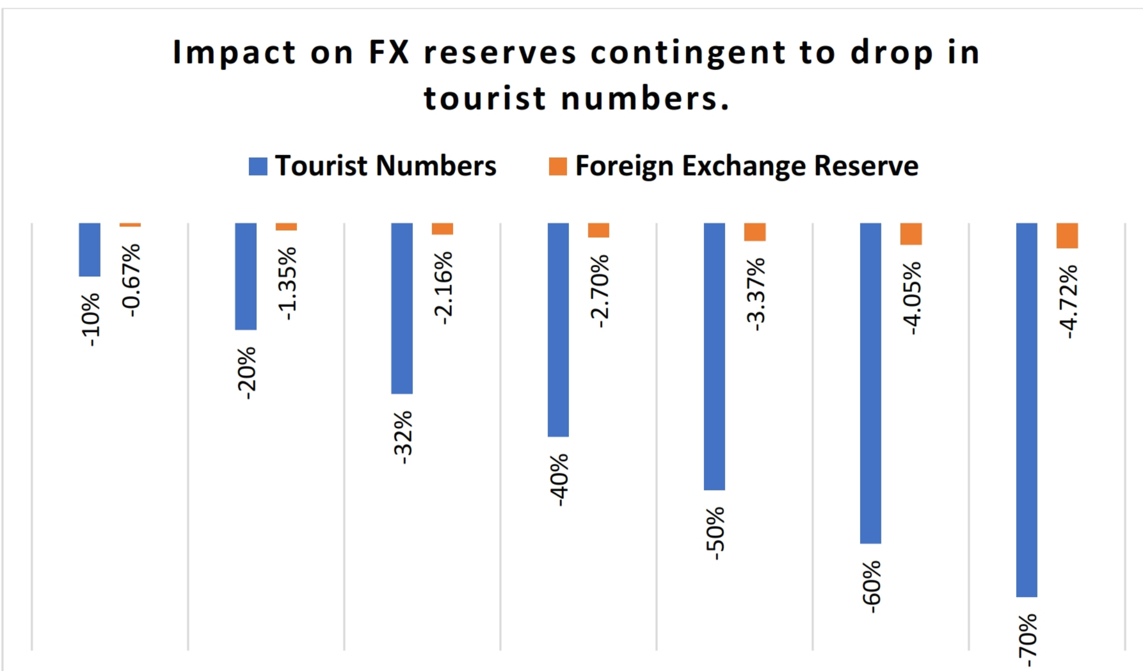
It has had such a great impact on the countries it ravages that countries that experience severe outbreaks go into self-imposed lockdown and quarantines. Combined with the fact that there is no known vaccine or medicine for this rapidly spreading pathogen, makes it a challenge to the global economy and its likely impact is already expected by some to be greater than those of the great depression and the global markets crash of 2008. According to revised growth forecasts by the Economist, across the G20, all but three countries are expected to register a recession this year. The global economy is also expected to contract by 2.2% compared to the previous forecast of 2.3% growth.



However, since Nepal's economy is relatively isolated owing to isolationist policies and lack of proper economic development, at first glance it seems as though this virus and its ramifications may pass us by. However, as a nation which has annual foreign remittance equal to 27% of the national GDP, any shocks to the external economies through which the remittance is being received will surely have a marked ripple effect on the nation's economy. Similarly, tourism numbers which are expected to be the major drivers of economic growth for the nation and contributed 7.9% of the nation's GDP have a decidedly downward outlook on the back of travel restrictions and dwindling tourist numbers which have already led to the cancellation of Nepal Tourism Year 2020.

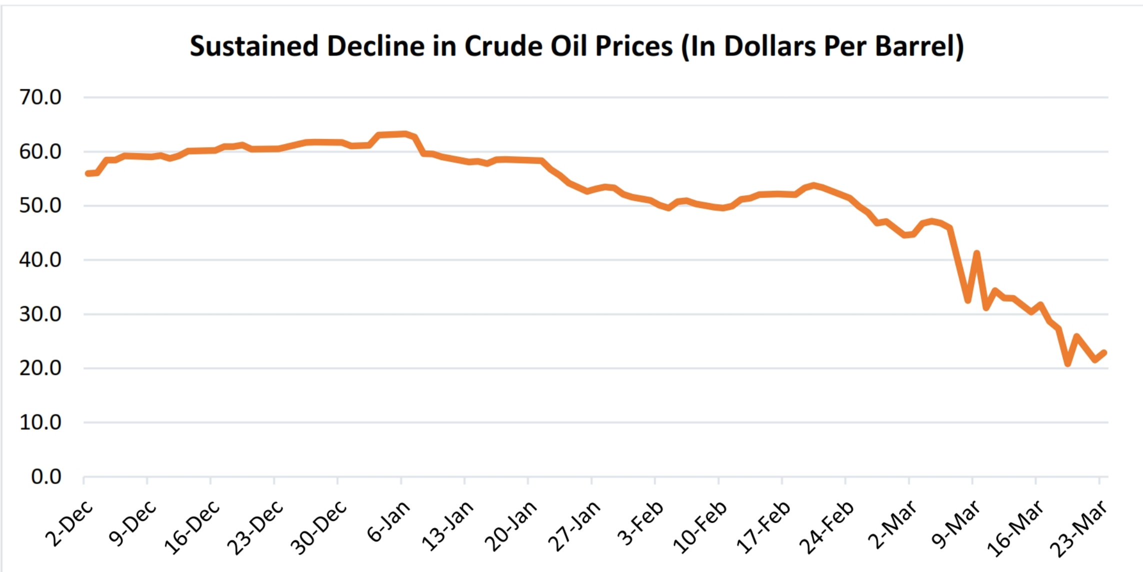
Thus, with such significant contributors to the national economy being open to external shocks, proper economic planning shall be required to offset the arising impact.

Any sudden shift in tourist numbers to the downside will surely have an effect on both the GDP of the country and our Foreign Exchange Reserves which are sure to drop on the back of Low Tourist Numbers and declining foreign currency inflows. Looking at the average spend of a tourist in Nepal for the last 8 years and a drop in tourist numbers up to and beyond those observed following the Gorkha Earthquakes (32%), the estimated Impact on Foreign Exchange Reserves contingent will be as follows:

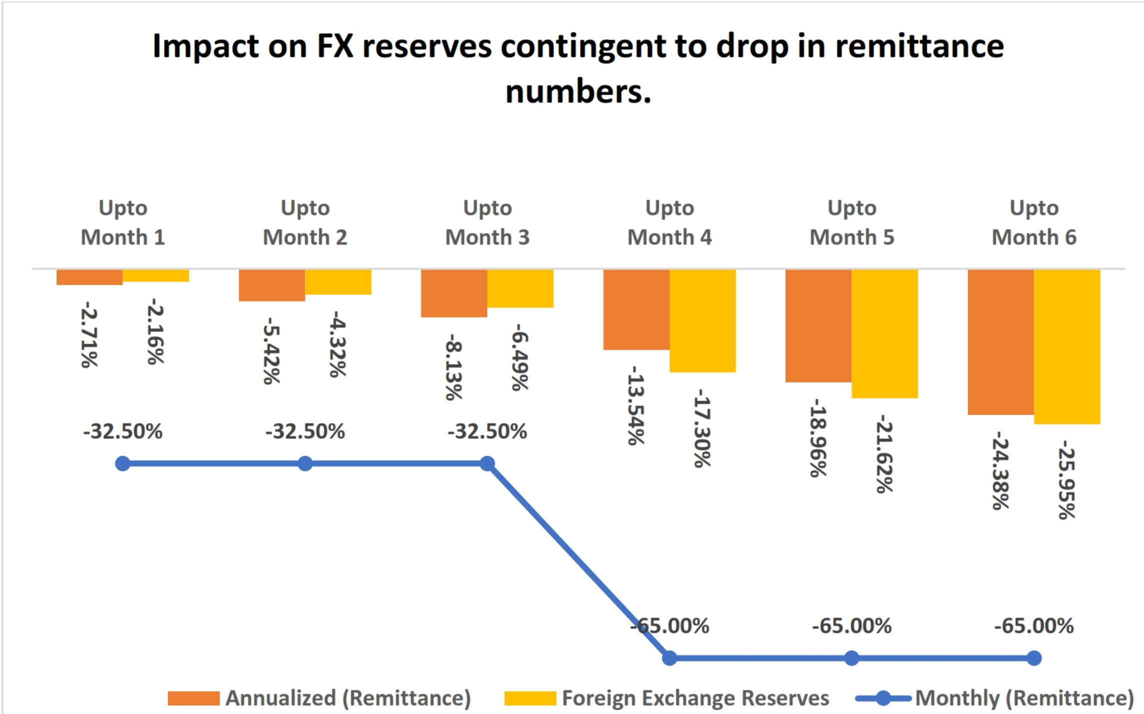


Note: Projections are based on single factor analysis.

With all the major economies of the world under lockdown, economic activities have come to a standstill and millions of workers all around the world are losing their jobs. Latest data shows that almost 3.3 Million Americans have already applied for Jobless claims to the government owing to the current situation. Thus, considering the current global outlook, major threat to Nepalese economic stability may stem from a decline in remittance numbers which have already shown signs of overheating. Even greater impact can be assumed from the middle east which is experiencing the effect of a double-edged sword at the moment. Besides the negative ramifications of an economic slowdown induced by a lockdown owing to the rapid spread of the virus, countries in the middle east are also exposed to the effects of a 64% drop in Oil prices buoyed by the effects of the virus and a price war between Russia and Saudi Arabia which will surely wreak havoc on their Oil Based Economies. This is sure to translate to rightsizing and wage cuts in companies hiring Nepali Workers there.



Remittance numbers coming in from the middle east (Oil Based Economies) make up around 50% of the total remittance flowing into the country as of August 2019 (NRB) while the rest of the world makes up the remaining 50%. As, annual remittance numbers equal 26.24% of the National GDP, remittance from the middle east alone is equal to around 13.12% of the National GDP with a similar contribution from Non-Oil Based Economies. In the most likely scenario if the situation persists, the middle eastern nations will generally take rightsizing measures which will have a profound impact on Nepal' Economy especially the GDP and Gross Foreign Exchange Reserves if the situation persists up to 6 months. Similarly, even remittance flow from other economies are also expected to decline but the impact is expected to be around on third of that in the Middle East as the economies are based on several types of industries rather than just crude oil. Additionally, considering that remittance adds to the broad money supply of the country, and using money multiplier of 5 (Average of last 2 years) while accounting for BOP Deficit, the changes that maybe observed are given below:



Note: Projections are based on single factor analysis.

Assumptions:

- Nepali workers earnings may reduce by up to 50% in the middle east initially as businesses shutdown temporarily due to low oil demand and effects of COVID-19. Similarly, the decrease in remittance from non-oil-based economies is expected at 30% of that in middle east. Hence, monthly remittance numbers are reduced by 32.5% for projections up to 3 months
- If there is no resolution in 3 months, it may lead to a series of layoff or further reduction in earnings which will prevent any inflow of remittance.

Under such a reduction of remittance numbers, deposit creation in commercial banks will tend to suffer as well. We have used regression analysis to map the effect of Remittance on Deposit Creation in Banks wherein deposits in commercial banks has been expressed as a function of total remittance.

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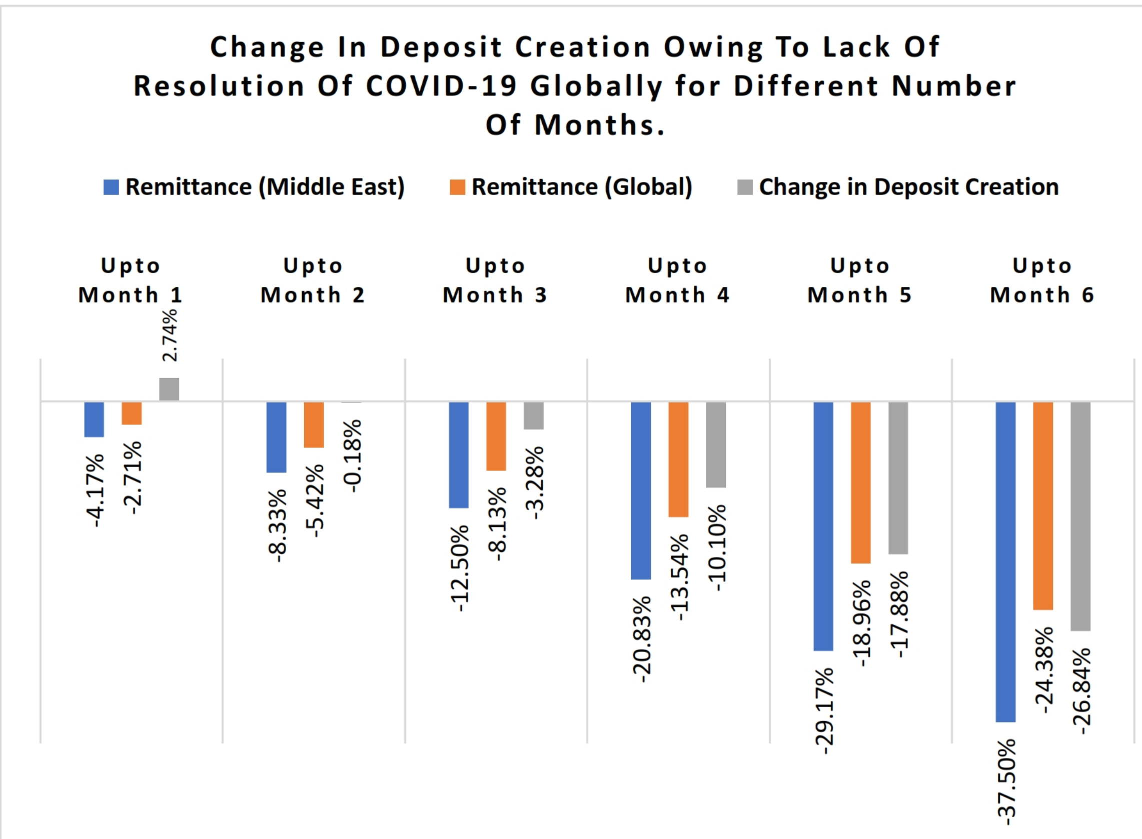
The change in deposit creation contingent to remittance degrowth as postulated is as follows:

S.N.	Particulars	Various Scenarios					
		Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
1	Annual Remittance (In Billions NPR)	897.00	897.00	897.00	897.00	897.00	897.00
2	Remittance (Middle East)	-4.17%	-8.33%	-12.50%	-20.83%	-29.17%	-37.50%
3	Remittance (Global)	-2.71%	-5.42%	-8.13%	-13.54%	-18.96%	-24.38%
4	Projected Remittance (In Billions NPR)	872.71	848.41	824.12	775.53	726.94	678.36
5	Deposit Creation (In Billions NPR) [Regression Model]	386.59	375.32	364.05	341.51	318.97	296.43
6	Deposit Creation	2.74%	-0.18%	-3.28%	-10.10%	-17.88%	-26.84%



Note: Projections are based on Regression analysis.

It can be clearly seen that deposit creation will be affected majorly due to decrease in remittance numbers with a drop of up to 26.84% in new deposit creation if the remittance situation in the middle east and the rest of the world will go as projected up to 6 months.

Similarly, performing a sensitivity analysis we can see the following state for our Foreign Exchange Reserves when Tourist Numbers Decline and the Remittance Situation with the Middle East persists for a period of up to 6 months.

<u>Sensitivity Table (Foreign Exchange Reserves)</u>

		Persistence of Remittance Situation in Months					
		Month 1	**Month 2**	**Month 3**	**Month 4**	**Month 5**	**Month 6**
Change in Tourist Numbers	-10%	-2.83%	-4.99%	-7.16%	-17.97%	-22.29%	-26.62%
	-20%	-3.51%	-5.67%	-7.84%	-18.65%	-22.97%	-27.30%
	-32%	-4.32%	-6.48%	-8.65%	-19.46%	-23.78%	-28.11%
	-40%	-4.86%	-7.02%	-9.19%	-20.00%	-24.32%	-28.65%
	-50%	-5.53%	-7.69%	-9.86%	-20.67%	-24.99%	-29.32%
	-60%	-6.21%	-8.37%	-10.54%	-21.35%	-25.67%	-30.00%
	-70%	-6.88%	-9.04%	-11.21%	-22.02%	-26.34%	-30.67%

It can be seen that in the worst-case scenarios where tourist numbers decline by up to 70% and the remittance situation persists up to 6 months the nation may experience a high level of GDP degrowth while Gross Foreign Exchange Reserves might decrease by up to 30.7% being able to cover merchandise and service imports up to 6.3 months unless no other variable changes. However, that is the worst-case scenario wherein the virus fails to get contained and no cure is forthcoming.

Similarly, the government's lockdown of the country which might be expected to extend on the back of more infection cases and the spread of the disease to different parts of the country is indicative of more severe measures on the back of greater infection numbers. This means that other service specific areas such as transportation, communication, real estate and retail which altogether make a substantial part of the national GDP are sure to be affected. This will hit the already reeling economy even harder.

However, the fact that this virus comes from a family of known viruses with a genome under intense scrutiny in the world means that even existing medicines maybe used to fight it and reduce its severity. Several drugs used for Anti-Retroviral Therapy to the Curing of Malaria have shown signs of stopping the disease in lethality and the fact that china where the outbreak seemed to originate has now almost effectively contained its spread shows a more positive outlook for the future. The numbers here show a grim outlook but in reality, the impact should be more moderate with medium collateral damage looking at the nature of the pathogen unless it mutates rapidly.

Nonetheless, the government can be expected to come up with more measures to vitalize the already latent economic growth which has been hit hard by the impact of the virus. As unlike the Gorkha earthquake when significant global support was forthcoming in the wake of the disaster, COVID-19 is a global threat, one which even the biggest nations with state-of-the-art technologies are struggling to cope with.