COVID-19 PERSPECTIVES
April 30, 2020

Q&A with Dr. Stelios Papadopoulos
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- **How did Greece get it right?**

  A number of factors have contributed to "getting it right"
  - Government policy has been informed by sensible science
  - Aggressive social distancing measures, including restrictions on commerce and mobility, were introduced early
  - The government shifted rapidly to digital communications with the citizens
  - Greeks took the measures seriously

  It was perhaps valuable that Italy preceded Greece by about two weeks in the evolution of the epidemic and served as a valuable lesson of how bad it could be if measures were not taken.

- **How does Greece avoid resurgence from occurring at the peak of tourist season?**

  This will be extremely difficult because, if tourists were to flock into the country, the crowding would undoubtedly cause a resurgence. The only reasonable way forward is to plan for a very modest tourist season, with the obvious negative implications for the economy, but an acceptable number of new cases.

- **Risks of reopening schools prematurely?**

  As of the beginning of May schools are opening with a very methodical, careful and gradual approach. Clearly, opening up the schools entails risk of resurgence. On the other hand, the opening of the schools has a natural termination point a few weeks from now as the school year ends. I have to believe the government will monitor the situation carefully and be better prepared from a data point of view to manage the operation of the school system in the Fall.

- **Compare the Swedish approach and how does it compare to Europe?**

  Sweden has taken a very loose approach to restrictions and distancing. So on the surface it would appear that their approach is very distinct from that of the rest of Europe; however, many Swedes, particularly the elderly, are choosing to shelter in place voluntarily so it is mostly the young, who

are on average less likely to become severely ill, who are moving about and around. As of May 9, 2020, Sweden has had 31 deaths per 100,000. For comparison, Greece has 1, the U.S. 23 and Italy 50.

- **How many virus strains are known to us—is it possible to vaccinate against all of them assuming a vaccine is developed?**

  This will get a little technical, but it is a good question. So far there have been dozens of isolates that have been sequenced but all of them appear to be of a single strain. Small differences in the genetic code do not make automatically for a new strain. That is not to say that there will not be another strain or even that one of the isolates to date upon further study demonstrates distinct biological properties that qualify it for a new strain. The question about a vaccine is more fundamental. Will we able to develop one in the first place? The vaccine will need to be extremely safe (vaccines are given to healthy, asymptomatic individuals, as such they must be very safe), be able to generate immunity against SARS-CoV-2 and have that immunity last a long time (perhaps even a lifetime). That's a tall order and even if we end up with the right biological construct, the amount of time needed to perform human clinical trials to demonstrate the above attributes is a lot more than six months, which is routinely mentioned in the press as a target day for a vaccine

- **Is the fact that there are mutations the reason that experts warning the crisis will span 2-3 years?**

  The 2-3 year time frame is driven by the expectation of how long it will take for novel drugs and/or vaccines to be developed as well as the amount of time required for a large portion of the population to be exposed, including those who were sick and recovered and those who were infected but were asymptomatic. As more and more people are exposed and recover, they are no longer capable of transmitting the virus. Thus, the population approaches a point of herd immunity which slows down very significantly the spread of the disease.