OBSERVATIONS

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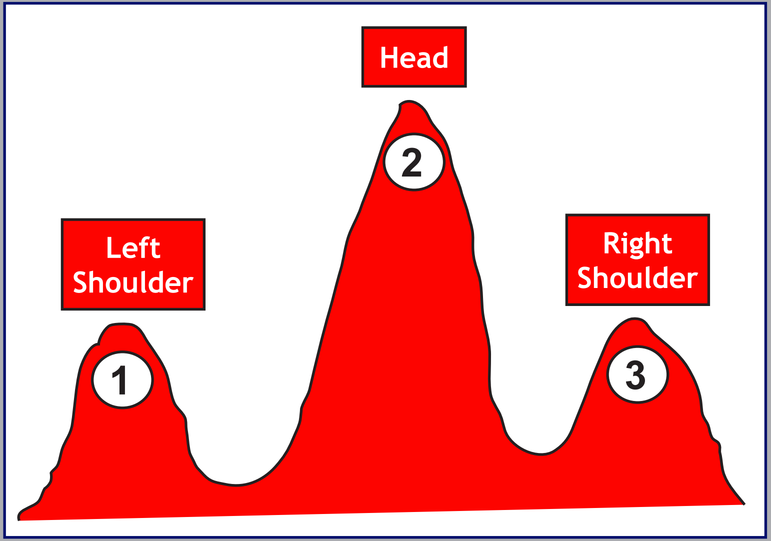
26 February 2020

Covid-19

price action and the shape of pandemics

Walter J. Zimmermann Jr.

ICAP Technical Analysis



Background

- When the SPX broke decisively above my most bearish case resistance at 3155.00 on 12th Dec 2019 room and time opened to the upside for the bulls.
- Specifically time.
- With my time cycle work the remaining time for the bulls was much more precise than the remaining upside in price.
- That remaining upside pointed to 2nd half February.
- Specifically, to ***February 21st 2020***.
- From 21st February 2020 I expected "all hell would break lose to the downside for the stock markets."
- And at the risk of beating a dead horse, I was not shy about repeatedly emphasizing this timing situation.
- I have two long standing Fibonacci duration time cycles that clearly pointed to this timing risk.
- There was a cycle of mid-east violence and regime change and a cycle of pandemics.
- The headlines over the past couple years suggested that mid-east violence and regime change as the higher probability headline at the final peak in the equity markets.

Bad Things Do Happen in Threes

- As it turns out it was a pandemic headline at the Feb price peak, not a mid-east terrorism related headline.
- And as it turns out, I am certain that everyone would have much preferred a mid-east violence headline.
- However, as also mentioned in previous reports, bad things never happen when it is convenient.
- In fact for the great majority of investors, bad things always happen when they are least expected.
- This is because everyone is always caught all in on the long side at major peaks in the markets.
- This is the nature of human behavior.
- And there are only two things that can help inoculate us from the otherwise irresistible urge to buy near tops.

1. Chart Patterns in Technical Analysis
2. Time Cycles in Technical Analysis

- However none of this is the subject of this report.
- The purpose of this report is to expand on the topic of a report dated 3rd February 2020
- The three wave nature of pandemics.

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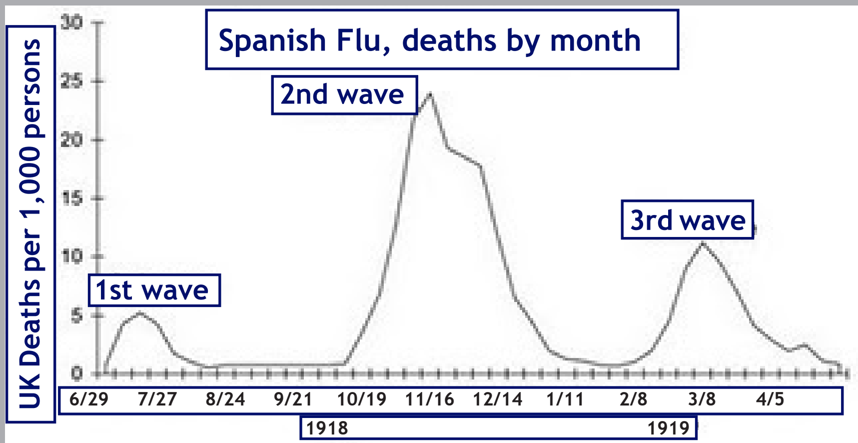
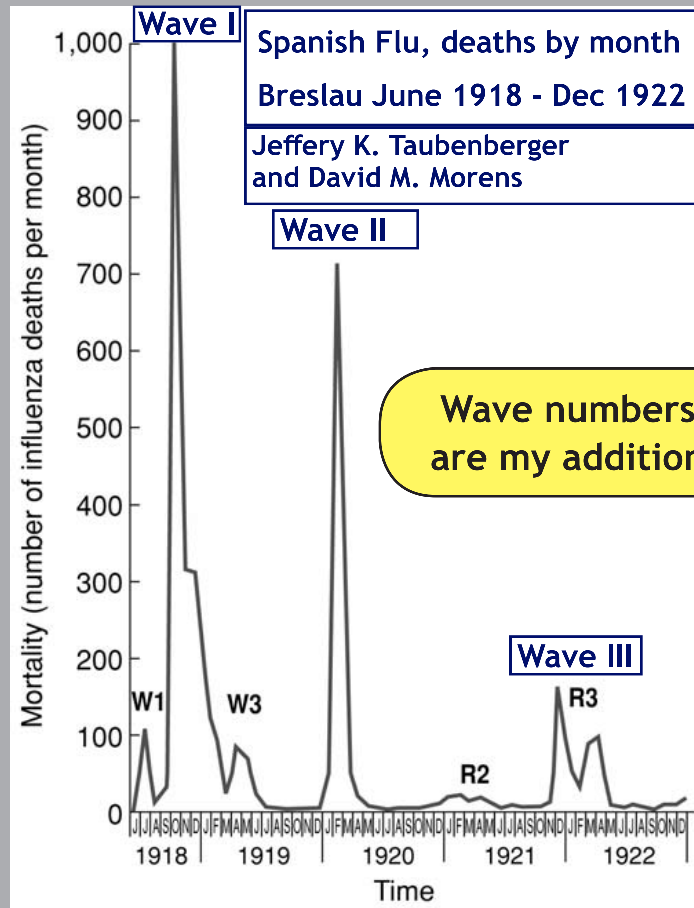
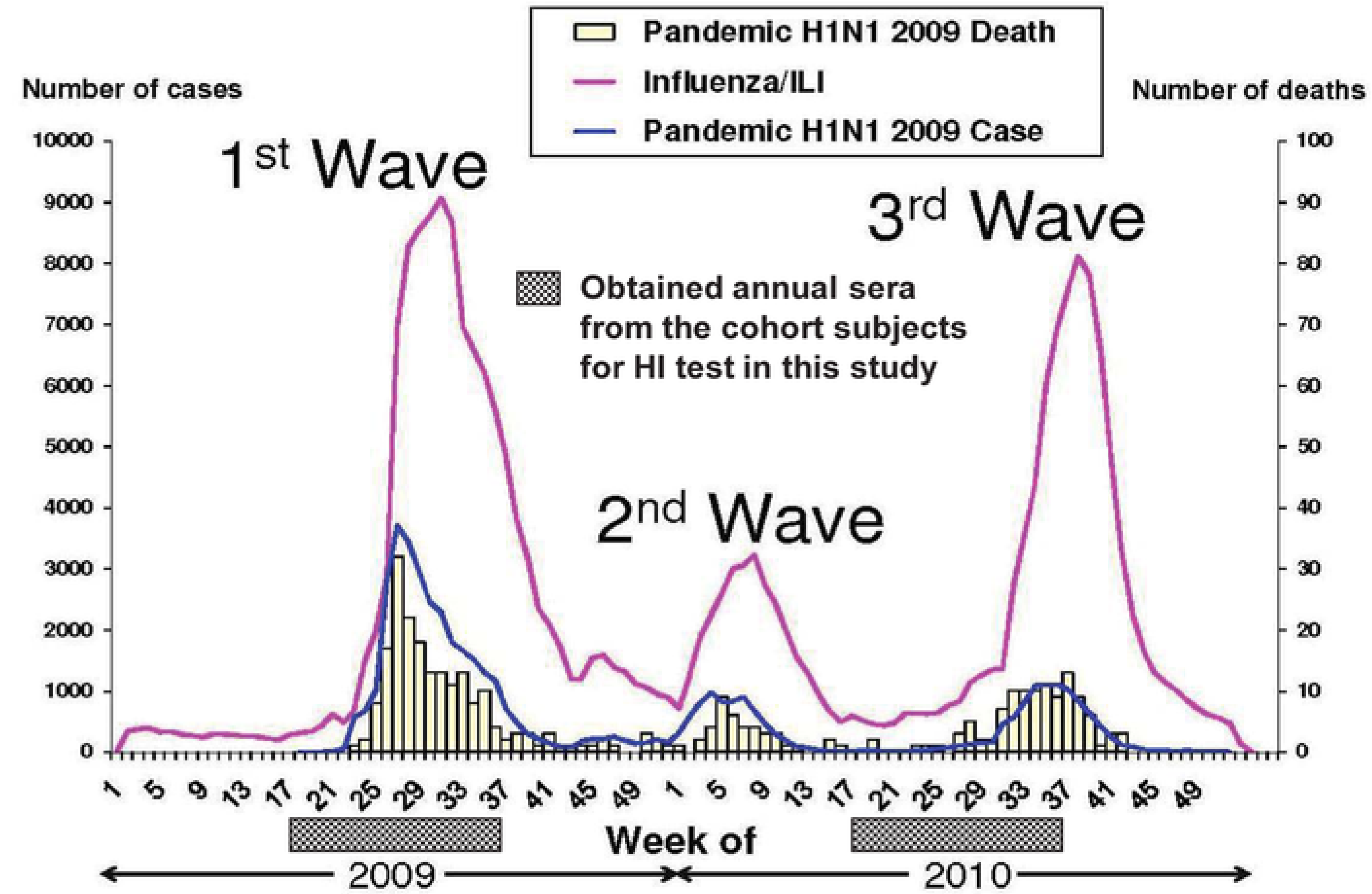


Three Fold Waves within Three Fold Waves

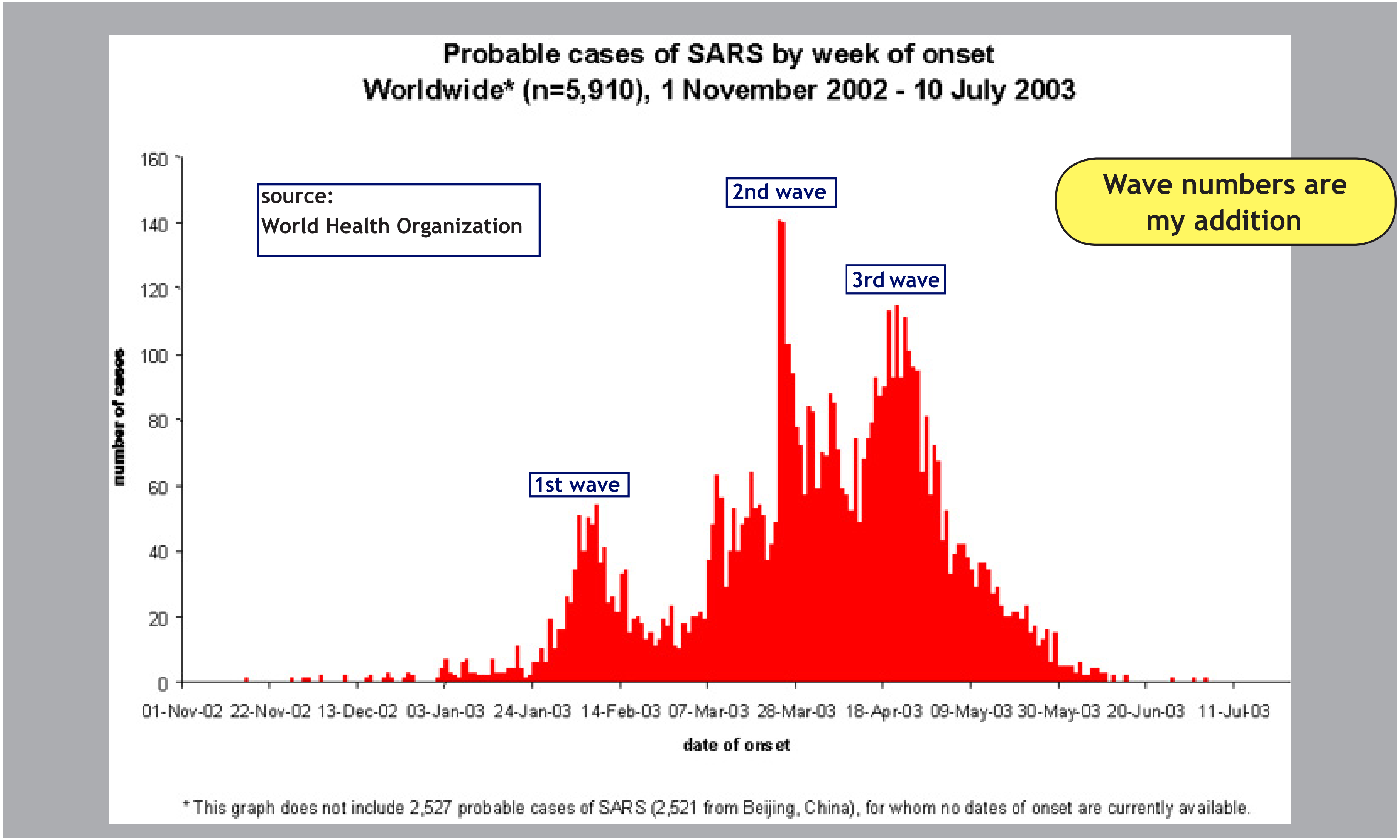
- Estimate peg the total deaths from the that 1918 pandemic as between 50 and 100 million people.
- At the time that was 3% to 5% of the Earth's population
- It is estimated that 500 million were infected.
- So one in five that were infected died.
- More soldiers died from this pandemic than from World War I
- And when the deaths are plotted a curious pattern emerges.
- The deaths arrived in sets of three waves.

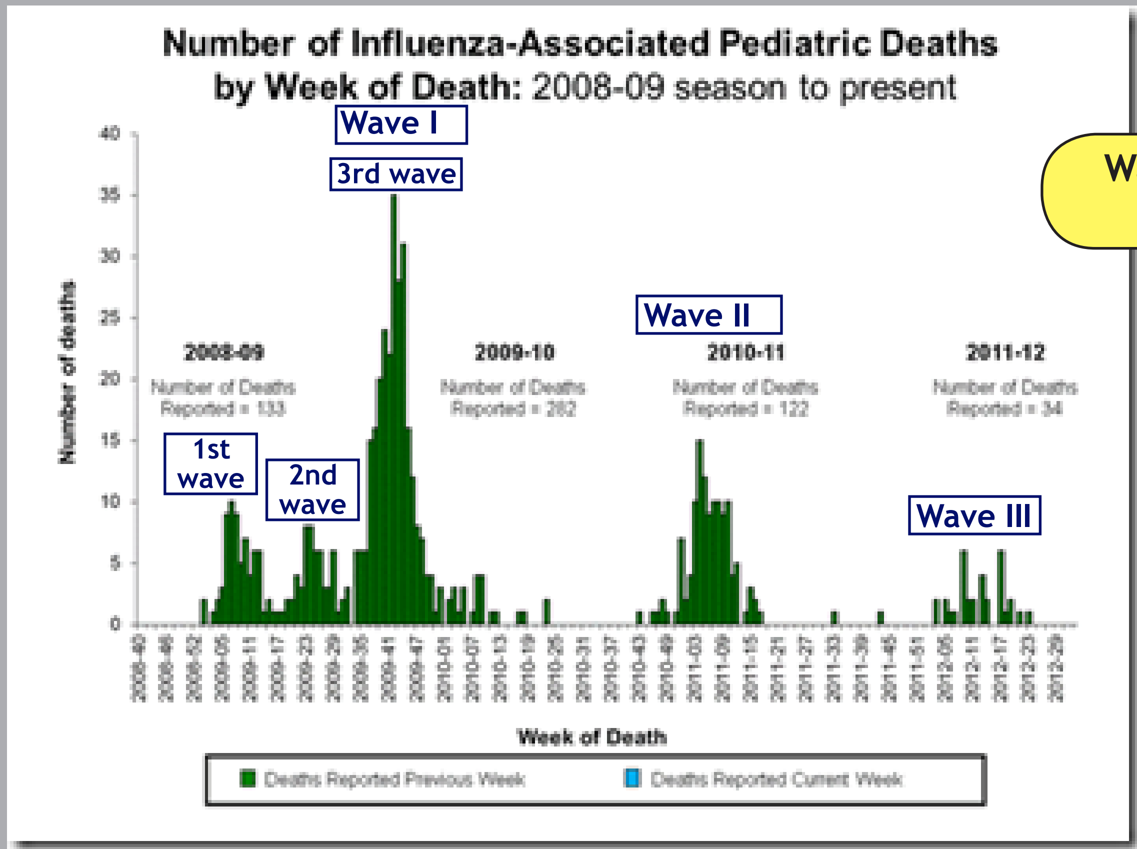


Wave numbers are my addition

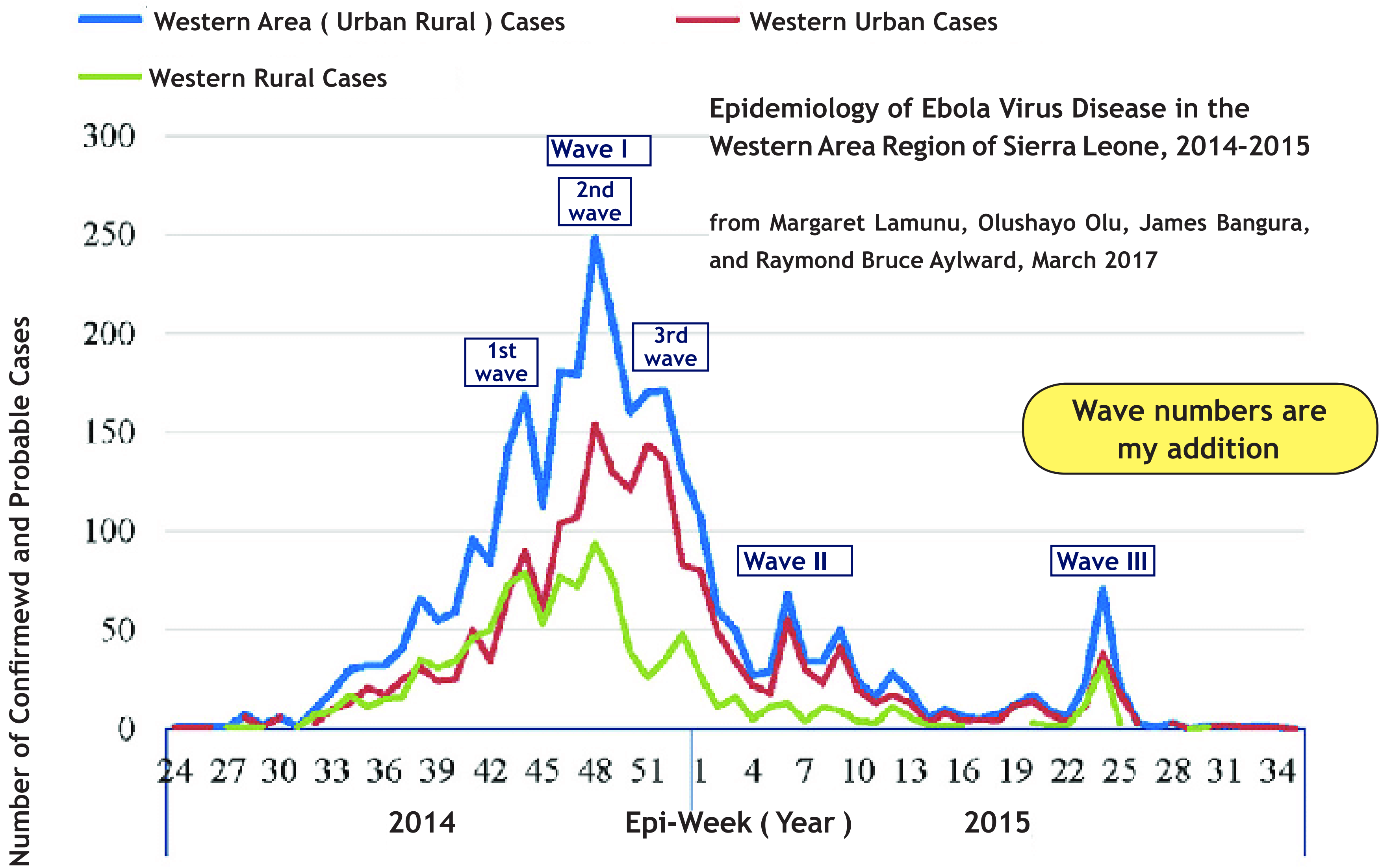


Source: Bureau of Epidemiology, Ministry of Public Health, Thailand


Probable cases of SARS by week of onset
Worldwide* (n=5,910), 1 November 2002 - 10 July 2003
source:
World Health Organization
2nd wave
3rd wave
1st wave
Wave numbers are my addition
number of cases
160
140
120
100
80
60
40
20
0
01-Nov-02 22-Nov-02 13-Dec-02 03-Jan-03 24-Jan-03 14-Feb-03 07-Mar-03 28-Mar-03 18-Apr-03 09-May-03 30-May-03 20-Jun-03 11-Jul-03
date of onset
* This graph does not include 2,527 probable cases of SARS (2,521 from Beijing, China), for whom no dates of onset are currently available.



Wave numbers are my addition


Western Area (Urban Rural) Cases
Western Urban Cases
Western Rural Cases
Epidemiology of Ebola Virus Disease in the Western Area Region of Sierra Leone, 2014-2015
from Margaret Lamunu, Olushayo Olu, James Bangura, and Raymond Bruce Aylward, March 2017
Wave numbers are my addition
Wave I
2nd wave
1st wave
3rd wave
Wave II
Wave III
Number of Confirmewd and Probable Cases
300
250
200
150
100
50
0
24 27 30 33 36 39 42 45 48 51 1 4 7 10 13 16 19 22 25 28 31 34
2014
Epi-Week (Year)
2015

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Head and Shoulders Top Patterns in Pandemic Deaths

- The head and shoulders top reveals the process by which a population of objective investors are infected by a wave of dangerously excessive bullish sentiment.
- This peaking pattern reveals the trajectory of a market losing its collective mind.
- The end result is long liquidation into a bear market.
- In theory, the spread of an infectious disease should closely resemble of spread of an excess sentiment extreme
- In both cases the dynamic is collective human behavior.
- A price chart of the spread of a sentiment extreme should resemble the death chart of the spread of an infectious disease.
- The only question is what chart patterns will we find when we plot deaths over time during a pandemic.
- The answer, again and again, is the head and shoulders top.
- This should not be a big surprise
- The head and shoulders pattern is arguably the most simple, the most reliable, the most iconic, and the most instructive of all trend reversal patterns.
- In the world of price action this pattern reveals the trajectory of a market losing its mind.
- In a pandemic, the trajectory plotted is the loss of life.

Looking Outside the Box

- The subject of technical analysis is collective human behavior as revealed by the price action of the markets.
- A major component of the subject of epidemiology is collective human behavior as revealed by the spread of disease.
- The disease studied by technical analysis is an emotional affliction that robs the investor of the ability to think clearly.
- The disease in pandemics is physiological and robs the individual of his capacity to live.
- Excessive hope and fear do not spread in a vacuum.
- And neither does an infectious disease.
- In both cases the affliction is transmitted from person to person. At first one person at a time. And then later on en masse.
- In the case of a pandemic the reversal is from a healthy population to an infected population.
- It is the trajectory of a population losing its population.
- The bear case implication of all this is that we are only in wave 1 of 3 of this pandemic.
- Or the left shoulder in head and shoulders top terms.
- Cheer-leading efforts by certain politicians to make believe that everything is “under control” will not be helpful.
- See the next two pages.

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Still an Up Trend ?

On page 6 of the week ahead outlook for 17 to 21 Feb I made the following two points:

- As noted in the report for 10 to 14 Feb, from here the bulls still need a decisive weekly close above ***3415.00***
- And from here the bears need a decisive weekly close below ***3100.00***

Cheer Leaders versus Epidemiologists versus the Price Action

- Certain cheer leaders are saying “everything is under control.”
- The data watchers are saying it is not a pandemic. Yet.
- The epidemiologists are saying that the cheerleaders are raising the risk of a pandemic.
- What is the S&P 500 price action saying?
- Run for cover on a weekly close below ***3100.00***
- Because that will break the back of this bull market.

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SPX - monthly

Big Picture Refresh - Downside Risk

- A decisive break below 3100.00 targets ***2750.00***
- And a decisive break below 2750.00 makes possible a larger decline to the vicinity of ***1250.00***

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REPRINT

Why 2020 is not a reincarnation of 1918

- Why did the Dow Jones Industrial Average rising during the Spanish Flu pandemic?
- How could that have happened?
- The answer is actually quite simple.
- The United States became a wealthy world power by selling the allies ammunition, weapons, and food.
- By the end of World War One the United States was by far the most wealthy super power.
- The UK and France were nearly bankrupt.
- And Germany was bankrupted by the allies.
- So what happened to the Dow Industrials when the war ended in November 1918.
- The DJIA fell.
- Prices and demand for crude oil and refined products also fell sharply from the end of the war.
- See text at right.

1918 and 2020, a couple more 'then and now' points

- At the end of 1918 the USA did not need anyone.
- But everyone needed the USA.
- The UK, France, and Belgium needed food.
- And Germany needed credit.
- These days 43% of SPX earnings are export sales.
- In terms of manufacturing the United States needs China as much as China needs the USA.
- The world today is much more interconnected and interdependent than it ever was.
- Another big difference is the commodity cycle.
- The 30 year commodity cycle is now only 2 to 3 years from a historic petroleum led crash into a cycle low.
- Back in 1918 commodities were peaking into a 30 year cycle high, otherwise known as the World War I effect.
- Back in 1918 paper investments were a tiny part of the world economy. Today they are the economy.