# Twitter Thread by Professor

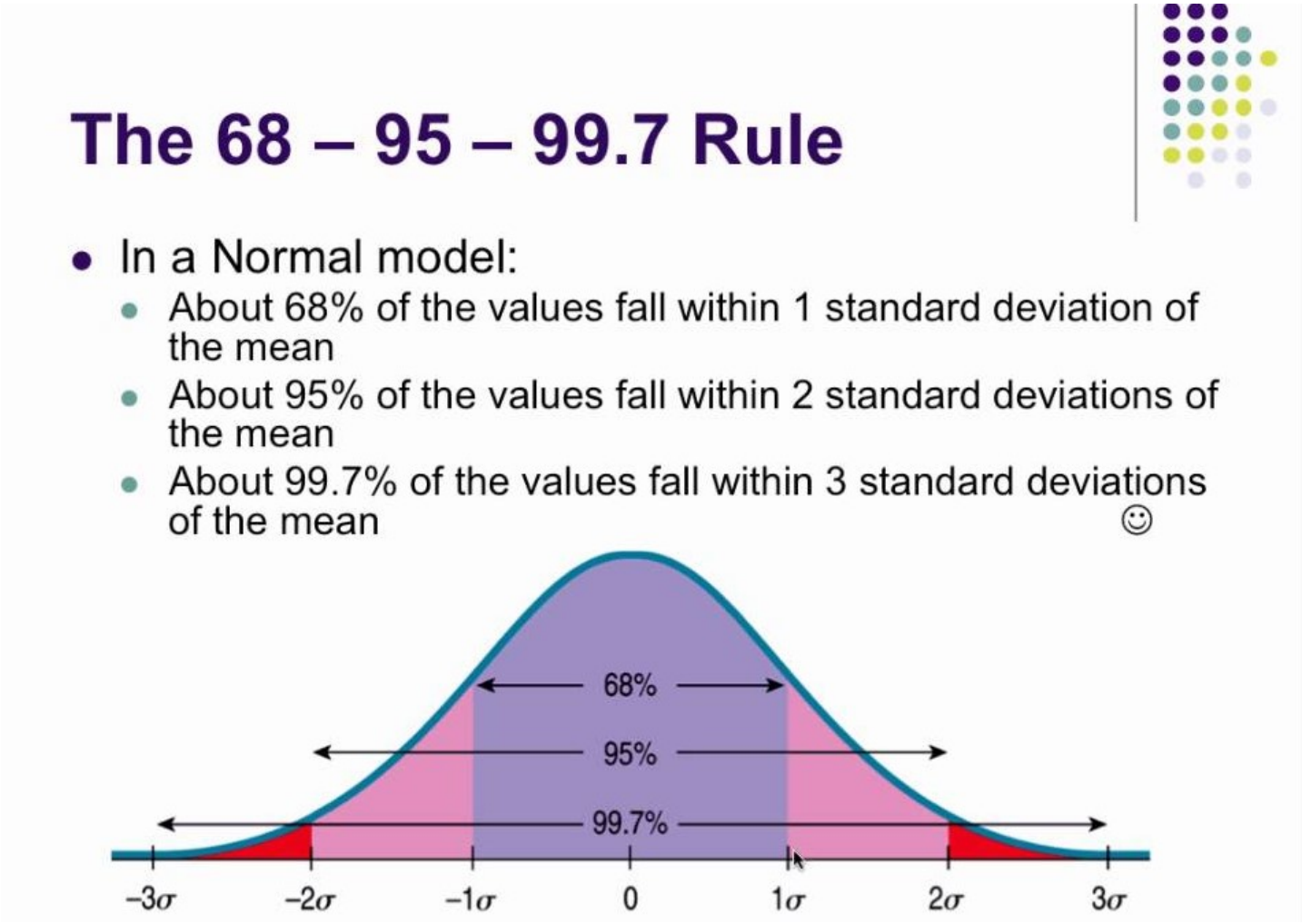
**Professor**
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**Bringing Data Science to Nifty Analysis. A small ■**

**As per Normal Distribution 68% of the time movement is with 1% SD Limits.**

**For 95% pf the times movement is within 2% SD limits.**

**And its only 0.3% of the times that movement exceeds 3 SD.**




Since 95% covers a lot of ground that's why 2SD is considered to be a a safe range for most events.

The farther we move from the average, chances of occurrence go down. This is what Taleb sahab calls Tail risk, because it lies in the tail of the standard distribution curve.

Normal distribution occurs everywhere. See this example

https://t.co/HHwUpIXTRG

> The Galton Machine shows order from randomness. Each ball bounces left or right at random, 12 times, but together where they fall can be predicted - the normal distribution. This one made by: https://t.co/oI9wOGq7nG pic.twitter.com/VQtVu66OSE
>
> — Tom Stafford (@tomstafford) April 19, 2018

Bollinger Band, which is a very popular indicator has a setting of 2SD. Because its expected that 95% of the time moves will be confined to 2SD limits.

When we say that price is at upper/lower Bollinger band, we are saying that it has reached 2 SD limits and likely to reverse.

Now coming to current scenario, open Nifty daily chart and apply two bollinger Bands on it.

First with default setting and in second change settings to 3 standard deviation.

Crossing 3 SD boundary means that Nifty is now in very rare territory where it has been only 0.3%

I have plotted a chart and you can see that wherever nifty has approached 3SD range it has taken a bounce.

Right now Nifty is not at 3SD levels (Looks like around 2.5 SD levels).

Note: some important points to remember and another chart in next tweet.



Important Points !

1. Nifty crossing 3SD is not impossible its just that there is only 0.3% probability of this tail risk.

2. The moves are considered from average (mean μ to be precise). Hence they are not absolute and are on a rolling basis. See the chart of March'20 fall.

