Market Share columns: share of the arrivals

* Percentage of all the ports of entry
* Why? Valuable if you are looking at city A vs city B
* For companies
* Trends of totals are more important
* Generating fundamental understanding of what is going on to help advise investment definitions
* “Alternative data” alternative methods to look at data
* “supply chain” – concern about how the shutdown in production would impact supply chain
* not a linear mapping
* example of
* how foreign travel would affect an investor:
  + municipal bonds: a loan
  + securities: states, schools
  + investors buy the bond, pay amount of interest
  + sometimes the bonds are secured by the
  + amount of traffic in the airport
  + 25% of Chinese visitors go through LAX – if that is a significant
    - lower concession sales
    - retail sales
    - not enough revenue to pay the bond back
    - revenue stream of the airport
    - even if it doesn’t’ decrease, if it decreases enough, increase in uncertainty; volatile market 🡪 creates opportunity, disagreement in the market, having an accurate estimation for LAX is really important
* Time Series analysis: “quick release”
  + Any historical analysis, make sure you have the data available at that time
* Visa Type
  + Percent change: January 2019 / January 2018
  + Same time period
  + Seasonality that matters
  + “seasonally adjusted” : account for seasonal variances that could mislead on the trend
  + example: spikes in December
  + normalize the time series, in September on average the hiring rate is neutral but in November, more hired than neutral
  + this is not seasonally adjusted data
  + for tourism: seasonality; people take vacations on average in the same time
* Graph: Chinese visitors/ All Asian visitors
* Think about a simple linear trend
* Draw a line through it, messy regression
* Normalization
* Which other Asian countries had the same patterns
* How does this impact investing process?
  + Travelers come at different periods:
  + Virus lockdown
  + Maybe they were coming in a period that was a lull for them
  + Financial securities, people might sell off stocks/bonds because they are scared generally
  + Building a model example: “Chinese don’t make up majority. IF they do, they don’t spend too much.” But if you look at the market,
  + Discrepancy you can make money on – trade on discrepancies in the market, time, magnitude, system with higher certainty if the market overreacts or underreacts…
  + **Clustering analysis, certain properties based on arrival patterns that would be interesting to look at**
* Whatever the market expectation is going into these earnings, much higher or lower
* Markets are paying attention to it now, beginning of February—market react, stocks sold off, flee to safe assets, general concern, sell everything China related, market rebounded, tapering off cases… market selling off as increasing cases outside China
* Wild swings, build a model to understand what is going on, overreaction or under reaction?
* They invest long term.
* Where does the data come from?
  + Financial data: NASDAQ, Bloomberg for prices
  + Companies data
* Tourism key indicators: hotel stays, tourist spending, Average Chinese tourist spends 2x the amount of any other tourist (could be skewed), rich Chinese are double that’s why average is high, median might not look the same
* Alternative data vendors make indices: index of product popularity
* We prefer raw data, transform into product
* Cannot rely on their methodology
* Methodologies could change
* If we have raw data
* **Prediction model: from 2018…forecast 2019**
* **Given protests in Hong Kong, already a hit in arrivals, 2010-2016, how HK impacted arrivals there,**
  + Now with virus, what happened?

Visa Type Change: US policy on Chinese visas

* 2016 change in duration – 10 year visa to be renewed every 2 years
* Chinese New Year:
* Trade War between US and China
* Hong Kong protest
* Diamond princess cruise ship

Hypothesis: travel ban would not have affected it as much because Chinese travel will already decline

-but in general, Chinese people are just staying home

- A strong US dollar has made it more expensive for people to visit the US, and the US government has made it more difficult for foreigners to visit by rejecting a larger share of travel visas. The Trump administration’s antagonistic stance toward China has also likely had a large effect. The number of Chinese visitors to the US has fallen by about 5% since the outbreak of a trade war between the two countries in 2017.

- temporary shock of the virus - >

- break into regimes; make a baseline

- when parameters look like this

- possible we never get there

- feature analysis

- compare that the persistence

- measure period of disruption

- measure period of normalcy

- plot out coefficients and how they change- how can we think bout the new potentialal regime we are entering

- historical

- NTTO – 90’s – shock from SARS, no travel restriction, but decline in travel

- Global Financial Crisis

- pre and post

- a couple of case studies

- this sort of property- variables that define regime beforehand, shock then how did the variables change after that—if it follows same pattern, then we would expect the regime now to react (analogy!!!!)

- baseline simple models

- time series- state of stationarity

- don’t do regressions in levels, there is auto correlations

- make sure the variable has a stable distribution

- observational test: properties are consistent over a 5 year period…. Can do a regression

- ok to say in an ideal world to try all these methods but we have chosen to look at simple models so that we could capture things

- stable distribution: China publishes monthly

- given a 5 year period, try to take random chunks, validate and running the model if the model gets materially worse for some and better for others

- cross validation

- normalizing time series – z scores

- take current data point – the average / standard deviation : on average there is some trend. How far above our below that average

- gdp growth, measure of wealth (personal income), consumers having more money

profitability of any particular brands

* Particular Chinese brands more popular than less popular
* Shift of spending overseas
* Consumer spending, wealth proxies, exchange rates
* Prices in exchange rates
* Inflation rates?
* No of flights on airline schedules

What are the factors that could lead to a decline?

1. A **strong US dollar** has made it more expensive for people to visit the US. – **exchange rate** (US China)
2. The US government has made it more difficult for foreigners to visit by **rejecting a larger share of travel visas**. (Visa statistics)
   1. Visa rejections: Visa approvals for Chinese visitors have meanwhile become more difficult. The **rejection rate** for Chinese tourist visa applications to the U.S. reached 17% in the 2018 fiscal year from a low of 8.5% in 2013.
3. The Trump administration’s antagonistic stance toward China has also likely had a large effect. The number of Chinese visitors to the US has fallen by about 5% since the **outbreak of a trade war** between the two countries in 2017.
4. **Official travel advisory**: 2018 US travel alert (Chinese government) – binary variable; harassment by US law enforcement
5. Students coming into the US; tourists may affect student numbers

Y = total travel into the US (volume of Chinese nationals)

References:

1. <https://www.reuters.com/article/usa-china-travel/chinese-travel-to-us-shrinks-47-in-first-nine-months-of-2019-idUSL3N25W2OE>
2. <https://apnews.com/5797aa2e34004ee3ba5eae934debdbdb> (US travel industry to Chinese tourists)

Other Sources of Data:

* Hong Kong airport

Uk, Japan, China, South Korea, China, Brazil, Germany, France, Australia, Argentina, India