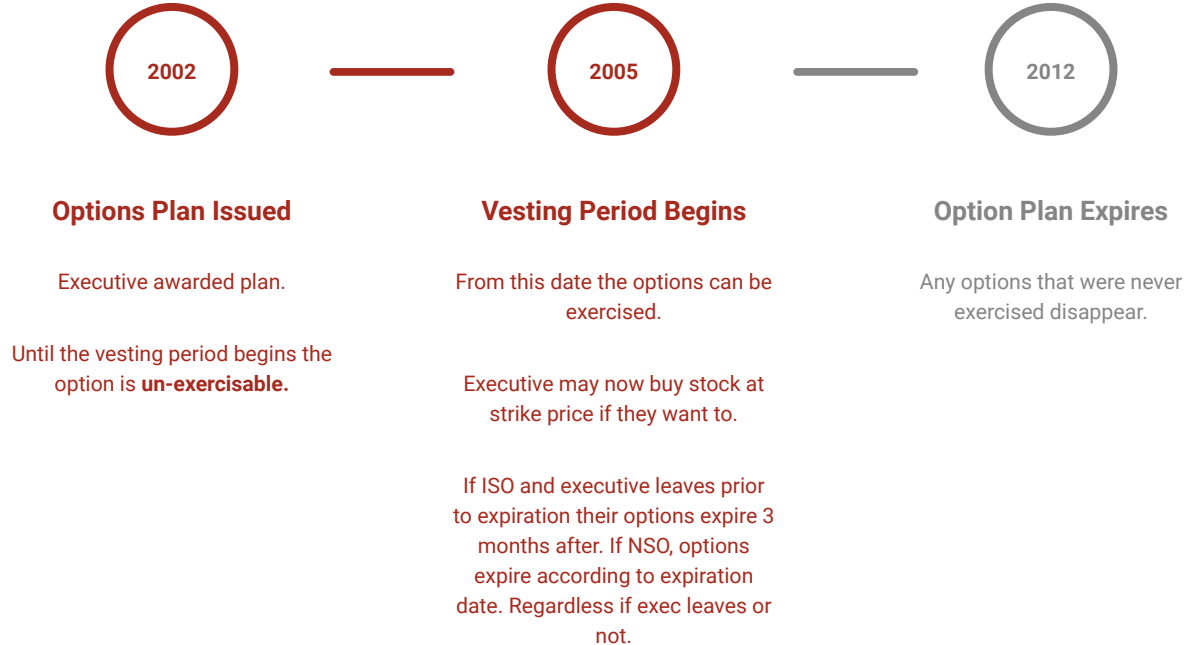


BoardEx Execucomp Summary

January 2022

Options Timeline Example



Two types of Options

- ISO (Incentive Stock Options)
 - Aka statutory stock options
- NSO (non-statutory stock options)
 - Aka non-qualified stock options
- Differences
 - Tax.
 - ISO: Subject to capital gains and no income tax if
 - 1) Option exercised **two years** after grant (kind of trivial as time before an option vests typically exceeds 2 years)
 - 2) Option sold more than one year after option exercised.
 - NSO: Subject to income tax at time of exercise and capital gains tax at time of sale.
 - ISO must be issued to employees. NSO allowed to be issued to employees and contractors.
 - Option expires if executive leaves?
 - ISO. Yes. Must exercised 3 months after executive leaves.
 - NSO. No. Option can be exercised anytime before expiration.

ISO rules

- Must be exercised within ten years of the grant date.
- Must be held for more than two years after the grant date, and the shares obtained from exercising ISOs must be held for at least one year.
- Employees can be granted up to \$100,000 worth of ISOs each calendar year, based on the fair market value at the grant date (any excess will be treated as NSOs).
- The exercise price for ISO must not be less than the stock's fair market value at the grant date.
- For significant shareholders (> 10% shareholders), the exercise price must be at least 110% of the fair market value, and the ISOs must be exercised within five years after the grant date.
- ISOs can only be granted by an entity that is taxed as a corporation.

Options and Taxes

- The granting of an option is not subject to tax. Neither is holding an option.
- NSO
 - **Exercise:** You pay ordinary income tax on the gain from the strike price, ie the difference between the strike price and value of the stock when option is exercised.
 - **Sale:** You pay capital gains on the difference between the price you sell the stock and the value of the stock when option was exercised.
- ISO
 - If option exercised after holding option for less than two years. Treated like NSO.
 - If option held more than two years, but option exercised and sold **in same year:** treated like NSO.
 - If option held more than two years, option exercised but share sold **after the year it was exercised:** You pay capital gains, rather than ordinary income, on the difference between grant price and the sale price.

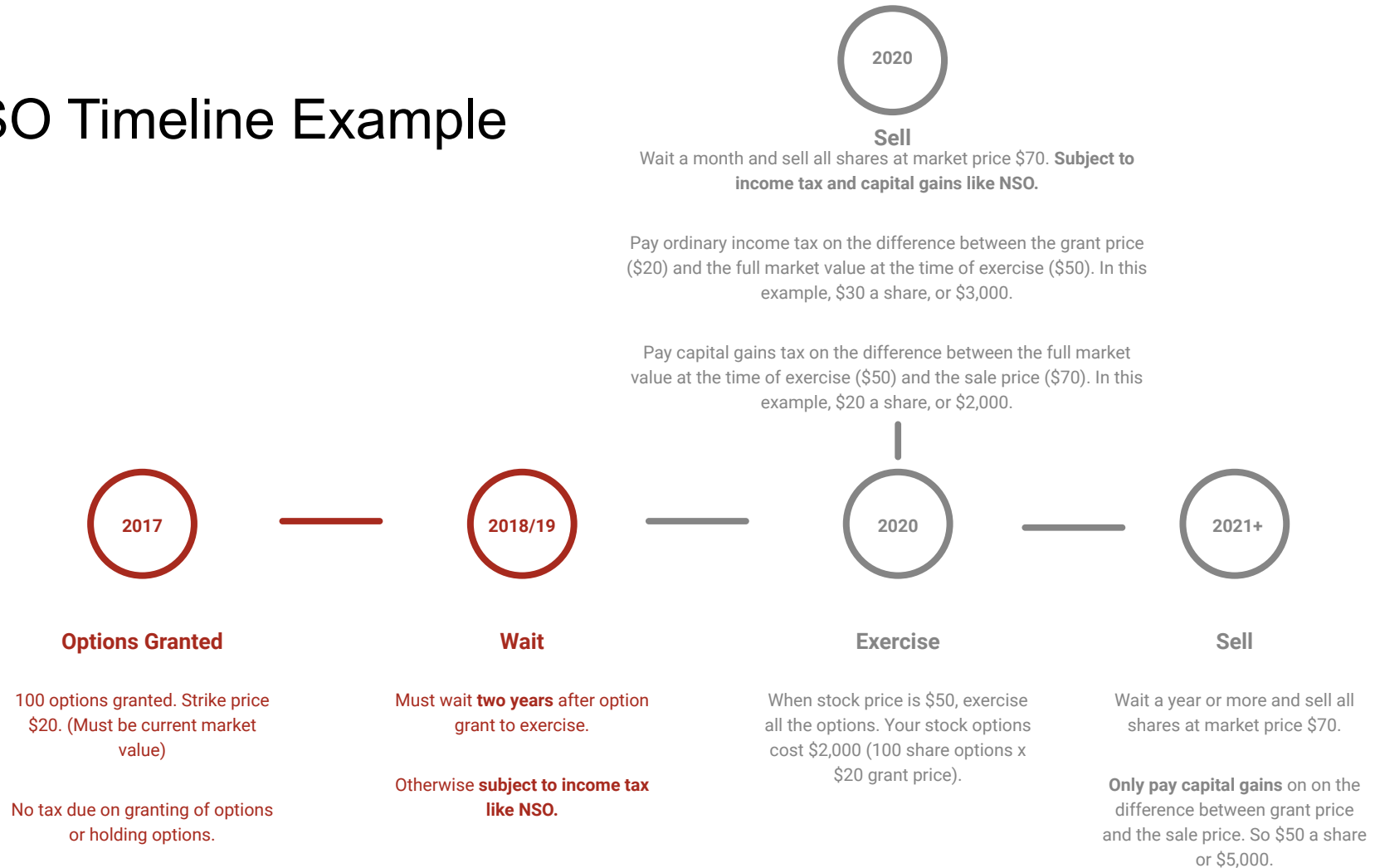
Example

- Number of options: 100
 - Strike price: \$10
 - Fair market value when exercised: \$50
 - Fair market value when sold: \$70
-
- **NSO**
 - When stock price is \$50, you exercise all the options. Your stock options cost \$1,000 (100 share options x \$10 grant price).
 - Next month you sell the all the stock for \$70.
 - Pay ordinary income tax on the difference between the grant price (\$10) and the full market value at the time of exercise (\$50). In this example, \$40 a share, or \$4,000.
 - Pay capital gains tax on the difference between the full market value at the time of exercise (\$50) and the sale price (\$70). In this example, \$20 a share, or \$2,000.
-
- **ISO,**
 - Conditions to be ISO are 1) option exercised after holding at least two years after it was granted and 2) waiting an additional year after exercise to sell it
 - If conditions met, then pay **only capital gains tax** on the difference between the grant price (\$10) and the sale price (\$70). In this example, \$70 a share, or \$7,000.
 - If conditions not met, then treated like NSO.

NSO Timeline Example



ISO Timeline Example



Options plans are very heterogeneous

- Several different plans typically awarded in same year.
- Plans differ in size, when vesting period starts and length, strike price, expiry date.
- Most option plans are NOT exercisable when issued -- executive must wait.

Variables that we need

- **Option plan details:** time when option is granted, vesting period start date (when option becomes exercisable), expiration date, strike price. (BoardEx provides these)
- **Options exercise:** Quantity of options exercised and exact date. Price of stock when exercised.
- **Options sold:** Quantity of options sold, exact date of sale and price. Unclear if this is available with BoardEx.

With current data, all I am able to look at is *quantities* of options per exec

- **OPT_EXER_NUM:** Number of options exercised by the executive during the year.
- **OPT_UNEX_EXER_NUM:** The aggregate number of unexercised options held by the executive at fiscal year end that were vested.
- **OPT_UNEX_UNEXER_NUM:** The aggregate number of unexercised options held by the executive at fiscal year end that were not yet vested.

Looked at exercised options out of total options held:

Ratio = $\text{OPT_EXER_NUM} / (\text{Total of all 3})$

And

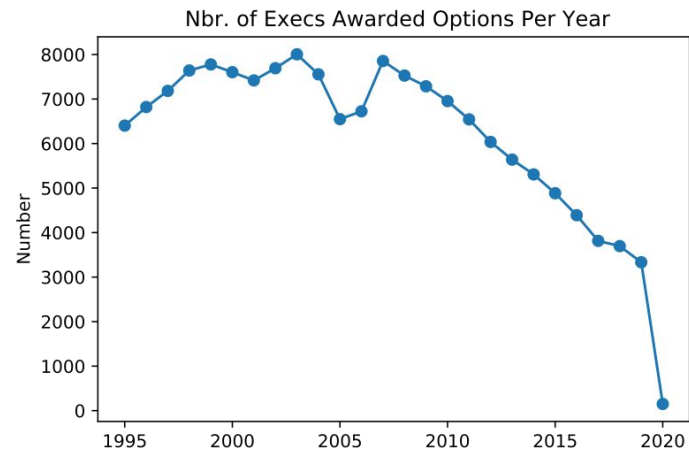
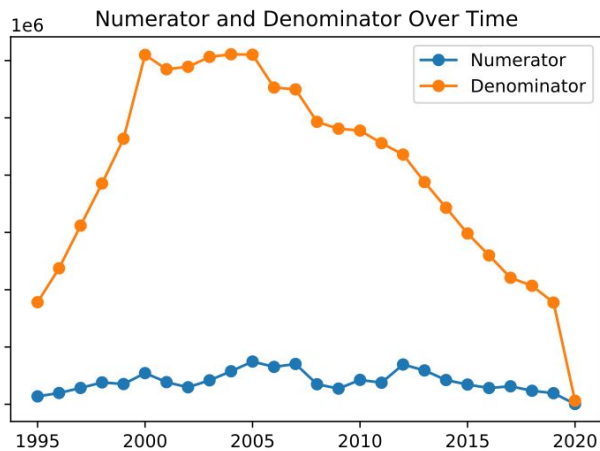
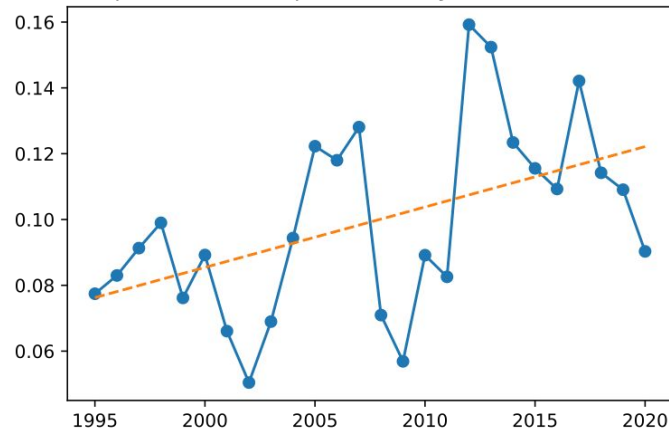
Ratio = $\text{OPT_EXER_NUM} / (\text{OPT_EXER_NUM} + \text{OPT_UNEX_EXER_NUM})$

Problems we ran into

- Execucomp prevents us from seeing the heterogeneity in plans issued.
- We don't know the strike price of these options. Can not be backed out.
- Do not know the expiration date nor the vesting period length.
- Essentially all we can see is the aggregate **number** options for each individual.
- Can't find a way to distinguish between ISO and NSO.

Ratio In Execucomp

of Exercised Options of Total Options Held by the Executive (exercisable or not)



We turned to BoardEx...

- Pros

- Shows options awarded by plan.
- Public and private companies. Executive and non-executives.
- Detailed plan info: We have vesting period start date (when option becomes exercisable), expiration date, strike price, stock price
- We have base salary, annual bonuses, etc.

- Cons

- Do NOT know when the option is exercised. Only know the period when it could be exercised.

BoardEx Analysis – Results were not very informative.

- Like with Execucomp we look at the ratio
 - **Sum3: Options Exercised / (Options Exercised + Unexercised Exercisable Options + Unexercised exercisable options)**
 - And
 - **Sum2: Options Exercised / (Options Exercised + Unexercised Exercisable Options)**
- **I constructed:** Options Exercised (all assumptions listed in next slide), Unexercised Exercisable Options, and Unexercised unexercisable options.
- I needed to make an assumption about when options were exercised.
- I only looked at numbers of options exercised/number unexercised. Not able to determine the value.

Assumptions of when options were exercised.

1. **Median** Vesting Year

- a. Assume that executive exercises option package at the median vesting period in the dataset (around 7-8)

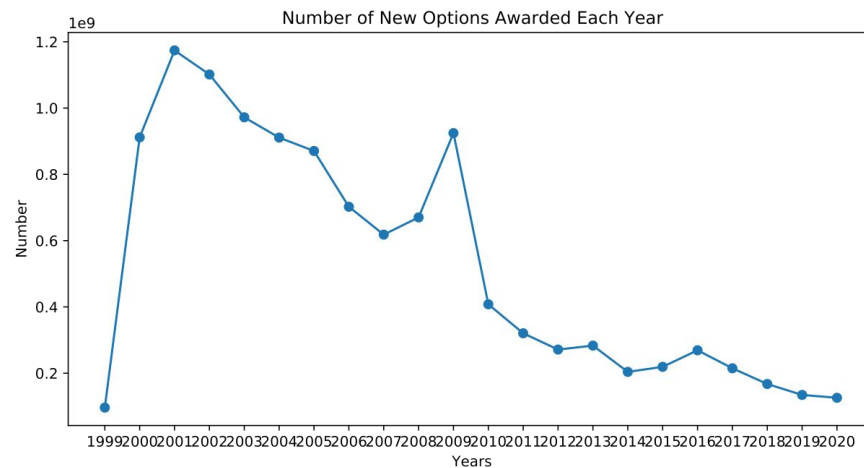
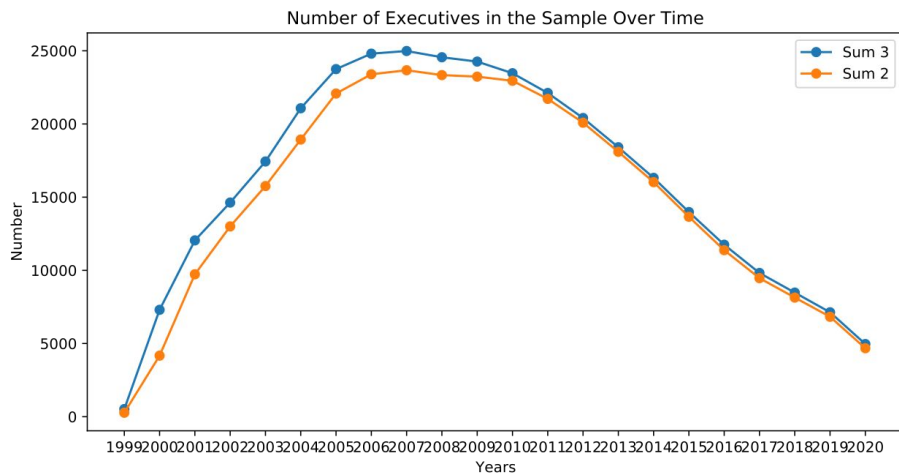
2. **Spread Out** Package over Vesting Period

- a. If an executive has 1 over and a vesting period of 5 years then they exercise 0.2 of that option in each vesting year.

3. Executive exercises option package when stock value is highest during vesting period. (Not done)

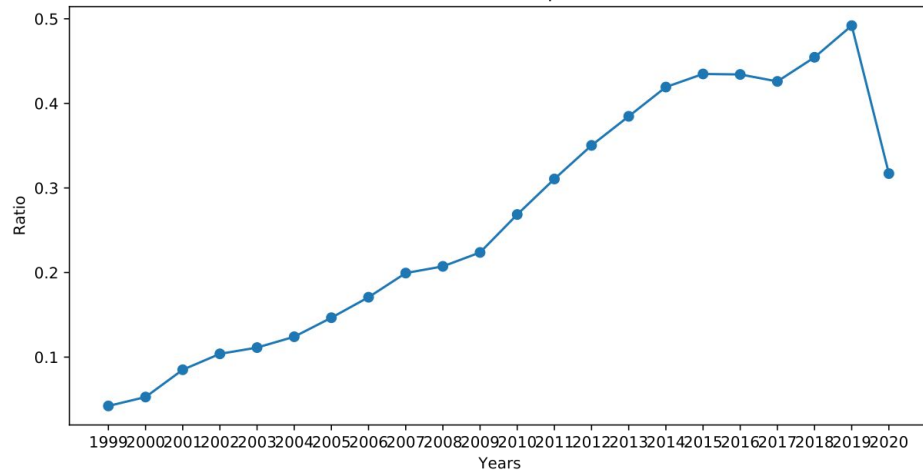
- a. Would be an upper bound case.
- b. Never programmed this. It is harder than it sounds.

BoardEx: Shrinking Sample and Options Awarded

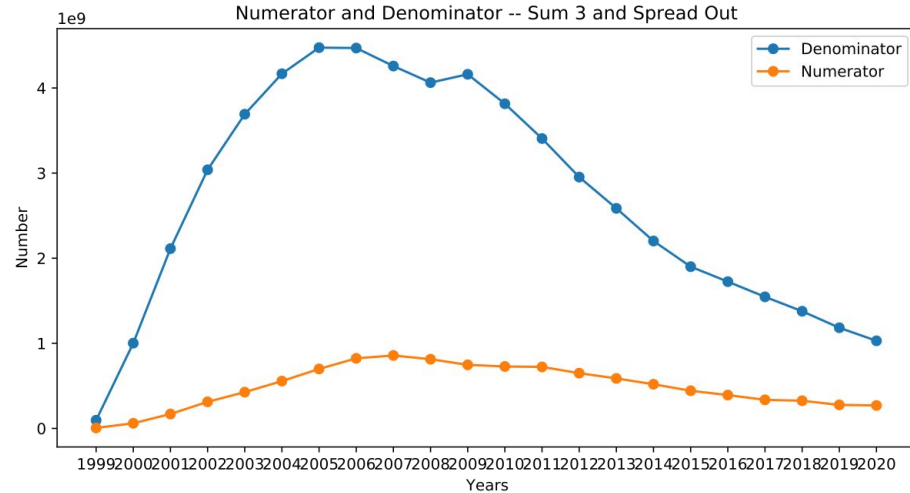


Sum 3 and Spread Out

Ratio -- Sum 3 and Spread Out

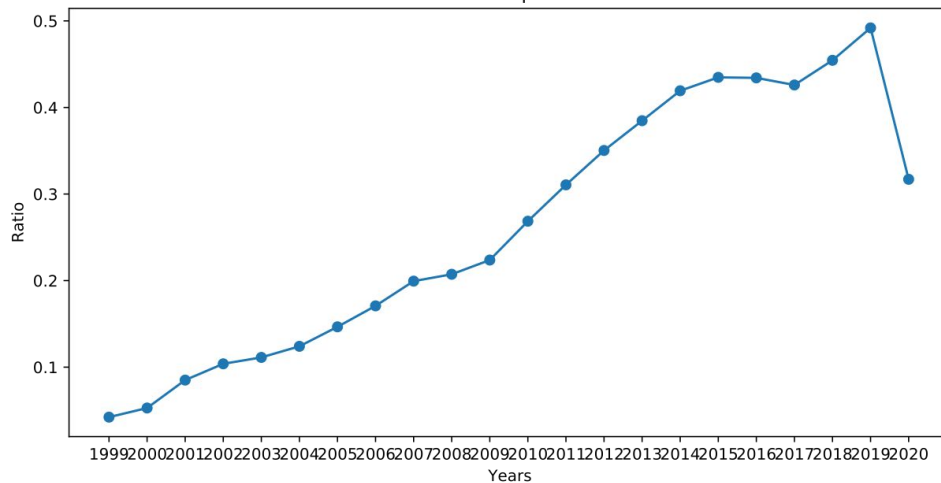


Numerator and Denominator -- Sum 3 and Spread Out

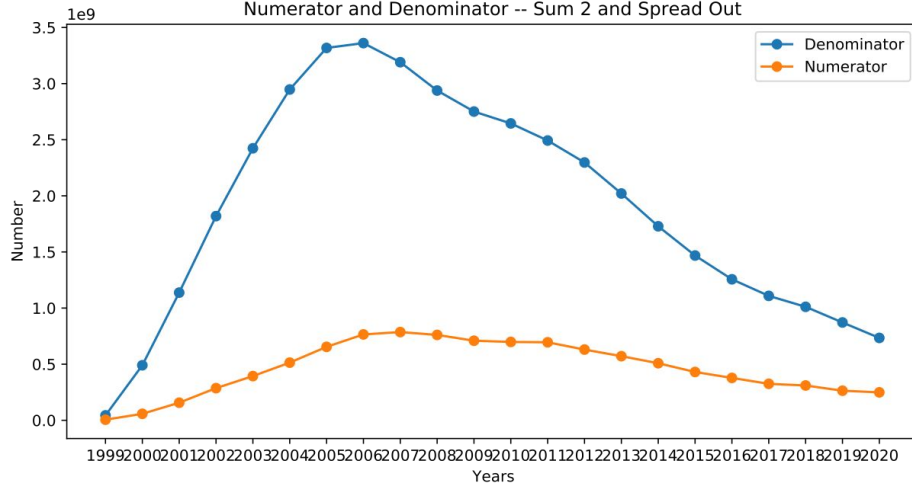


Sum 2 and Spread Out

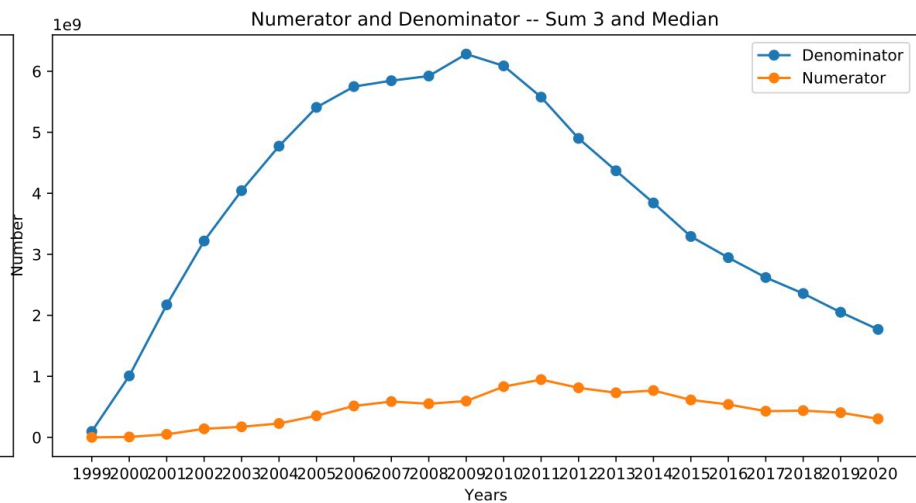
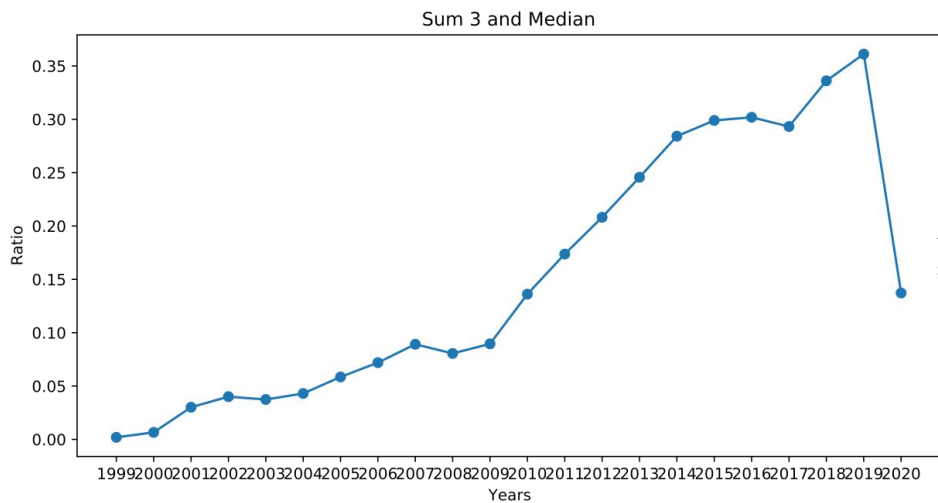
Sum 2 and Spread Out



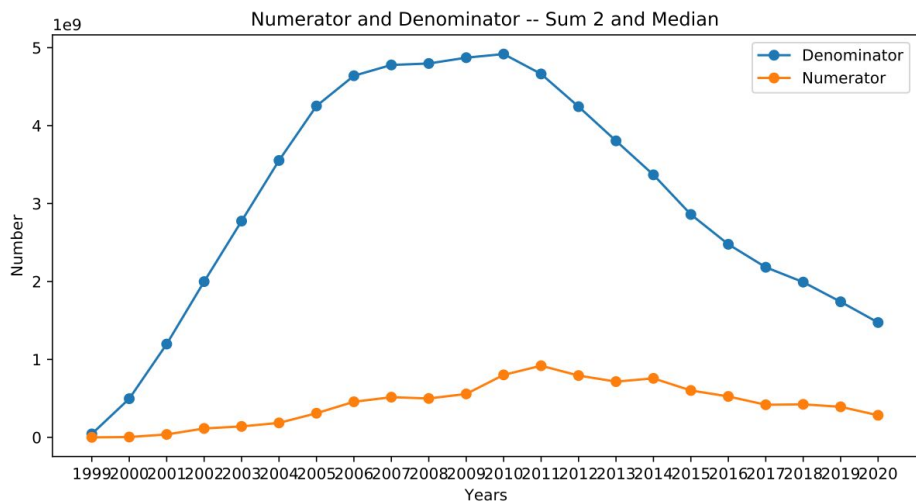
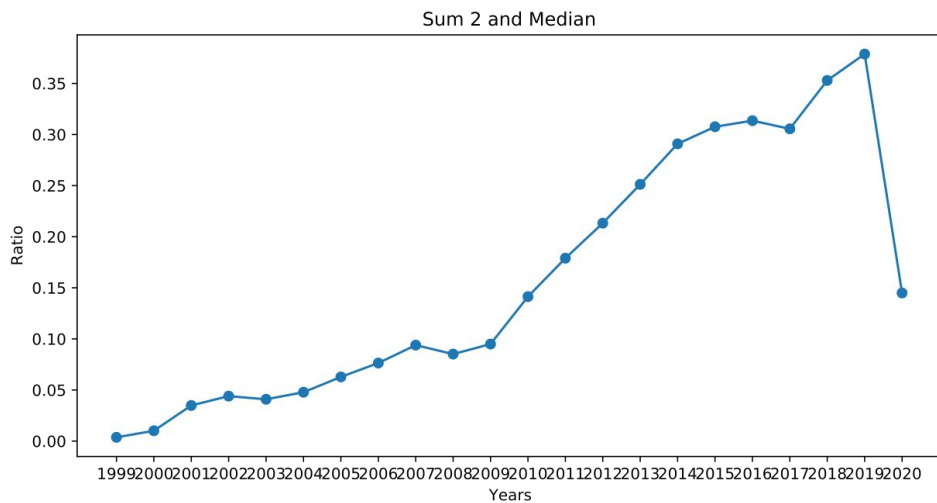
Numerator and Denominator -- Sum 2 and Spread Out



Sum 3 and Median



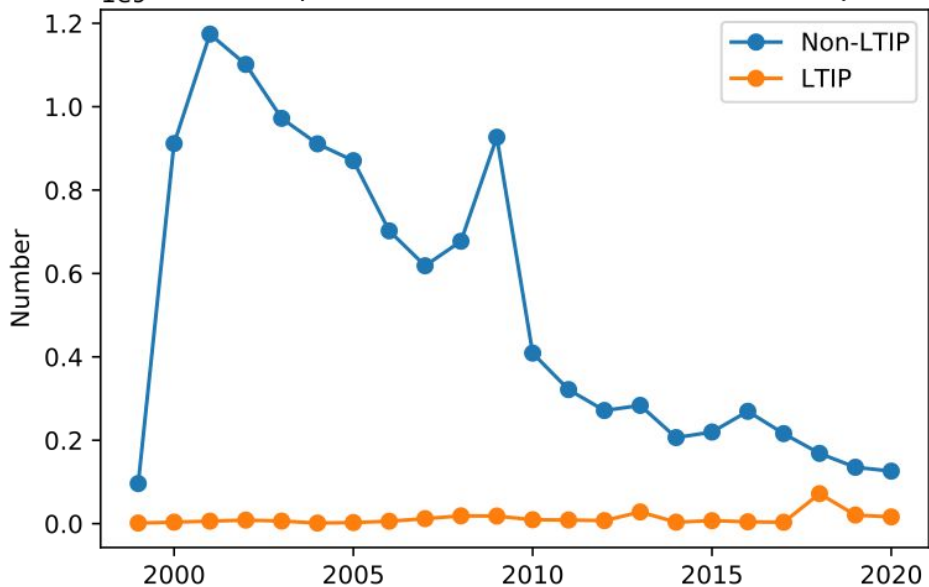
Sum 2 and Median



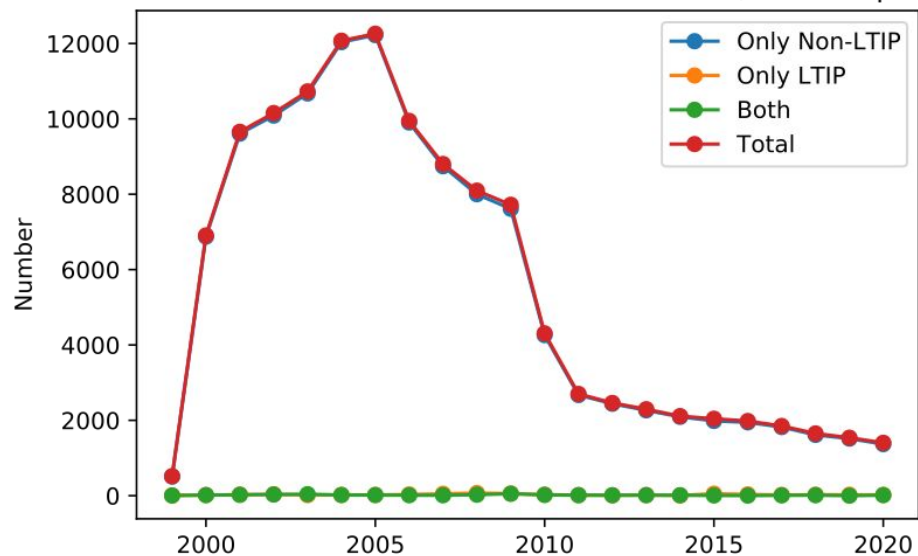
BoardEx: Non-LTIP + LTIP

- According to people at BoardEx LTIP options (incentive based) are preferred now.
- But few executives are awarded LTIP options in BoardEx...

Number of Options Awarded Non-LTIP and LTIP Options



Number of Executives Awarded Non-LTIP and/or LTIP Options



Problems with BoardEx

- Not knowing when options were exercised really limits analysis.
- We discovered that after 2009 BoardEx surveyed fewer executives. Hard to distinguish whether options exercised were growing over time or sample getting smaller.

Variables needed from BoardEx

- We need to know the quantity and when options are exercised. Ideally the exact date.
- Stock price when options were exercised. Value (like BS) of the options that are exercised.
- When shares are sold and at what price.
- **Need to know when BoardEx stops collecting data on an executive.**
- Any income or capital gain tax information.
- Criteria of the LTIP plans. How much of these plans have been fulfilled?

Questions for BoardEx

1. LTIP options are preferred but BoardEx does not have a lot of data on it. Is more LTIP option data available?
2. Any way to distinguish between ISO and NSO plans?
3. Is data available for when the shares are sold by executive in addition to when they are exercised? Stock price when sold?
4. They say that they have data on options that are exercised, do they also have data on LTIP options that are exercised?
5. For LTIP variable definition what do they mean by “maximum number” (see footnotes on previous page)
6. Do they collect data on the awarding criteria of plans? How much or how quickly criteria was fulfilled?
7. How important are other LTIP plans like equity matching schemes and shares issued relative to LTIP options?
8. More countries available?