

# Group 9 Project

Are Rent Caps an Effective Policy Tool?

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## Group Members:

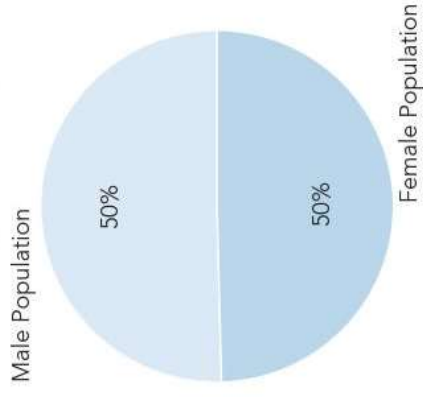
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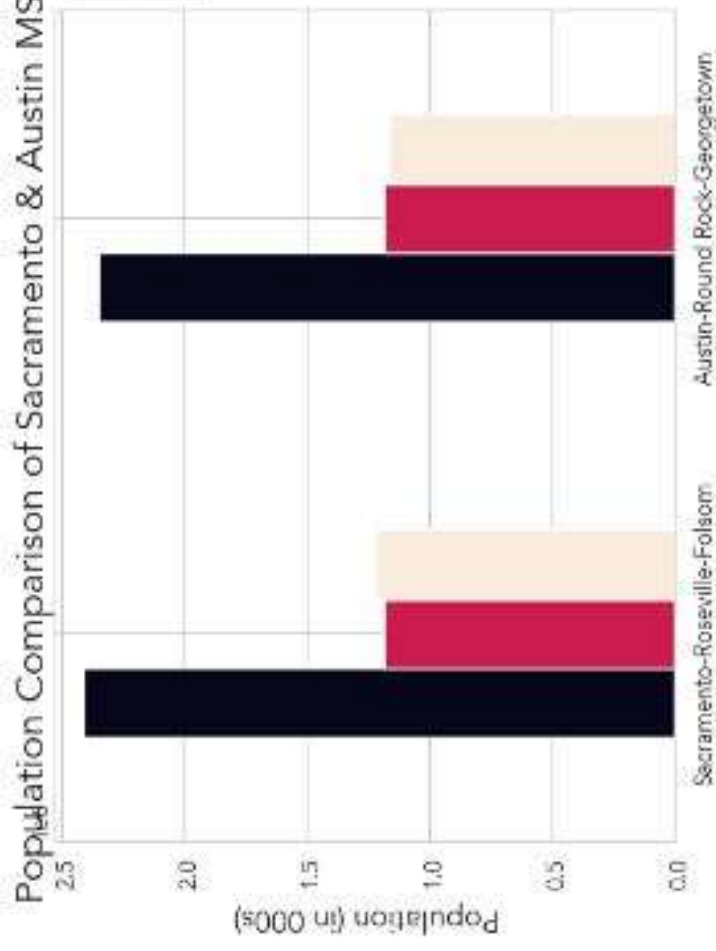
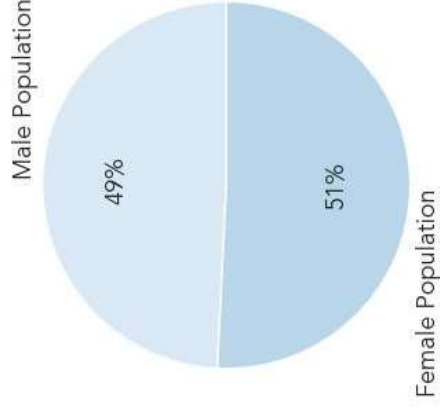
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# Austin and Sacramento MSAs: Population Composition Comparisons

Austin-Round Rock-Georgetown Population Breakdown



Sacramento-Roseville-Folsom Population Breakdown



# ***Stock market and housing market 2015-2020***

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The stock market is a very large dataset with several parameters but for our analysis have decide to use the date, month, symbols and closing price. Our analysis is goin evaluate how the 2020 pandemic had a financial impact on the stock market

# *Stock market Raw data*

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date, volume, open, high, low, close, adjclose, symbol
7/2/2020, 257500, 17.63999939, 17.73999977, 17.62000084, 17.70999998, 17.70999998, AAU
7/1/2020, 468100, 17.72999954, 17.72999954, 17.54000092, 17.68000031, 17.68000031, AAU
6/30/2020, 319100, 17.64999962, 17.79999924, 17.61000061, 17.78000069, 17.78000069, AAU
6/29/2020, 405500, 17.67000008, 17.69000053, 17.62999916, 17.68000031, 17.68000031, AAU
6/26/2020, 335100, 17.48999977, 17.67000008, 17.42000008, 17.67000008, 17.67000008, AAU
6/25/2020, 246800, 17.60000038, 17.60000038, 17.52000046, 17.59000015, 17.59000015, AAU
6/24/2020, 329200, 17.61000061, 17.70999908, 17.55999947, 17.61000061, 17.61000061, AAU
6/23/2020, 351800, 17.54999924, 17.65999985, 17.54999924, 17.65999985, 17.65999985, AAU
6/22/2020, 308300, 17.5, 17.56999969, 17.44000053, 17.5, 17.5, AAU
6/19/2020, 153800, 17.27000046, 17.39999962, 17.26000023, 17.39999962, 17.39999962, AAU
6/18/2020, 102200, 17.27000046, 17.27000046, 17.13999939, 17.22999954, 17.22999954, AAU
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## *Average closing price per year and by symbols*

We can see that there is a significant decrease of closing price during the pandemic. AAAG (century Group USA) and AAL (American Airlines) decrease significantly

Out[28]:

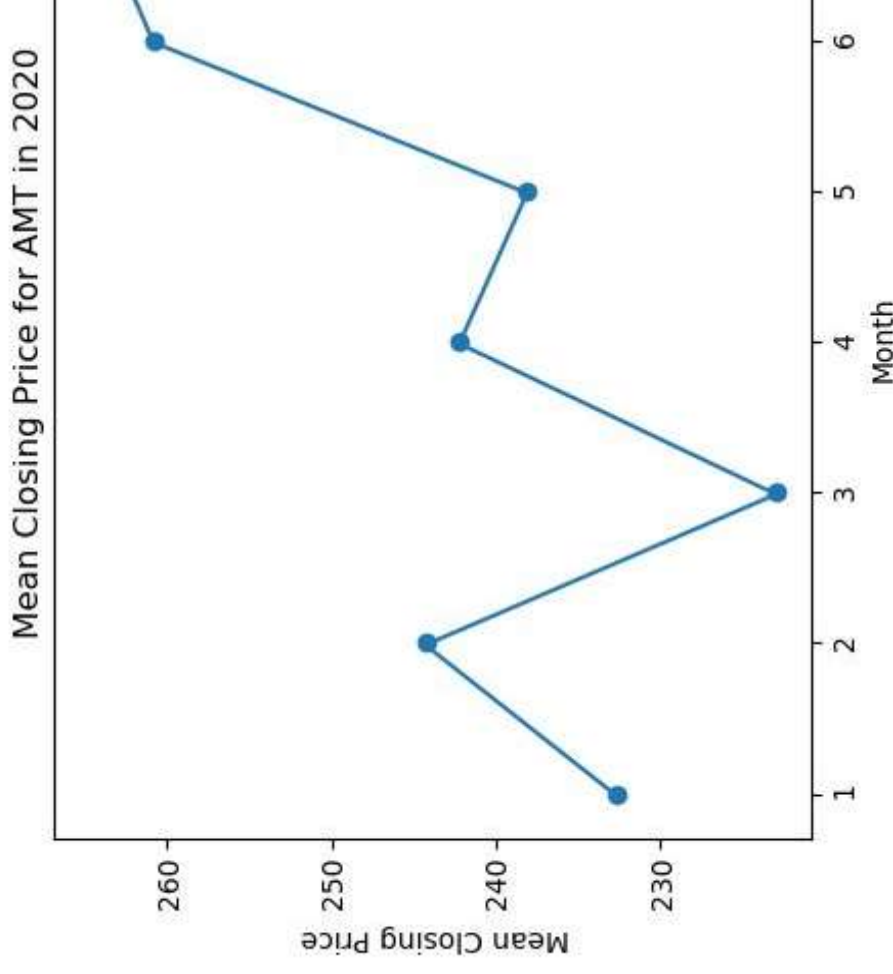
symbol	year	close
AAAU	2018	12.171579
	2019	13.920317
	2020	16.474961
AACG	2019	1.931699
	2020	1.025039
	2015	38.491495
	2016	38.953017
AADR	2017	50.131394
	2018	54.197490
	2019	47.813492
	2020	48.989291
	2015	45.122103
AAL	2016	38.183849
	2017	47.490717
	2018	42.801952
	2019	30.879326
	2020	17.341260

# Stock Market Analysis for American Tower Corporation[AMT] in 2020

AMT is one of the largest global real estate investment in the housing market

We can see the financial impact of the pandemic on the AMT stock market in 2020.

In the midst of the pandemic the housing stock market declined significantly while during the summer we can see that the stock market is at its peak again because of the high demand.

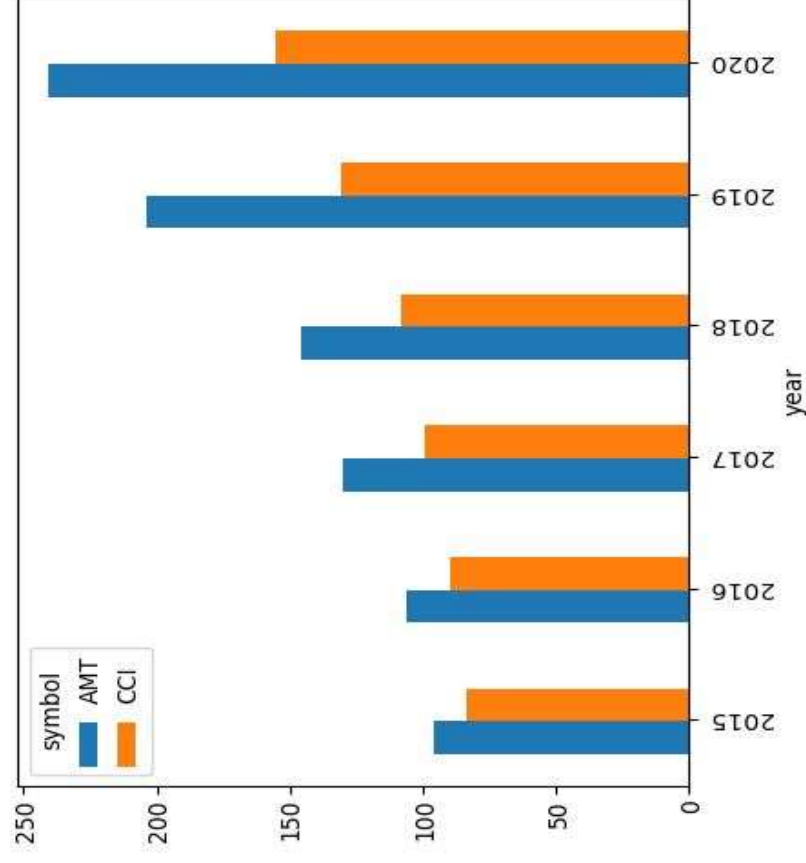


# *stock market comparison*

We are comparing 2 large real estate investment corporations ( American Tower Corporation AMT and Crown Castle Corporation CCI) in the housing market and we can see a increase of their stocks prices from 2015 to 2020.

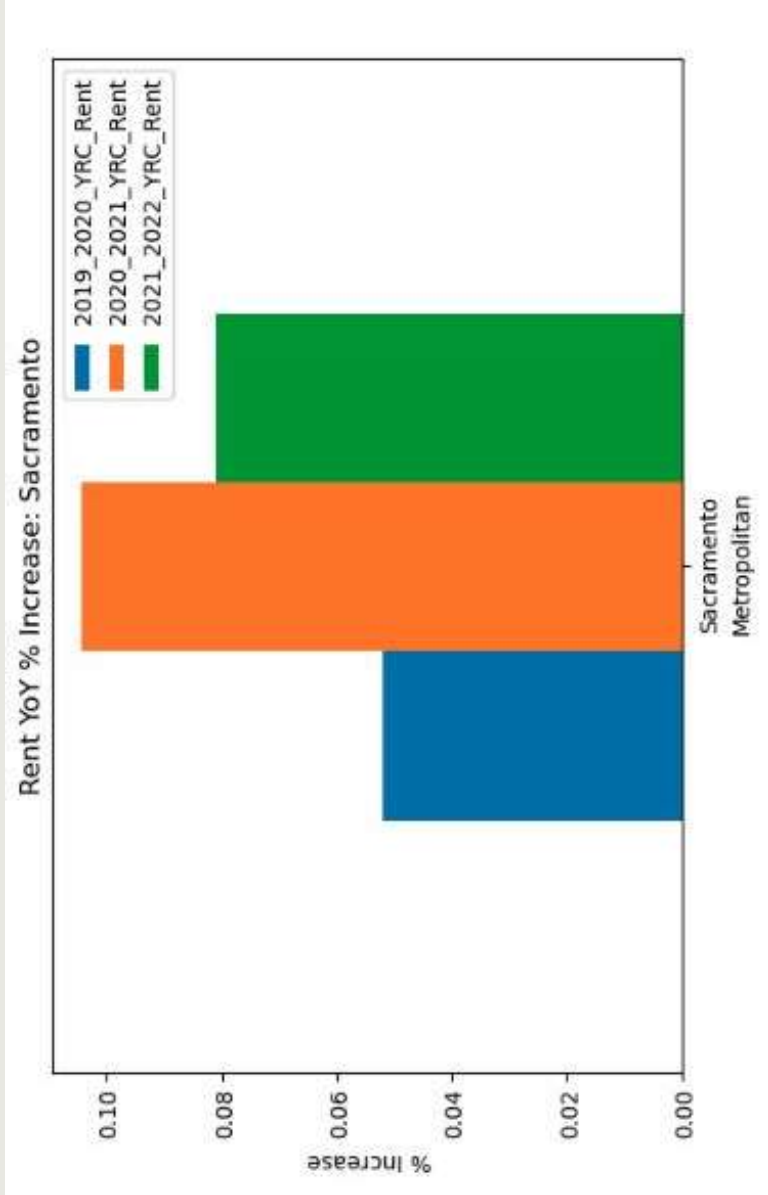
The widespread shift to remote work from home prompted many buyers to re-evaluate their housing options.

Also in 2020 due to the falling of mortgage interest rates, the cost to borrow money to buy a house was dropping and more people could afford to buy a house

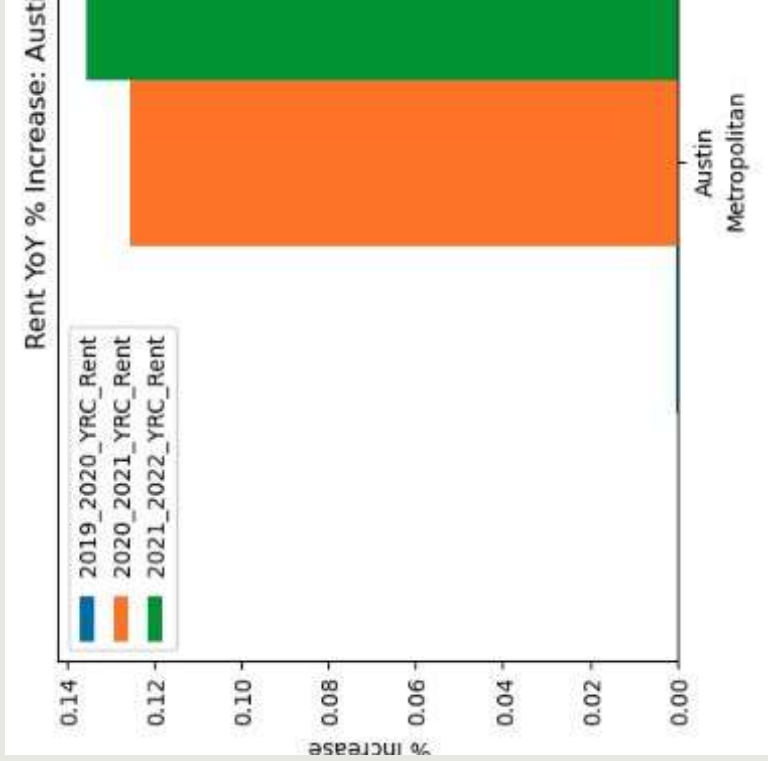




# Year over Year Rent Increase Sacramento vs Austin

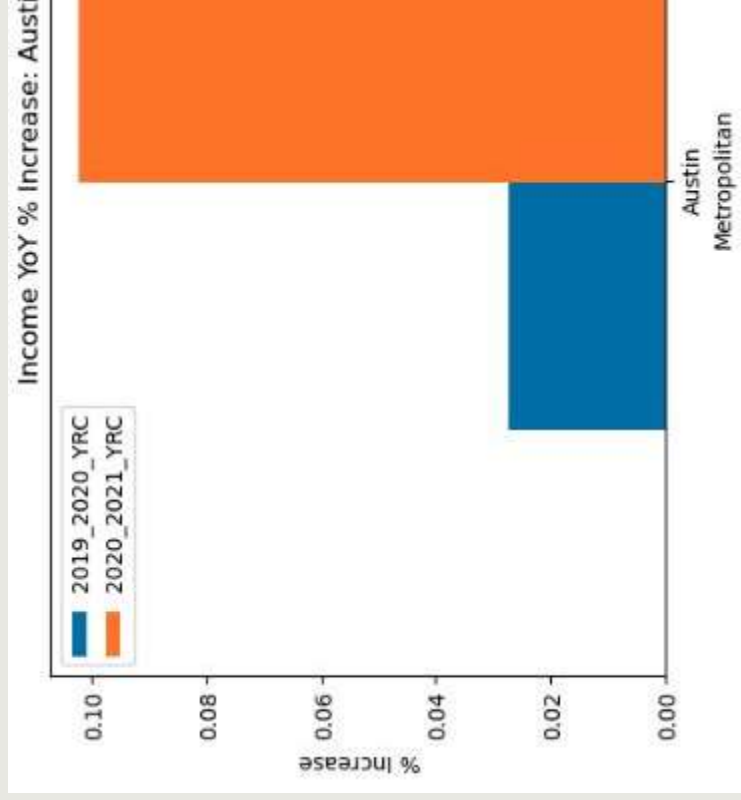
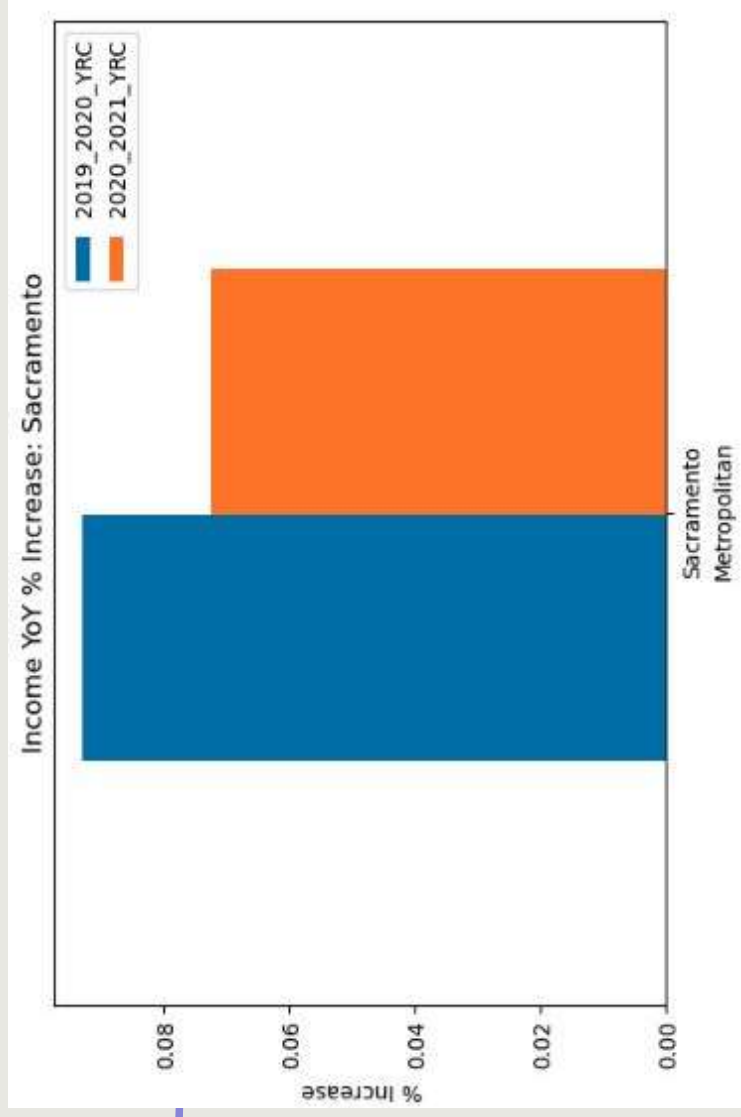


Sacramento avg rent increase 2019 to 2022 : 7.9116333241907605%  
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Sacramento avg rent increase 2019 to 2020 : 5.187654795099598%  
Sacramento avg rent increase 2020 to 2021 : 10.434557098539647%  
Sacramento avg rent increase 2021 to 2022 : 8.112687832083566%



Austin avg rent increase 2019 to 2022 : 8.77%  
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Austin avg rent increase 2019 to 2020 : 0.00%  
Austin avg rent increase 2020 to 2021 : 12.00%  
Austin avg rent increase 2021 to 2022 : 13.00%

# Year over Year Income Increase Sacramento vs Austin



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Sacramento avg income increase 2019 to 2021 : 8.25331800239359%
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Sacramento avg income increase 2019 to 2020 : 9.277290922860542%
Sacramento avg income increase 2020 to 2021 : 7.229345081926637%
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Austin avg income increase 2019 to 2021 : 6.
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Austin avg income increase 2019 to 2020 : 2.
Austin avg income increase 2020 to 2021 : 10
```

# Analyst

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Sacramento avg rent increase 2019 to 2021 : 7.811105946819623%
Austin avg rent increase 2019 to 2021 : 6.281834372320165%
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Sacramento avg rent increase 2019 to 2020 : 5.187654795099598%
Austin avg rent increase 2019 to 2020 : 0.02854684323910156%
Sacramento avg rent increase 2020 to 2021 : 10.434557098539647%
Austin avg rent increase 2020 to 2021 : 12.535121901401228%
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Sacramento avg income increase 2019 to 2021 : 8.25331800239359%
Austin avg income increase 2019 to 2021 : 6.474161555607124%
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Sacramento avg income increase 2019 to 2020 : 9.277290922860542%
Austin avg income increase 2019 to 2020 : 2.720305613614836%
Sacramento avg income increase 2020 to 2021 : 7.229345081926637%
Austin avg income increase 2020 to 2021 : 10.228017497599415%
```

- Currently only have 2 years' worth of data, so the scope if more time allowed, would be to include income data was available to the city.
- Though Austin had a lower rent increase from 2019 to 2021 when reviewing the data, it send Austin rent increase is trailing behind the rate than Sacramento
- Sacramento's income increase was higher than over their rent increase
- Worth further review Austin's income over the years have become a new "trend" for the city
  - Could be influencing the rent
  - Could be driving income
- Interesting to note significant increase in rent and income from 2019 to 2020 to 2021 – could be due to the 2020 move announcement
  - Rent 12.51 delta
  - Income 7.51 delta