

# The Main Effects on Netflix Revenue and Subscribers

The Effect on Netflix Global Revenue  
Before, During and After Covid-19 Virus

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# Review

Netflix is one of the world's leading entertainment services in over 190 countries enjoying TV series, films and games across a wide variety of genres and languages.

Members can play, pause and resume watching as much as they want, anytime, anywhere, and can change their plans at any time.

Netflix started in 1997 as a DVD-rental-by-mail firm, and spent the first five years struggling to get to a sustainable model that was cash flow positive. They began streaming in the US in 2007, and internationally in 2010. Netflix's first original series debuted in 2013. They became global in 2016, nearly twenty years after starting Netflix.

During 2022, Netflix was struggling to show meaningful growth given a weak economy, increasingly aggressive competition, and an apparently saturated U.S. market for streaming.

## Sources:

<https://about.netflix.com/en>

<https://ir.netflix.net/ir-overview/profile/default.aspx>

<https://www.worldometers.info/coronavirus/>

<https://www.kaggle.com/datasets/josephassaker/covid19-global-dataset>

<https://www.demandsage.com/netflix-subscribers/>

[https://www.crunchbase.com/organization/netflix/company\\_financials](https://www.crunchbase.com/organization/netflix/company_financials)

<https://www.businessofapps.com/data/netflix-statistics/>

<https://www.statista.com/topics/842/netflix/#topicOverview>

[https://www.calcalist.co.il/world\\_news/article/bjekmcwdn](https://www.calcalist.co.il/world_news/article/bjekmcwdn)

<https://truelist.co/blog/netflix-statistics/>

## Countries where Netflix Services is Available In



# Scope Of Work

The aim of current work is to portray some of the leading influences on the company's revenue and subscribers such as Covid-19 Virus and its leading competitors.

**Date range:** 2022/12- 2018/08

**Countries:** Only countries which Netflix is available in.

We are targeting the sales and revenue operation units.

Due to inherent limitations, such as data availability and time constraints, the focus is solely on gathering information about Netflix and the impact of the COVID-19 pandemic.

Data on subscribers and trends from Netflix's competitors was not collected. Therefore, any events or developments at competing platforms, such as Disney's special sale, that may have influenced Netflix are not taken in account.

# Research Questions

The project is based on an ad hoc analysis of Netflix revenue and subscribers to find out the trend changes as a result of Covid-19 and the competition Netflix deals with:

- What are the main trends of revenue and subscribers number and market cap during the years 2018-2022?
- How has the Covid-19 pandemic outbreak affected Netflix revenue and subscribers number ?
  - Has the revenue before the outbreak of the Covid-19 remained the same across the three years of the pandemic?
  - Has the number of subscribers reduced or grown?
- How was the company's pricing strategy affected through the years 2018-2022?
- How Netflix revenue, subscribers number and pricing have been changed in comparison to its leading competitors during the years 2019-2022?

# KPI & Measures

- The number of **subscribers per quarter** - the growth trend resulting from the pandemic.
- The increase in **plan prices** is a result of the growing number of subscribers.
- Examine the trend changes of **market competitors** over a given period.
- The year **revenue** report will show the growing trend changes as a result of a large number of people staying at home due to the pandemic.

# Main Variables Glossary

- **Subscribers** - Number of subscribers per quarter in millions.  
The number of subscribers per year is represented by the number of subscribers in the last quarter of the year, as it is a cumulative measure
- **Revenue** - Company revenue per quarter in billions
- **Plan price** - The price for the streaming watching plan per year in US dollars.  
When compared to competitors - only premium plan prices are taken in account.
- **New Deaths**- Sum of new death cases from COVID-19 for each quarter (measure for the pandemic severity).  
Source: <https://pandem-ic.com/four-perspectives-on-pandemic-severity/>
- **Geographic Regions** - Four regions (Asia and Pacific, Latin America, US & Canada, EMEA - Europe, Middle East and Africa) which have netflix streaming services, calculated according to Netflix financial reports



# Data List

| Original File Name          | Sql Table / Python Result File Name | Record Count | Record Count After Transformation |
|-----------------------------|-------------------------------------|--------------|-----------------------------------|
| Competition.xlsx            | competition.py                      | 24           | 25                                |
| Competitors.xlsx            | competitors.py                      | 7            | 8                                 |
| CovidCountryData.xlsx       | covid_country_data.py               | 227          | 226                               |
| CovidDailyData.xlsx         | covid_daily_data.py                 | 184.788      | 599                               |
| GlobalStreamingRevenue.xlsx | global_streaming_revenue.py         | 5            | 5                                 |
| NetflixCountries.xlsx       | netflix_countries.py                | 227          | 213                               |
| NetflixMarketCa.xlsx        | netflix-market-cap.py               | 21           | 21                                |

# Data List

| Original File Name            | SQL Table / Python Result File Name | Record Count | Record Count After Transformation |
|-------------------------------|-------------------------------------|--------------|-----------------------------------|
| NetflixPlanPrices.xlsx        | netflix-plan-prices.py              | 4            | 52                                |
| NetflixRevenueSubscribers.csv | netflix-revenue-subscribers.py      | 81           | 80                                |
| Regions.csv                   | regions.py                          | 4            | 4                                 |

# Data Review - Summary

The database which has been built for the current project contains 10 tables, the largest of which contains around 200K records.

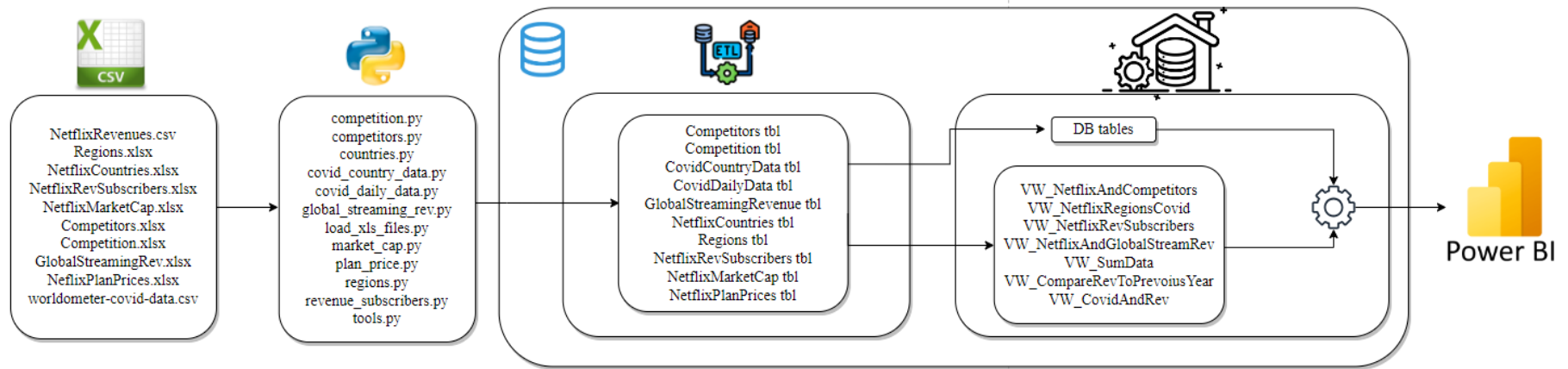
## Assumptions:

- The number of subscribers is shown in millions
- The revenues are given in billions
- The prices are given in U.S. dollars and show US prices only (prices vary significantly between countries over the world <https://vpnwiki.com/en/netflix-subscription-prices>) .

## Filters on the data:

- Countries which Netflix is available in
- Premium plan prices per year

# Data Flow High Level



# Preparing data with Python - Example

```
# preparing NetflixRevenuesSubscribers table
DfNetflixRevenueSubscribers['SubscribersPrctChange'] = DfNetflixRevenueSubscribers['SubscribersQuarterEndM'].pct_change()

DfNetflixRevenueSubscribers['RevenuePrctChange'] = DfNetflixRevenueSubscribers['RevenueBillions'].pct_change()

display(DfNetflixRevenueSubscribers)

#Splitting Column Year to quarter and year and cleaning Qaurters of letter 'Q'
DfNetflixRevenueSubscribers[['Quarter', 'Year']] = DfNetflixRevenueSubscribers["Year"].apply(lambda x: pd.Series(str(x).split("-")))

DfNetflixRevenueSubscribers['Quarter'] = DfNetflixRevenueSubscribers['Quarter'].apply(lambda x: pd.Series(str(x).replace('Q', '')))

# Changing Data Type
DfNetflixRevenueSubscribers[['ID', 'RegionID', 'Quarter', 'Year']] = \
    DfNetflixRevenueSubscribers[['ID', 'RegionID', 'Quarter', 'Year']].astype('int32')

# Calculating percentage change
DfNetflixRevenueSubscribers[['SubscribersQuarterEndM', 'RevenueBillions', 'SubscribersPrctChange', 'RevenuePrctChange']] = \
    DfNetflixRevenueSubscribers[['SubscribersQuarterEndM',
                                   'RevenueBillions',
                                   'SubscribersPrctChange',
                                   'RevenuePrctChange']].astype('float32')
```

# Preparing data with Python - Example

```
# preparing NetflixPlanPrices table - Pivot
NetflixPlanPrices = pd.melt(NetflixPlanPrices, id_vars='Netflix_Plans/year',
                             value_vars= [2023, 2022, 2021, 2020, 2019, 2018] )

# define columns
NetflixPlanPrices.columns = [Netflix_Plans, 'Year', 'Price']

# define ID column
NetflixPlanPrices.insert(0, 'ID', range(1, len(NetflixPlanPrices) + 1))

# change data types
NetflixPlanPrices[['Price']] = NetflixPlanPrices[['Price']].astype('float32')
NetflixPlanPrices[['ID', 'Year']] = NetflixPlanPrices[['ID', 'Year']].astype('int32')
NetflixPlanPrices[[Netflix_Plans]] = NetflixPlanPrices[['Plan']].astype('str')
```

# Preparing data with Python - Example

```
# set primary key
def set_primary_key(engine, table_name, column_name):
    with engine.connect() as con:
        con.execute('ALTER TABLE ' + table_name + ' ALTER COLUMN ' + column_name + ' int NOT NULL;')
        con.execute('ALTER TABLE ' + table_name + ' ADD PRIMARY KEY (" + column_name + ");')

# NetflixRevenueSubscribers table
set_primary_key(engine, 'NetflixRevenueSubscribers', 'ID')
```

# Preparing data with Python - Example

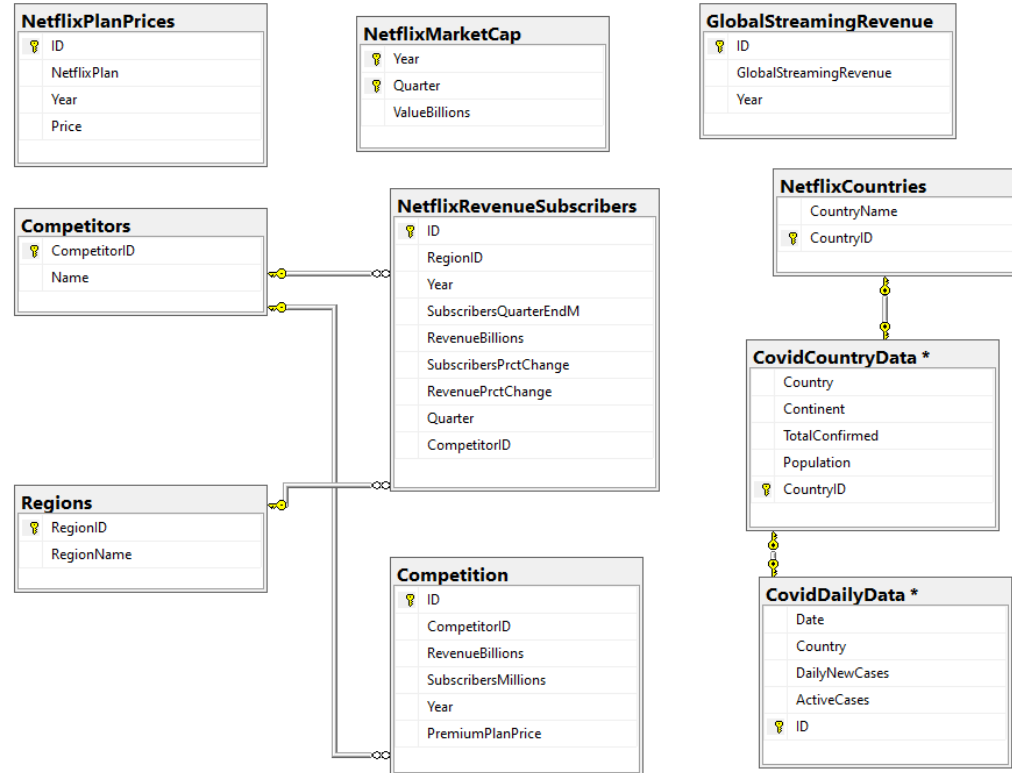
```
# COSTANTS
# uid, psw, dsn = 'computer-name', 'computer-name', 'dsn_name'
UID, PSW, DSN = 'PC', 'PC', 'NetflixFProject'
ENGINE = sa.create_engine(f"mssql+pyodbc://{UID}:{PSW}@{DSN}")
DB_PATH = "../FinalProject/OperationalDB/"

# create db
NetflixFPlanPrices.to_sql(name='NetflixFPlanPrices',
                           con=ENGINE,
                           index=False,
                           if_exists='replace')
```



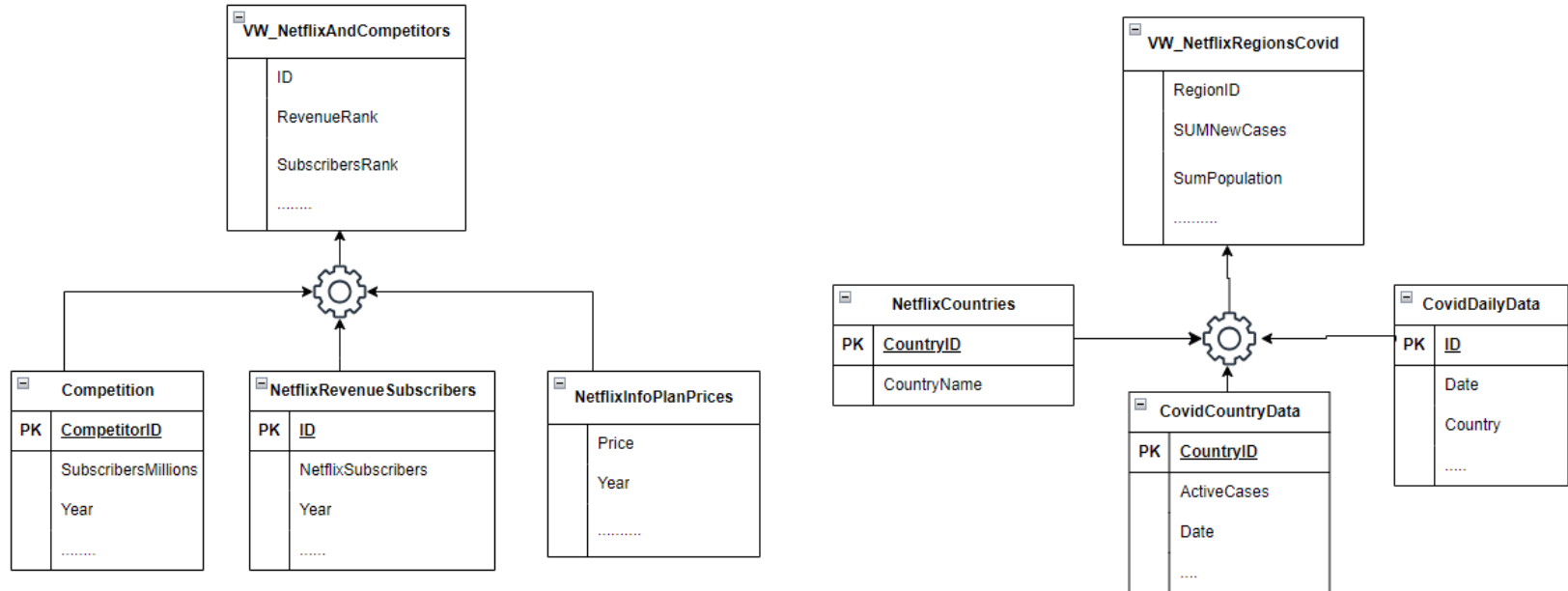
# Data Review

Final tables ERD:



# Data Review

## Views



# Netflix Revenues and Subscribers Analyses

# Descriptive Statistics- Netflix Revenue and Subscribers

| Region Name                           | MinYear | MaxYear | Average Revenue (Billions) | Min Revenue (Billions) | MaxRevenue (Billions) | STDRevenue (Billions) | Avg Subscribers (Millions) | Min Subscribers (Millions) | Max Subscribers (Millions) | STD Subscribers (Millions) |
|---------------------------------------|---------|---------|----------------------------|------------------------|-----------------------|-----------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| Asia Pacific                          | 2018    | 2022    | 0.58                       | 0.199                  | 0.916                 | 0.26                  | 22.16                      | 7.394                      | 38.023                     | 10.18                      |
| EMEA (Europe, Middle East and Africa) | 2018    | 2022    | 1.75                       | 0.189                  | 2.561                 | 0.7                   | 57.3                       | 29.339                     | 76.729                     | 16.07                      |
| Latin America                         | 2018    | 2022    | 0.79                       | 0.54                   | 1.030                 | 0.16                  | 33.55                      | 21.26                      | 41.699                     | 6.6                        |
| US & Canada                           | 2018    | 2022    | 2.84                       | 1.976                  | 3.601                 | 0.54                  | 70.07                      | 60.909                     | 75.215                     | 4.79                       |

# Descriptive Statistics- Netflix Revenue and Subscribers

## SQL Query

```
SELECT      R.RegionName
            ,MIN(NRS.Year) as MinYear
            ,MAX(NRS.Year) as MaxYear
            ,ROUND(AVG(NRS.RevenueBillions), 2) as AverageRevenue
            ,MIN(NRS.RevenueBillions) as MinRevenue
            ,MAX(NRS.RevenueBillions) as MaxRevenue
            ,ROUND(STDEV(NRS.RevenueBillions), 2) as STDRevenue
            ,ROUND(AVG(NRS.SubscribersQuarterEndM), 2) as AverageSubscribers
            ,MIN(NRS.SubscribersQuarterEndM) as MinSubscribers
            ,MAX(NRS.SubscribersQuarterEndM) as MaxSubscribers
            ,ROUND(STDEV(NRS.SubscribersQuarterEndM),2) as STDSubscribers
FROM        NetflixRevenueSubscribers NRS
            JOIN Regions R
              ON NRS.RegionID=R.RegionID
GROUP BY    R.RegionName
```

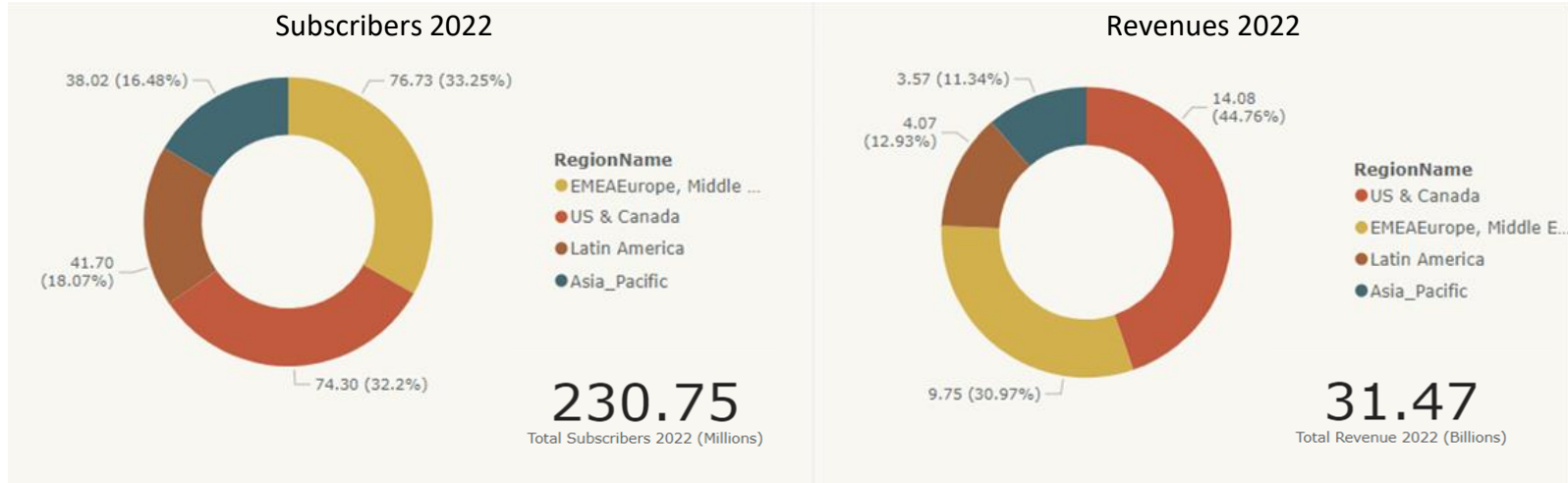
# Descriptive Statistics- Netflix Market Capital

| MinYear | Max Year | Average Value | MinValue | Max Revenue | STDValue |
|---------|----------|---------------|----------|-------------|----------|
| 2018    | 2023     | 170           | 90       | 270         | 53.58    |

```
SELECT      Min(Year) as MinYear
            ,MAX(Year) as MaxYear
            ,ROUND(AVG(ValueBillions), 2) as AverageValue
            ,MIN(ValueBillions) as MinValue
            ,MAX(ValueBillions) as MaxValue
            ,ROUND(STDEV(ValueBillions), 2) as STDValue
FROM        NetflixMarketCap
```

# Netflix Revenue and Subscribers By Region - Year 2022\*

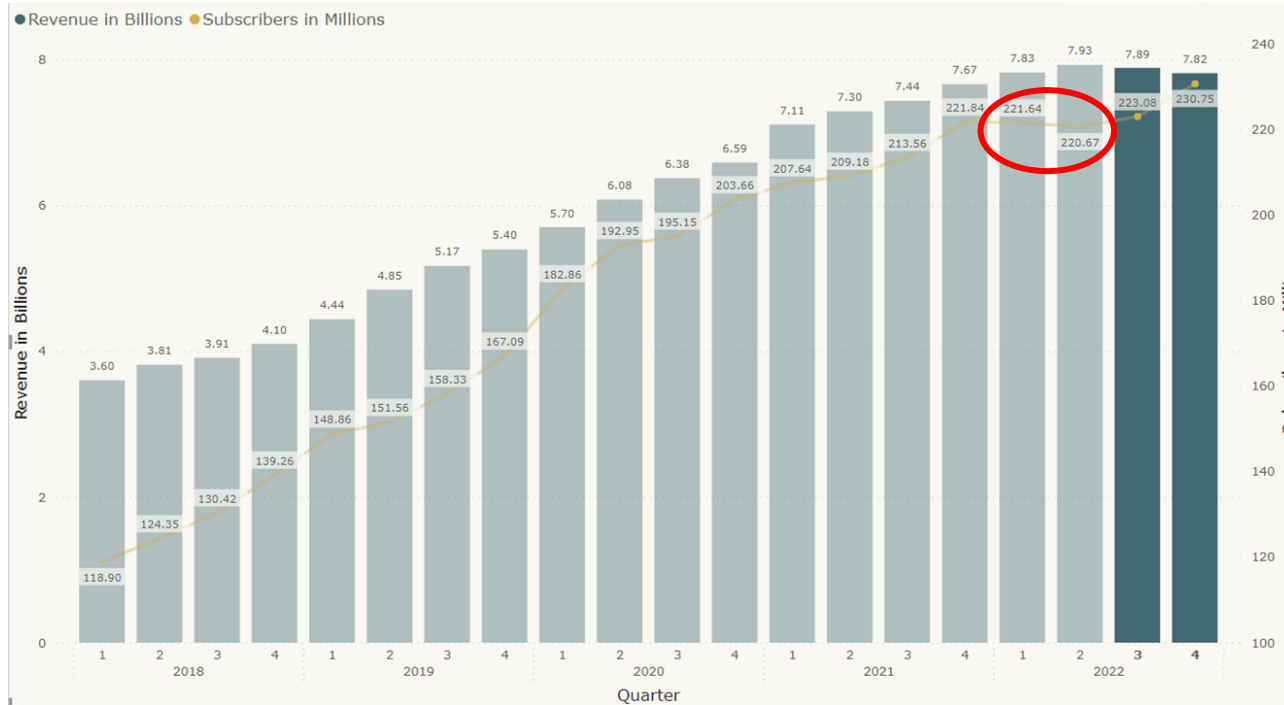
\*The latest year data which shows Netflix Revenue and subscribers by region



As shown, most of Netflix subscribers are from EMEA (Europe, Middle East and Africa) (33.25%) and US & Canada (32.2%)

The revenue in US & Canada is the largest (44.76%)

# Netflix Revenue and Subscribers Totals by Quarter and Year



31.47

Max of Netflix Year Revenue (2022)

15.43

Min of Netflix Year Revenue (2018)

139.26

Min of Year Subscribers (2018)

230.75

Max of Year Subscribers (2022)

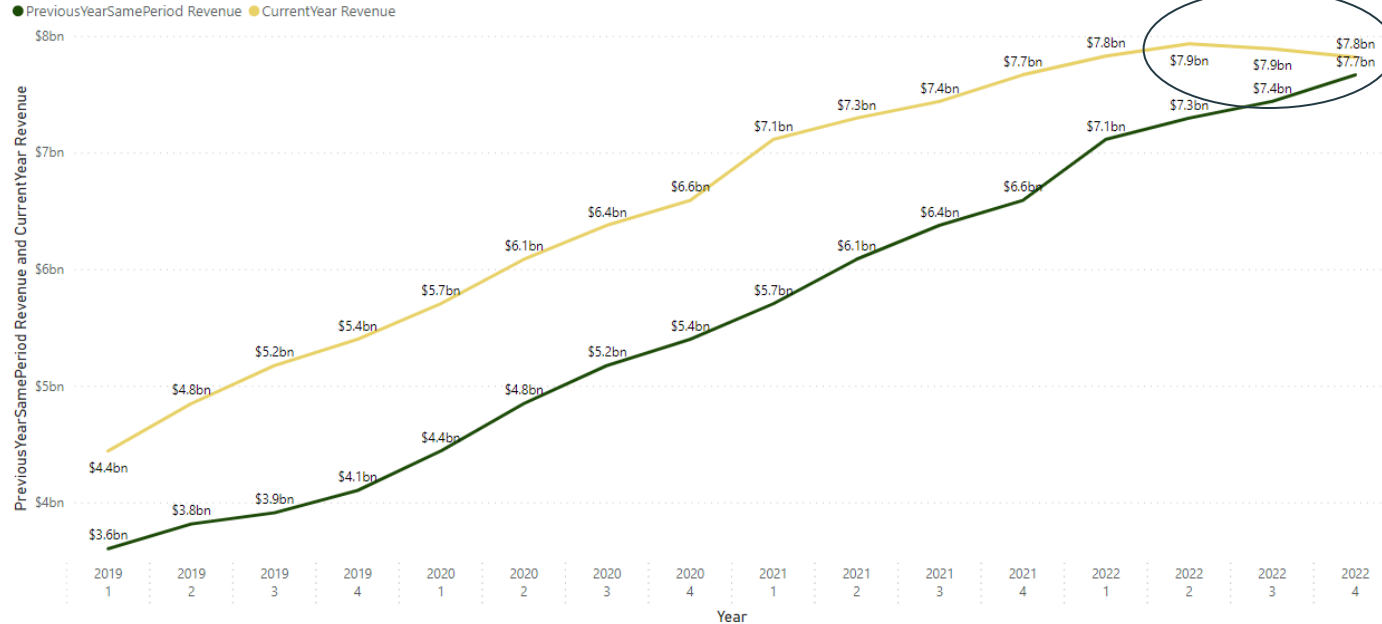
Netflix showed long term subscribers and revenue growth, until 2022, where in Q1 and Q2 Netflix experienced subscribers loss, and in Q3 and Q4 revenue descent.

[theguardian.com/media/2022/jul/19/netflix-slump-earnings-call-second-quarter-2022](https://theguardian.com/media/2022/jul/19/netflix-slump-earnings-call-second-quarter-2022)



# Netflix Total Revenues of Current Year vs Previous Year Same Period

PreviousYearSamePeriod vs. CurrentYear Revenues by Year



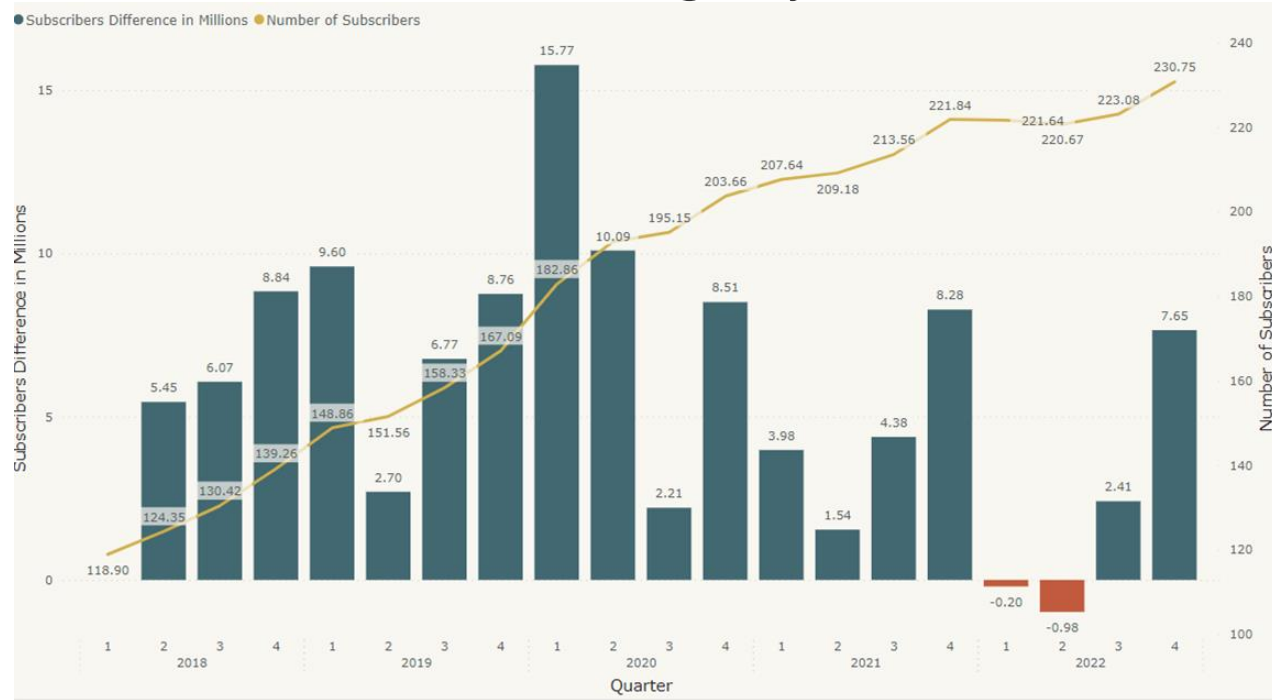
We can observe the trend changes of Current Year Revenue (yellow line) compared to the Previous Year Same Period (green line).

It can be summarized, that although the company experienced a **reduction in revenue growth** in the Q3 and Q4 of 2022, the tendency was still positive in comparison to previous year.

# Query

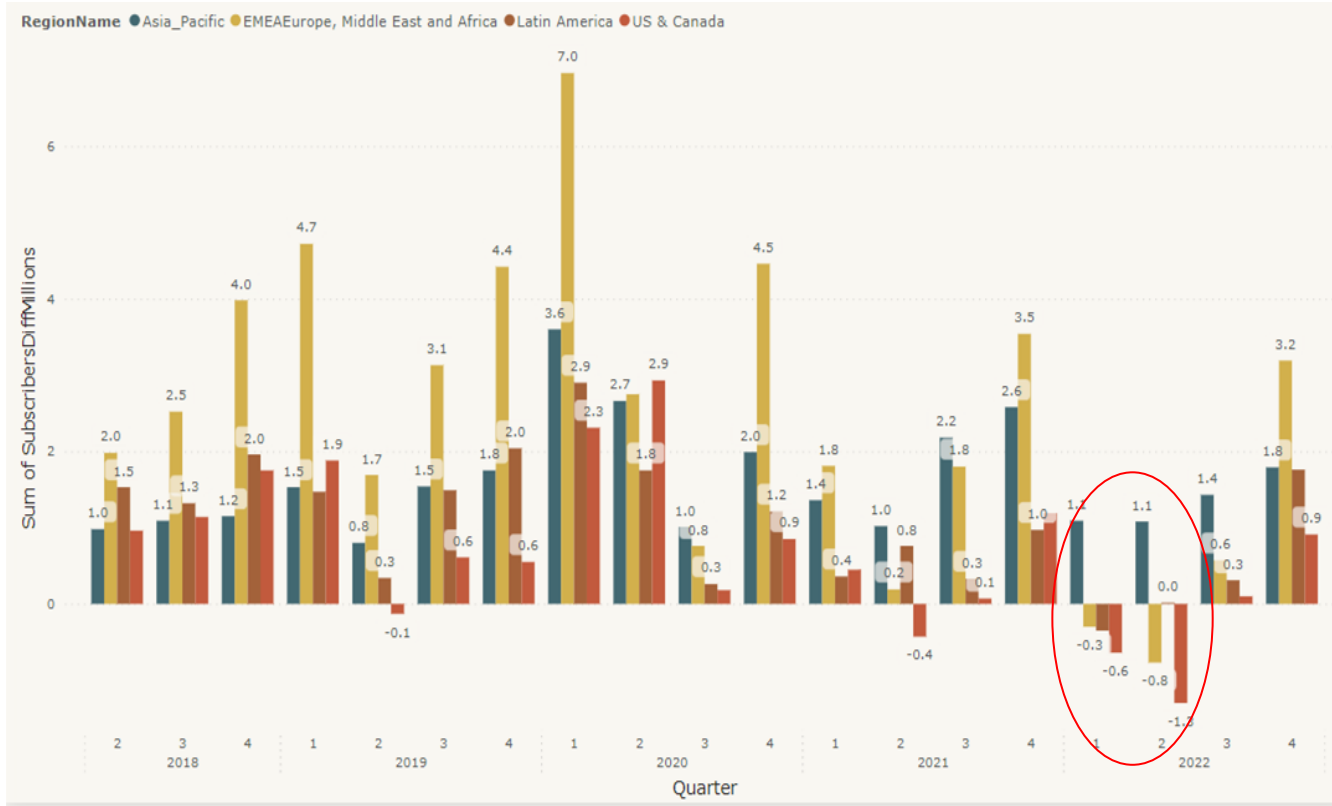
```
WITH Totals AS
(
  SELECT  Year
          ,Quarter
          ,SUM(RevenueBillions) * 1000000000 AS TotalRevenue
  FROM    NetflixRevenueSubscribers
  GROUP BY Year
          ,Quarter
)
, PreviousQuarter AS
(
  SELECT  *
          ,LAG(TotalRevenue) OVER (ORDER BY Year, Quarter ASC) PreviousQuarterRevenue
  FROM    Totals
)
SELECT  a.Year
        ,a.Quarter
        ,ROUND(a.TotalRevenue, 2) TotalRevenue
        ,ROUND(a.PreviousQuarterRevenue, 2) PreviousQuarterRevenue
        ,ROUND(b.TotalRevenue, 2) AS YTD
  FROM    PreviousQuarter a
        LEFT JOIN PreviousQuarter b
            ON b.Quarter = a.Quarter
            AND b.Year = a.Year - 1
```

# Netflix Subscribers Change by Quarter and Year



- This chart shows netflix growth or loss of subscribers in each quarter (the difference on subscribers numbers from quarter to quarter)
- A constant growth in subscribers until Q1 2022, where Netflix lost 200K subscribers and almost 1M in Q2 2022. The growth tendency in subscribers turned positive only in Q3 2022, maybe due to the release of a cheaper plan with ads.

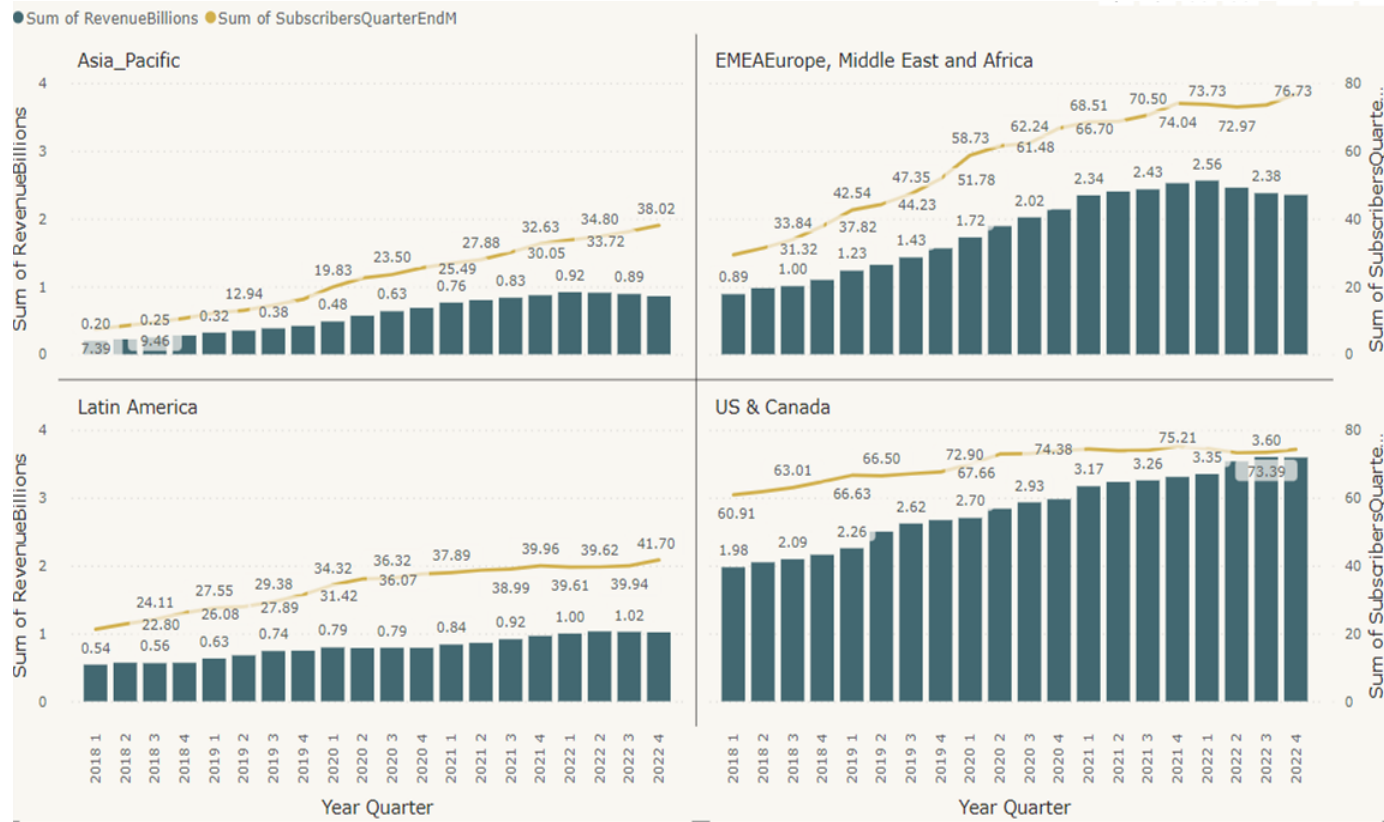
# Netflix Subscribers Change by Quarter, Year and Region



The first and the second quarters in 2022 show a significant decrease in subscribers numbers in all Netflix regions, except Asia and Pacific, which continued its growth.

The possible reason for this can be the change in dollar rater, week economy and the end of the COVID-19 pandemic

# Netflix Revenue and Subscribers Totals by Region



- The US & Canada Market is saturated and the growth is slowing down.
- The most promising Netflix market, for now, is Asia Pacific region (Australia and Asian countries).
- According to the press, indeed Netflix is to increase Asia content spending.

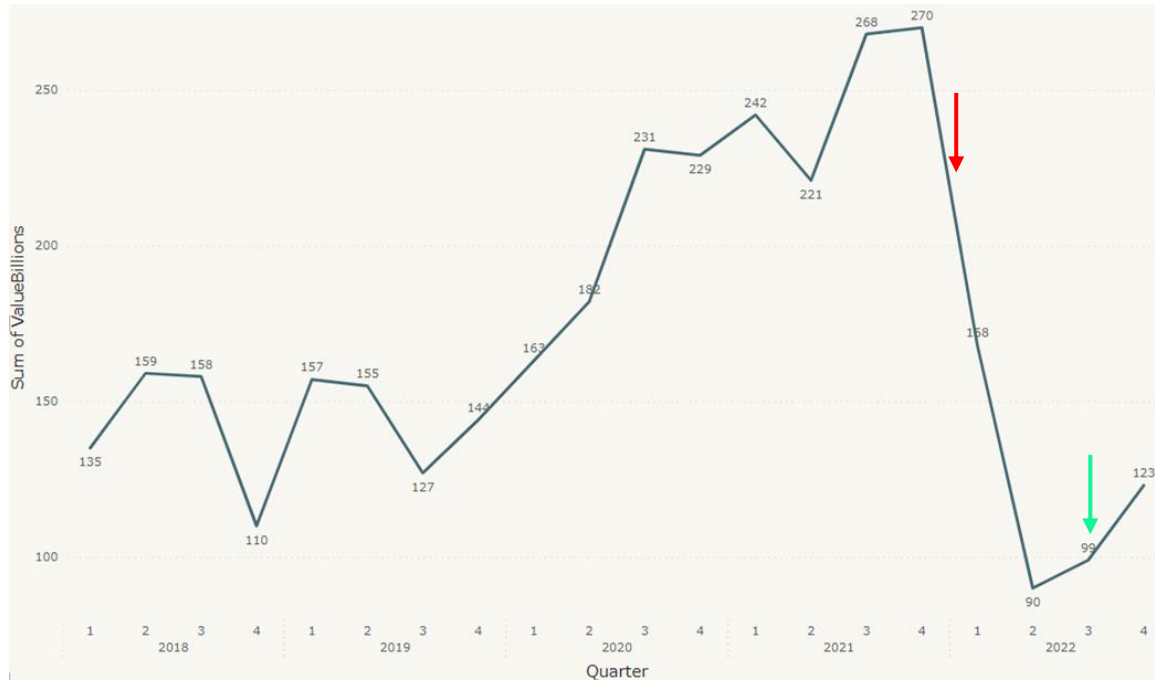
Source:

<https://variety.com/2023/tv/news/netflix-content-spending-asia-pacific-1235543665/>

## Netflix Subscribers Change by Quarter and Year - SQL Query

```
;WITH CTE AS
(
SELECT      Year
           ,Quarter
           ,RegionID
           ,SubscribersQuarterEndM
           ,LAG(SubscribersQuarterEndM) OVER (PARTITION BY RegionID ORDER BY Year, Quarter) AS PreviousQuarterSubscribers
FROM        NetflixRevenueSubscribers
)
SELECT      *
           ,ROUND(SubscribersQuarterEndM - PreviousQuarterSubscribers, 2) AS SubscribersDiffMillions
FROM        CTE
```

# Netflix Market Cap by Quarter and Year



- The meteoric growth of Netflix market cap during the COVID-19 Pandemic suddenly turned over at the first quarter of 2022. This process escalated in Q2 2022, when Netflix has lost two thirds of its value in comparison to its peak at Q4 2021 .
- The most prominent Netflix change in the first two quarters of 2022 was the subscribers abandonment, which corresponds to the drastic market cap collapse.
- This, with combination with the weak economy and dollar rate changes and COVID-19 pandemic end can explain current data.

Source:

<https://edition.cnn.com/2023/01/11/investing/netflix-stock-rebound/index.html>

# Summary

- As said earlier, during 2022 Netflix was struggling to show meaningful growth given a weak economy, increasingly aggressive competition, and an apparently saturated U.S. market for streaming.
- The company, which lost 200,000 subscribers in the first year-ago quarter, returned to subscriber growth in the second half of 2022 but its pace of additions has slowed dramatically, forcing it to think of ways to squeeze out revenue from the 100 million people who use the service without paying for it.
- The streaming giant has cracked down in some countries on password-sharing, or streaming Netflix by non-members who don't belong to the same household. According to the press, after that move, Netflix has started to show a significant growth again.

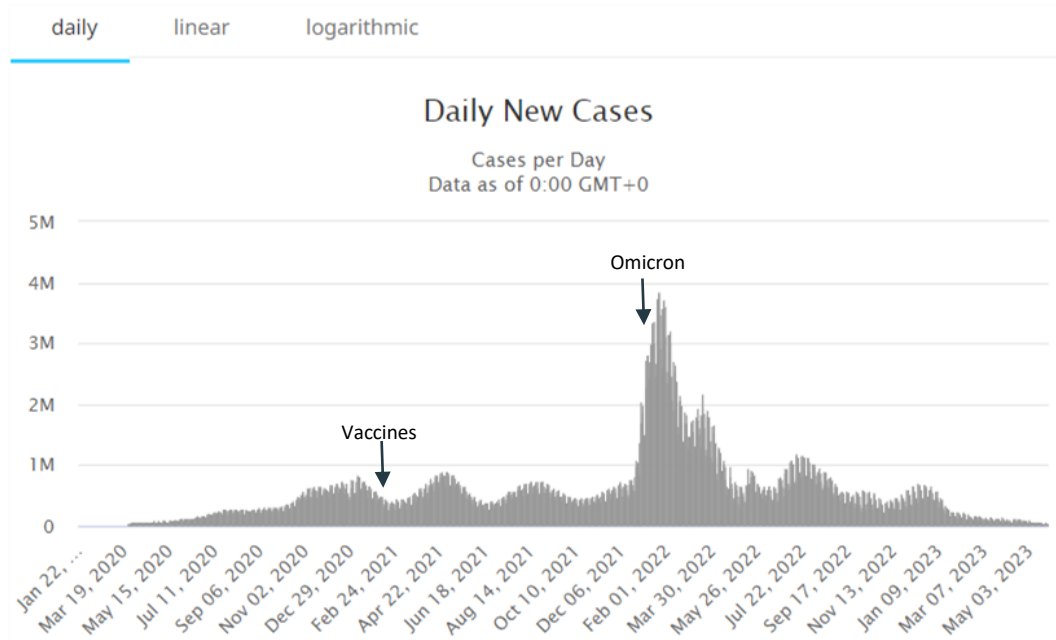
## Sources:

- <https://www.barrons.com/articles/netflix-earnings-preview-advertising-password-sharing-16b3e861?mod=bol-social-tw>
- <https://www.theglobeandmail.com/business/technology/article-netflix-set-to-report-first-quarter-results-amid-investor-scrutiny/>



# COVID-19 Analysis

# COVID-19 Worldwide



- The **COVID-19 pandemic** is a global pandemic of coronavirus disease (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)
- WHO (World Health Association) referred to COVID-19 as global pandemic on March 11, 2020
- Worldwide lockdowns were carried out during the two years of the pandemic
- The Omicron wave was more contagious but less lethal due to vaccination and virus type

Sources: <https://www.worldometers.info/coronavirus/>  
[https://en.wikipedia.org/wiki/COVID-19\\_pandemic](https://en.wikipedia.org/wiki/COVID-19_pandemic)

# COVID-19 Analysis

- The COVID-19 Pandemic which forced people to stay at homes, naturally brought growth to the streaming companies, such as Netflix.
- In order to investigate Covid-19 pandemic influence on Netflix revenue and subscribers tendencies, the current analysis refers to Covid-19 pandemic data only in countries which have Netflix services (or had during the pandemic, such as Russia).
- The data has been analyzed regionally, corresponding the regions which Netflix refers to in its quartile finance reports.
- For the sake of current analysis, Covid-19 country data and Netflix financial data have been placed crosswise using SQL view.

# COVID-19 Analysis- SQL Query

```
CREATE VIEW VW_NetflixRegionsCovid AS
WITH CTE AS
(
SELECT C.Continent
      ,C.Population
      ,NC.CountryName
      ,CONVERT(VARCHAR(30),CD.Date,3) as DATE
      ,CD.DailyNewCases, CD.ActiveCases, CD.DailyNewDeaths
      ,(CASE WHEN C.Continent = 'Asia' THEN 4
        WHEN C.Continent = 'Australia/Oceania' THEN 4
        WHEN C.Continent = 'Europe' THEN 2
        WHEN C.Continent = 'Africa' THEN 2
        WHEN C.Continent = 'North America' THEN
          CASE WHEN NC.CountryName = 'Greenland' THEN 2
            WHEN NC.CountryName NOT IN ('USA', 'Canada') THEN 3
            ELSE 1 END
        WHEN C.Continent = 'South America' THEN 3
        END) as RegionID
FROM NetflixCountries NC
JOIN CovidCountryData C ON NC.CountryName=C.Country
JOIN CovidDailyData CD ON NC.CountryName=CD.Country
)
SELECT      RegionID
            ,DATEPART(Quarter, Date) as Quarter
            ,Year(Date) AS Year, SUM(DISTINCT Population) As SumPopulation
            ,SUM(DailyNewCases) as SUMNewCases
            ,SUM(DailyNewDeaths) AS SUMNewDeaths
FROM CTE
GROUP BY RegionID, DATEPART(Quarter, Date), Year(Date)
```

# Descriptive Statistics- COVID-19

| RegionName                            | Countries Count | Min Year | Max Year | Avg Population | Min Population | MaxPopulation | STDPopulation  |
|---------------------------------------|-----------------|----------|----------|----------------|----------------|---------------|----------------|
| Asia & Pacific                        | 59              | 2020     | 2022     | 4440125971     | 72468          | 129285119036  | 15711559319.14 |
| EMEA (Europe, Middle East and Africa) | 95              | 2020     | 2022     | 1685577282     | 268884         | 19839931008   | 2812449513.26  |
| Latin America                         | 47              | 2020     | 2022     | 1155002805     | 219912         | 19814362276   | 3091839090.98  |
| US & Canada                           | 2               | 2020     | 2022     | 15292019608    | 1687772460     | 30784821316   | 13258384688.43 |

# Descriptive Statistics- COVID-19

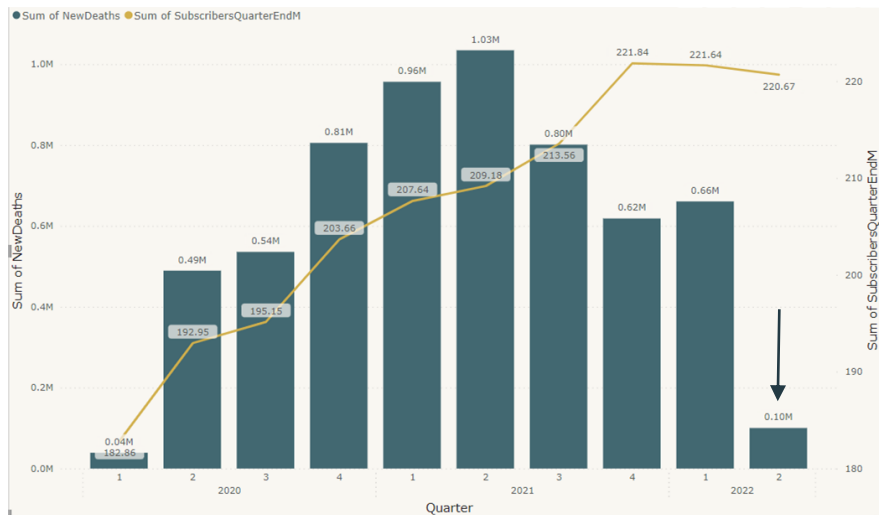
| RegionName                                     | AvgDaily<br>NewDeaths | MinDaily<br>NewDeaths | MaxDaily<br>NewDeaths | STDDaily<br>NewDeaths | AvgDaily<br>NewCases | MinDaily<br>NewCases | MaxDaily<br>NewCases | STDDaily<br>NewCases |
|--|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|----------------------|----------------------|----------------------|
| Asia Pacific                                   | 2958.64               | 0                     | 243918                | 13552.43              | 275427.29            | 0                    | 18189908             | 1185665.92           |
| EMEA<br>(Europe,<br>Middle East<br>and Africa) | 2157.17               | 0                     | 101605                | 6967.69               | 195405.66            | 0                    | 15642043             | 895338.03            |
| Latin<br>America                               | 4059.25               | 0                     | 196360                | 15572.15              | 146479.22            | 0                    | 7660374              | 617465.43            |
| US & Canada                                    | 53343.7               | 101                   | 200824                | 67027.66              | 4401539.8            | 8604                 | 25427540             | 6611138.53           |

# Descriptive Statistics- COVID-19

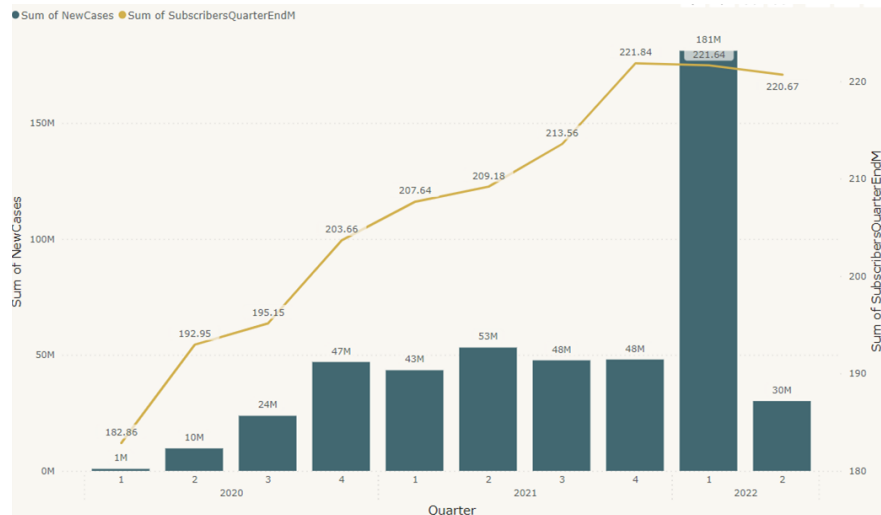
```
SELECT      R.RegionName
            ,COUNT(DISTINCT NCC.CountryName) as CountriesCount
            ,ROUND(AVG(NCC.SUMPopulation), 2) as AvgPopulation
            ,MIN(NCC.SUMPopulation) as MinPopulation
            ,MAX(NCC.SUMPopulation) as MaxPopulation
            ,ROUND(STDEV(NCC.SUMPopulation), 2) as STDPopulation
            ,ROUND(AVG(NCC.SUMDailyNewCases), 2) as AvgDailyNewCases
            ,MIN(NCC.SUMDailyNewCases) as MinDailyNewCases
            ,MAX(NCC.SUMDailyNewCases) as MaxDailyNewCases
            ,ROUND(STDEV(NCC.SUMDailyNewCases), 2) as STDDailyNewCases
            ,ROUND(AVG(NCC.SUMDailyNewDeaths), 2) as AvgDailyNewDeaths
            ,MIN(NCC.SUMDailyNewDeaths) as MinDailyNewDeaths
            ,MAX(NCC.SUMDailyNewDeaths) as MaxDailyNewDeaths
            ,ROUND(STDEV(NCC.SUMDailyNewDeaths), 2) as STDDailyNewDeaths
            ,Min(Year) as MinYear
            ,MAX(Year) as MaxYear
FROM      NetflixCountriesCovid NCC
JOIN      Regions R
            ON NCC.RegionID = R.RegionID
GROUP BY  R.RegionName
```

# Subscribers Numbers (Millions) During Covid-19

## Netflix Subscribers Numbers and COVID-19 Severity (Mortality Rate)



## Netflix Subscribers Numbers and COVID-19 Severity (Positive Cases)



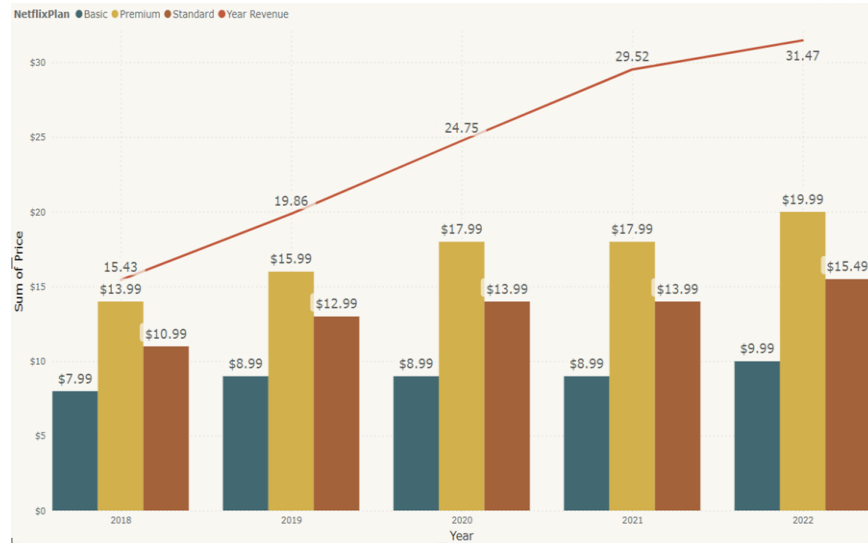
The severity of the COVID-19 pandemic was measured using mortality rate (Sum of new death cases for each quarter during the peak of the pandemic) and daily new positive cases.

**A strong positive tendency of subscribers growth as the pandemic worsened can be seen.**

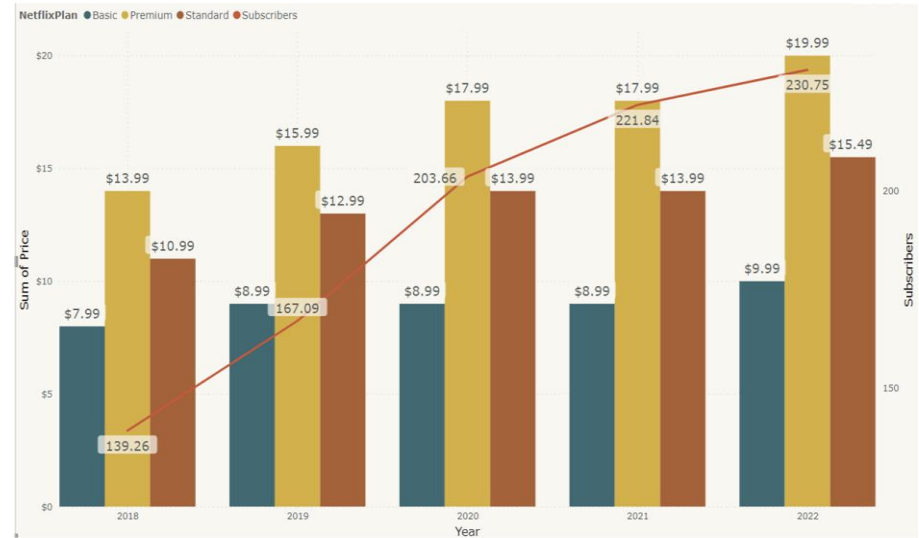


# Netflix Pricing Strategy

Netflix Pricing Strategy (in US dollars) and Revenue (in Billions) By Year



Netflix Pricing Strategy (in US dollars) and Subscribers (in Millions) By Year



- There is a constant raise in Netflix plan prices over the years.
  - Netflix has been criticized due to its high prices and constant price raises.
  - It seems that the number of subscribers has been, at least partially, influenced by the price raise in the beginning of 2022.
  - **It has been reported that approximately 600 K subscribers of US & Canada abandoned Netflix due the raise**
- Source: <https://www.makeuseof.com/why-netflix-is-losing-subscribers/>

# Competition Analysis

# Global Streaming Market

- The global video streaming market size was valued at USD 82.3 billion (estimation varies) in 2022 and is expected to expand at a compound annual growth rate (CAGR) of 21.5% from 2023 to 2030.
- Innovations such as [blockchain technology](#) and [Artificial Intelligence](#) (AI) are used to improve video quality and anticipated to positively influence the growth of the market.
- In May 2016, AI technology was implemented by Netflix to create a superior personalized experience for its subscribed consumers, which is being a strong advantage of Netflix.

Source: <https://www.grandviewresearch.com/industry-analysis/video-streaming-market>

## Descriptive Statistics- Global Streaming Revenue (Billions)

| MinYear | MaxYear | Average Global Revenue | MinGlobal Revenue | MaxGlobal Revenue | STDGlobal Revenue |
|---------|---------|------------------------|-------------------|-------------------|-------------------|
| 2018    | 2022    | 61.3                   | 42.4              | 82.3              | 16.11             |

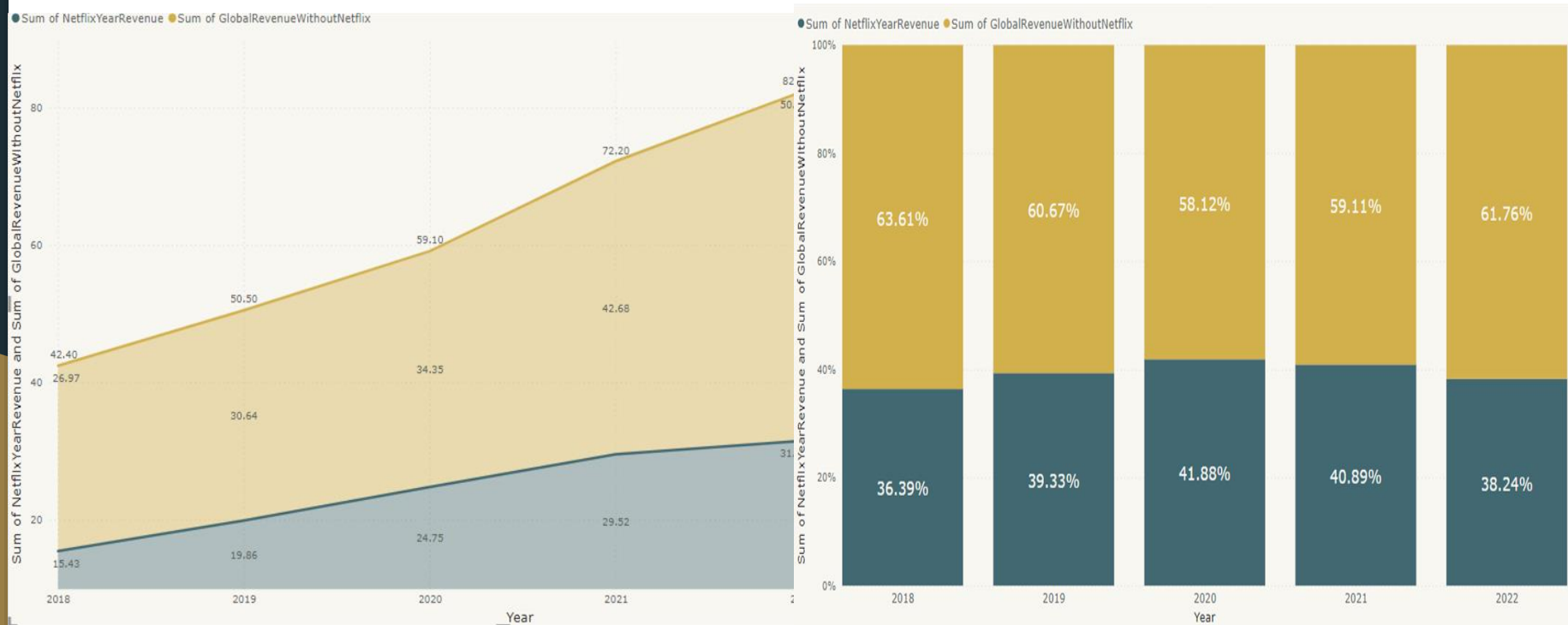
```
SELECT      Min(Year) as MinYear
            ,MAX(Year) as MaxYear
            ,ROUND(AVG(GlobalStreamingRevenue), 2) as AverageGlobalRevenue
            ,MIN(GlobalStreamingRevenue) as MinGlobalRevenue
            ,MAX(GlobalStreamingRevenue) as MaxGlobalRevenue
            ,ROUND(STDEV(GlobalStreamingRevenue), 2) as STDGlobalRevenue
FROM        GlobalStreamingRevenue
```

# Netflix and Global Streaming Revenue - View

```
CREATE VIEW NetflixAndGlobalRevenue AS
WITH CTE AS
(
SELECT      Year
            ,ROUND(SUM(RevenueBillions), 2) AS NetflixYearRevenue
FROM        NetflixRevenueSubscribers
GROUP BY    Year
)

SELECT      A.Year
            ,A.NetflixYearRevenue
            ,GSR.GlobalStreamingRevenue
            ,ROUND(A.NetflixYearRevenue / GSR.GlobalStreamingRevenue * 100, 2) AS PCTNetflixGlobal
            ,ROUND(GSR.GlobalStreamingRevenue - A.NetflixYearRevenue, 2) AS GlobalRevenueWithoutNetflix
FROM        CTE A
JOIN GlobalStreamingRevenue GSR
    ON A.Year = GSR.Year
```

# Netflix and Global Streaming Revenue By Years (In Billions)



The global streaming revenue is constantly growing. Netflix is responsible for almost half of the global streaming revenue throughout the years, but its share is getting smaller.

# Competition Overview

Netflix used to be the streaming platform with the most users in the US, but that has changed recently. In the latest ranking, Netflix is now in second place with 20% of the market share, coming right behind Amazon Prime Video with 21%. Another impressive growth was that of Paramount+, whose market share increased from 4% to 7%, overtaking Apple TV+.

Right now, this is the market share situation for streaming platforms in the United States:

1. Amazon Prime Video: 21%
2. Netflix: 20%
3. Disney+: 15%
4. HBO Max: 14%
5. Hulu: 11%
6. Paramount+: 7%
7. Apple TV+: 6%
8. Others: 6%

Sources: <https://macdailynews.com/2023/04/14/apple-tv-holds-steady-with-6-u-s-streaming-market-share-as-netflix-cedes-first-place>

<https://www.feedough.com/the-10-biggest-netflix-competitors/>

<https://businesschronicler.com/competitors/netflix-competitors-analysis/>

Variety, Forbes, Business of Apps, Techjury



# Descriptive Statistics- Competition

| Name               | Avg Revenue (Billions) | Min Revenue (Billions) | Max Revenue (Billions) | STD Revenue | Avg Subscribers (Millions) | Min Subscribers (Millions) | Max Subscribers (Millions) | STD Subscribers |
|--------------------|------------------------|------------------------|------------------------|-------------|----------------------------|----------------------------|----------------------------|-----------------|
| Amazon Prime Video | 25.35                  | 19.2                   | 31.8                   | 5.15        | 172.5                      | 120                        | 220                        | 45.73           |
| Disney+            | 3.85                   | 0                      | 7.4                    | 3.18        | 68.7                       | 0                          | 137.7                      | 63.08           |
| HBO                | 5.83                   | 0.35                   | 9.2                    | 3.87        | 63                         | 36                         | 81.2                       | 19.84           |
| Hulu               | 5.05                   | 3.7                    | 6.3                    | 1.21        | 32.8                       | 23.2                       | 41.4                       | 8.31            |
| Netflix            | 25.97                  | 19.86                  | 31.47                  | 5.44        | 205.84                     | 167.09                     | 230.75                     | 28.18           |
| Paramount+         | 0.64                   | 0.1                    | 1.4                    | 0.61        | 24.95                      | 4                          | 55                         | 23.74           |
| Youtube            | 23.21                  | 15.15                  | 29.2                   | 6.94        | 2350                       | 2000                       | 2600                       | 264.58          |

# Descriptive Statistics- Competition

| Name               | AvgPrice<br>(US \$) | MinPrice<br>(US \$) | MaxPrice<br>(US \$) | MinYear | MaxYear |
|--------------------|---------------------|---------------------|---------------------|---------|---------|
| Amazon Prime Video | 8.99                | 8.99                | 8.99                | 2019    | 2022    |
| Disney+            | 8.24                | 6.99                | 10.99               | 2019    | 2022    |
| HBO                | 14.99               | 14.99               | 14.99               | 2019    | 2022    |
| Hulu               | 12.495              | 11.99               | 13                  | 2019    | 2022    |
| Netflix            | 18.49               | 15.99               | 19.99               | 2019    | 2022    |
| Paramount+         | 9.99                | 9.99                | 9.99                | 2019    | 2022    |
| Youtube            | 11.99               | 11.99               | 11.99               | 2019    | 2022    |

# Competition Descriptive Statistics- SQL Query

```
SELECT      CS.Name
            , ROUND(AVG(NC.RevenueBillions), 2) as AvgRevenue
            , MIN(NC.RevenueBillions) as MinRevenue
            , MAX(NC.RevenueBillions) as MaxRevenue
            , ROUND(STDEV(NC.RevenueBillions), 2) as STDRevenue
            , ROUND(AVG(NC.SubscribersMillions), 2) as AvgSubscribers
            , MIN(NC.SubscribersMillions) as MinSubscribers
            , MAX(NC.SubscribersMillions) as MaxSubscribers
            , ROUND(STDEV(NC.SubscribersMillions), 2) as STDSubscribers
            , AVG(NC.PremiumPlanPrice) as AvgPrice
            , MIN(NC.PremiumPlanPrice) as MinPrice
            , MAX(NC.PremiumPlanPrice) as MaxPrice
            , MIN(NC.Year) as MinYear
            , MAX(NC.Year) as MaxYear
FROM      NetflixAndCompetitors NC
JOIN      Competitors CS
            ON NC.CompetitorID = CS.CompetitorID
GROUP BY  CS.Name
```

# Revenue Analysis - Competition View SQL Query

```
CREATE VIEW VW_NetflixAndCompetitors AS
WITH CTE AS
(
    SELECT      CompetitorID
               ,Year
               ,ROUND(SubscribersMillions, 2) AS SubscribersMillions
               ,ROUND(RevenueBillions, 2) AS RevenueBillions
               ,PremiumPlanPrice FROM Competition

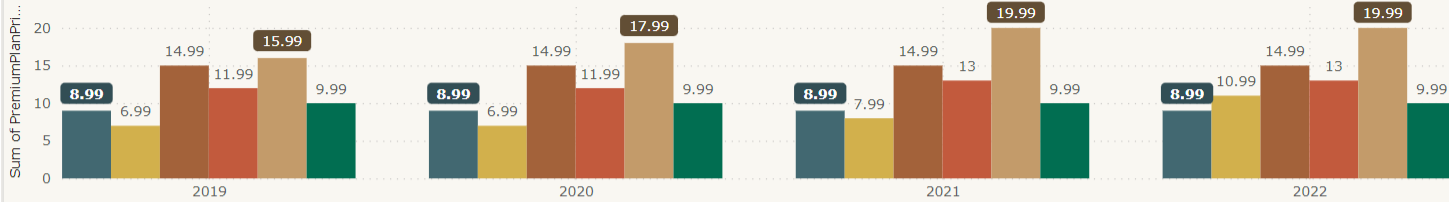
    UNION ALL

    SELECT      SubscribersSum.CompetitorID
               ,SubscribersSum.Year
               ,SubscribersSum.NetflixSubscribers
               ,RevenueSum.NetflixRevenue
               ,NetflixPlans.Price
    FROM        (SELECT      CompetitorID
                       ,Year
                       ,ROUND(SUM(SubscribersQuarterEndM), 2) as NetflixSubscribers
                   FROM        NetflixRevenueSubscribers
                   WHERE       Quarter = 4
                   GROUP BY    CompetitorID, Year) AS SubscribersSum
    JOIN        (SELECT      Year
                       ,ROUND(SUM(RevenueBillions), 2) as NetflixRevenue
                   FROM        NetflixRevenueSubscribers
                   GROUP BY    Year) AS RevenueSum
               ON SubscribersSum.Year = RevenueSum.Year
    JOIN        (SELECT      Year
                       ,ROUND(Price, 2) as Price
                   FROM        NetflixPlanPrices
                   WHERE       NetflixPlan = 'Premium') AS NetflixPlans
               ON RevenueSum.Year = NetflixPlans.Year
)
SELECT      ROW_NUMBER() OVER (ORDER BY Year) AS ID
           ,*
           ,DENSE_RANK () OVER (PARTITION BY Year ORDER BY RevenueBillions ASC) AS RevenueRank
           ,DENSE_RANK() OVER (PARTITION BY Year ORDER BY SubscribersMillions ASC ) AS SubscribersRank
           ,DENSE_RANK() OVER (PARTITION BY Year ORDER BY PremiumPlanPrice DESC) AS PriceRank
FROM        CTE
WHERE       Year BETWEEN 2019 AND 2022
```

# Competition Pricing ,Subscribers and Revenue

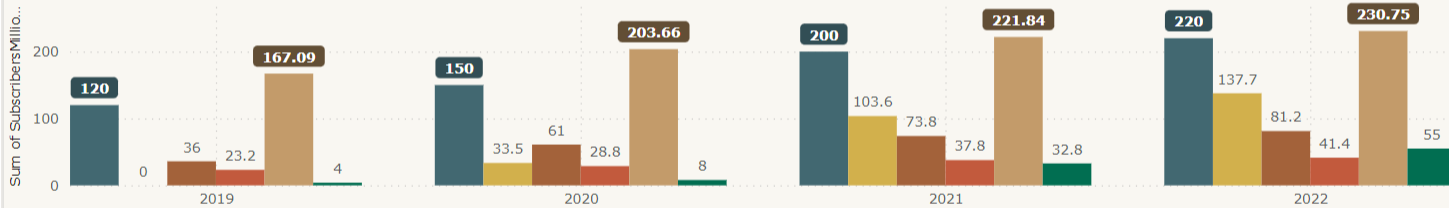
Sum of PremiumPlanPrice by YEAR and Name

Name ● Amazon Prime Video ● Disney+ ● HBO ● Hulu ● Netflix ● Paramount+



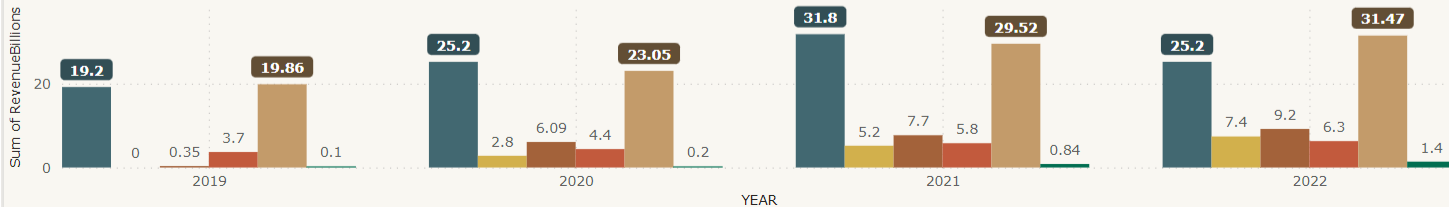
Sum of SubscribersMillions by YEAR and Name

Name ● Amazon Prime Video ● Disney+ ● HBO ● Hulu ● Netflix ● Paramount+



Sum of RevenueBillions by YEAR and Name

Name ● Amazon Prime Video ● Disney+ ● HBO ● Hulu ● Netflix ● Paramount+



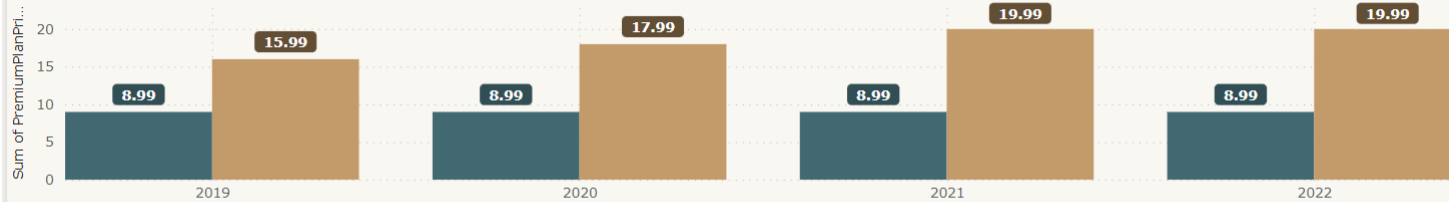
Although Netflix has the highest pricing in the market, it can be seen that it still leads in subscribers numbers.

However, Compared to the plan price, Amazon shows an increase in revenue and subscriber numbers (relative to itself) , as we will now see in the next slide

# Comparison between Netflix and Amazon

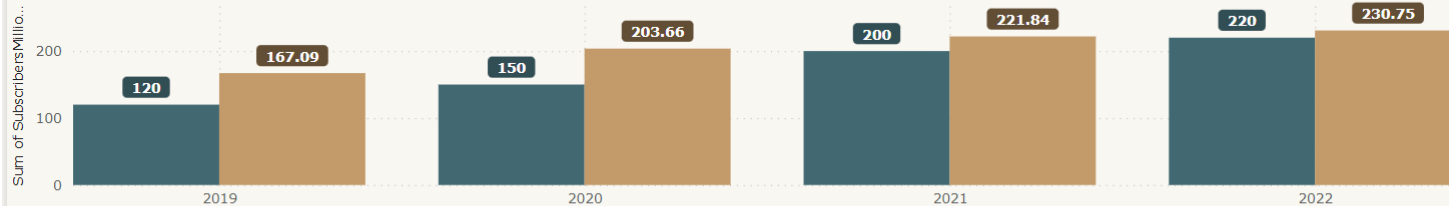
Sum of PremiumPlanPrice by YEAR and Name

Name ● Amazon Prime Video ● Netflix



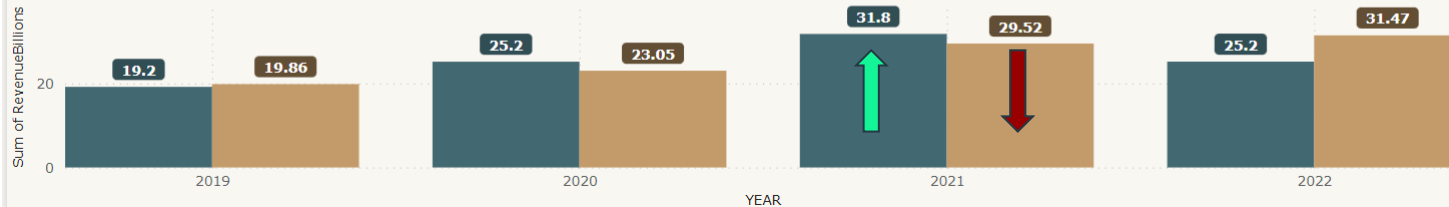
Sum of SubscribersMillions by YEAR and Name

Name ● Amazon Prime Video ● Netflix



Sum of RevenueBillions by YEAR and Name

Name ● Amazon Prime Video ● Netflix



- Amazon has stayed with the same pricing plan compared to Netflix which continues to raise its prices consistently.
- It can be assumed that if Netflix had not increased the plan price Amazon would have overtaken them in profits even a year later.

# Summary



Between year 2018 and 2021 Netflix has shown a significant positive growth in revenue and subscribers.



The most significant growth was during the COVID-19 pandemic, which was described by some sources as “meteoric”.



This tendency has changed to a negative one in the first quarter of 2022, in comparison to the previous quarter. It's important to state that the general tendency stayed positive from year to year.



Netflix is constantly raising prices, even in the beginning of 2022 when the world experienced vast economic crisis and war in Europe (Ukraine and Russia), which fueled the subscribers loss and market cap collapse.



Netflix revenue is almost 40% of global streaming industry revenue .



Thus, not surprising that although Netflix has the priciest premium plan, it is still leading in the subscribers numbers and revenue.



However, there are some strong competition to deal with, and with the last changes, Netflix has to consider new ways of attracting subscribers in new markets, besides the American and European which are already saturated.