DATA ANALYSIS ON TOP 5 NIFTY50 COMPANIES

In [1]:
```
import numpy as np
import seaborn as sns
import matplotlib.pyplot as plt
import pandas as pd
```

In [2]:
```
data1=pd.read_csv(r"C:\Users\Aashutosh Gourav\Documents\STOCK ANALYSIS\RELIANCE INDUSTRIES\Quote-Equity-RELIANCE-EQ-31-03-2020-to-31-03-2021.csv")
```

In [3]:
```
data2=pd.read_csv(r"C:\Users\Aashutosh Gourav\Documents\STOCK ANALYSIS\TCS\Quote-Equity-TCS-EQ-31-03-2020-to-31-03-2021.csv")
```

In [4]:
```
data3=pd.read_csv(r"C:\Users\Aashutosh Gourav\Documents\STOCK ANALYSIS\HDFC BANK\Quote-Equity-HDFCBANK-EQ-31-03-2020-to-31-03-2021.csv")
```

In [5]:
```
data4=pd.read_csv(r"C:\Users\Aashutosh Gourav\Documents\STOCK ANALYSIS\INFOSYS\Quote-Equity-INFY-EQ-31-03-2020-to-31-03-2021.csv")
```

In [6]:
```
data5=pd.read_csv(r"C:\Users\Aashutosh Gourav\Documents\STOCK ANALYSIS\HINDUSTAN UNILEVER\Quote-Equity-HINDUNILVR-EQ-31-03-2020-to-31-03-2021.csv")
```

In [7]:
```
data1=data1.add_prefix('RI_')
data2=data2.add_prefix('TCS_')
data3=data3.add_prefix('HDFC_')
data4=data4.add_prefix('INFY_')
data5=data5.add_prefix('HUL_')
```

In [8]:
```
data1
```

Out[8]:

	RI_SNo	RI_Date	RI_series	RI_OPEN	RI_HIGH	RI_LOW	RI_PREV. CLOSE	RI_ltp	RI_close	RI_vwap	RI_52W H	RI_52W L	RI_VOLUME
0	1	31-Mar-20	EQ	1,073.95	1,129.80	1,048.00	1,030.45	1,100.00	1,113.75	1,093.37	1,617.55	875.65	20249909
1	2	1-Apr-20	EQ	1,122.25	1,124.60	1,045.20	1,113.75	1,084.00	1,080.45	1,072.84	1,617.55	875.65	19017099
2	3	3-Apr-20	EQ	1,134.45	1,134.45	1,056.30	1,080.45	1,088.00	1,077.45	1,077.52	1,617.55	875.65	18912044
3	4	7-Apr-20	EQ	1,102.10	1,214.00	1,100.00	1,077.45	1,211.00	1,206.10	1,161.27	1,617.55	875.65	24859057
4	5	8-Apr-20	EQ	1,180.00	1,229.00	1,160.00	1,206.10	1,197.00	1,192.15	1,194.60	1,617.55	875.65	22803774
...	...	...	...	...	...	...	...	...	...	...	...	...	...
245	246	24-Mar-21	EQ	2,079.75	2,079.75	2,040.40	2,087.50	2,048.55	2,047.30	2,055.87	2,369.35	875.65	7763726
246	247	25-Mar-21	EQ	2,054.00	2,054.00	1,985.00	2,047.30	1,993.95	1,991.45	2,011.25	2,369.35	875.65	10153757
247	248	26-Mar-21	EQ	2,012.00	2,013.70	1,973.70	1,991.45	1,994.00	1,994.65	1,995.09	2,369.35	875.65	9313160
248	249	30-Mar-21	EQ	2,008.00	2,048.90	1,991.55	1,994.65	2,031.90	2,029.30	2,026.44	2,369.35	1,020.00	9433850
249	250	31-Mar-21	EQ	2,018.00	2,049.90	1,999.00	2,029.30	2,005.65	2,003.10	2,017.21	2,369.35	1,020.00	7499740

250 rows × 20 columns

In [9]:
```
data2
```

Out[9]:

	TCS_SNo	TCS_Date	TCS_series	TCS_OPEN	TCS_HIGH	TCS_LOW	TCS_PREV. CLOSE	TCS_ltp	TCS_close	TCS_vwap	TCS_52W H	TC
0	1	31-Mar-20	EQ	1,837.40	1,855.00	1,780.00	1,778.50	1,819.00	1,826.10	1,824.45	2,296.20	
1	2	1-Apr-20	EQ	1,825.90	1,834.75	1,702.00	1,826.10	1,714.00	1,708.75	1,763.66	2,296.20	
2	3	3-Apr-20	EQ	1,740.00	1,740.00	1,650.00	1,708.75	1,659.00	1,654.20	1,688.30	2,296.20	
3	4	7-Apr-20	EQ	1,710.00	1,785.85	1,705.00	1,654.20	1,765.85	1,775.20	1,747.20	2,296.20	
4	5	8-Apr-20	EQ	1,760.00	1,806.00	1,701.00	1,775.20	1,708.00	1,705.45	1,736.76	2,296.20	
...	...	...	...	...	...	...	...	...	...	...	...	
245	246	24-Mar-21	EQ	3,111.20	3,152.30	3,111.15	3,142.60	3,123.60	3,121.10	3,130.63	3,339.80	
246	247	25-Mar-21	EQ	3,112.20	3,130.85	3,050.00	3,121.10	3,074.50	3,064.85	3,091.11	3,339.80	
247	248	26-Mar-21	EQ	3,090.65	3,118.00	3,043.05	3,064.85	3,062.00	3,066.80	3,078.97	3,339.80	
248	249	30-Mar-21	EQ	3,083.00	3,188.45	3,060.90	3,066.80	3,172.00	3,158.55	3,139.65	3,339.80	
249	250	31-Mar-21	EQ	3,155.00	3,205.00	3,132.00	3,158.55	3,175.30	3,177.85	3,177.88	3,339.80	

250 rows × 20 columns

In [10]:
```
data3
```

Out[10]:

	HDFC_SNo	HDFC_Date	HDFC_series	HDFC_OPEN	HDFC_HIGH	HDFC_LOW	HDFC_PREV. CLOSE	HDFC_ltp	HDFC_Close	HDFC_vwa
0	1	31-Mar-20	EQ	853.8	873.6	838	831.65	857.95	861.9	854.7
1	2	1-Apr-20	EQ	863.85	863.85	820	861.9	829.55	829.65	831.9
2	3	3-Apr-20	EQ	843	844	810	829.65	811	813.85	825.2
3	4	7-Apr-20	EQ	874	907.3	845.35	813.85	895.8	896.1	871.5
4	5	8-Apr-20	EQ	879.95	945	866.1	896.1	888.7	888.9	902.0
...	...	...	...	...	...	...	...	...	...	...
245	246	24-Mar-21	EQ	1,490.90	1,506.45	1,471.00	1,500.15	1,481.10	1,478.80	1,489.0
246	247	25-Mar-21	EQ	1,490.20	1,495.55	1,450.25	1,478.80	1,468.00	1,463.35	1,468.5
247	248	26-Mar-21	EQ	1,494.00	1,499.00	1,474.00	1,463.35	1,497.55	1,491.30	1,486.8
248	249	30-Mar-21	EQ	1,506.65	1,562.55	1,501.55	1,491.30	1,548.80	1,553.70	1,537.7
249	250	31-Mar-21	EQ	1,548.00	1,548.00	1,488.00	1,553.70	1,494.40	1,493.65	1,499.7

250 rows × 20 columns

In [11]:
```
data4
```

Out[11]:

	INFY_SNo	INFY_Date	INFY_series	INFY_OPEN	INFY_HIGH	INFY_LOW	INFY_PREV. CLOSE	INFY_ltp	INFY_close	INFY_vwap	INFY_52
0	1	31-Mar-20	EQ	650	662	633.7	626.7	639.6	641.5	647.8	8
1	2	1-Apr-20	EQ	634.35	637.5	594	641.5	603.9	602.8	611.89	8
2	3	3-Apr-20	EQ	603.5	606	582.15	602.8	588.5	585.7	592.53	8
3	4	7-Apr-20	EQ	615	644.25	612.9	585.7	633.8	639	627.65	8
4	5	8-Apr-20	EQ	630	655.65	626.35	639	632.25	631.6	637.44	8
...	...	...	...	...	...	...	...	...	...	...	
245	246	24-Mar-21	EQ	1,357.85	1,370.45	1,346.25	1,371.55	1,355.00	1,353.75	1,357.63	1,406.
246	247	25-Mar-21	EQ	1,346.75	1,352.50	1,327.60	1,353.75	1,337.60	1,333.80	1,338.88	1,406.
247	248	26-Mar-21	EQ	1,344.70	1,356.70	1,332.00	1,333.80	1,338.70	1,336.20	1,340.61	1,406.
248	249	30-Mar-21	EQ	1,346.90	1,400.00	1,336.15	1,336.20	1,386.50	1,385.30	1,373.99	1,406.
249	250	31-Mar-21	EQ	1,382.00	1,388.00	1,363.30	1,385.30	1,367.30	1,368.05	1,370.72	1,406.

250 rows × 20 columns

In [12]:
```
data5
```

Out[12]:

	HUL_SNo	HUL_Date	HUL_series	HUL_OPEN	HUL_HIGH	HUL_LOW	HUL_PREV. CLOSE	HUL_ltp	HUL_Close	HUL_vwap	HUL_52W H
0	1	31-Mar-20	EQ	2,234.80	2,313.00	2,185.00	2,184.35	2,298.50	2,298.50	2,260.32	2,313.00
1	2	1-Apr-20	EQ	2,293.20	2,324.90	2,158.05	2,298.50	2,179.00	2,179.65	2,219.18	2,324.90
2	3	3-Apr-20	EQ	2,234.00	2,254.10	2,127.95	2,179.65	2,153.00	2,154.10	2,183.12	2,324.90
3	4	7-Apr-20	EQ	2,220.00	2,460.00	2,220.00	2,154.10	2,449.00	2,444.90	2,361.65	2,460.00
4	5	8-Apr-20	EQ	2,432.00	2,614.30	2,417.40	2,444.90	2,455.00	2,460.85	2,520.36	2,614.30
...	...	...	...	...	...	...	...	...	...	...	...
245	246	24-Mar-21	EQ	2,337.30	2,350.90	2,315.55	2,337.30	2,319.70	2,318.60	2,337.43	2,614.30
246	247	25-Mar-21	EQ	2,318.60	2,322.00	2,231.05	2,318.60	2,248.95	2,237.05	2,265.02	2,614.30
247	248	26-Mar-21	EQ	2,255.00	2,325.00	2,248.80	2,237.05	2,307.05	2,317.90	2,300.37	2,614.30
248	249	30-Mar-21	EQ	2,325.00	2,406.00	2,325.00	2,317.90	2,393.00	2,398.75	2,388.17	2,614.30
249	250	31-Mar-21	EQ	2,386.00	2,438.60	2,381.65	2,398.75	2,420.00	2,431.50	2,417.72	2,614.30

250 rows × 20 columns

In [13]:
```
print("PARAMETERS:")
a=data1.columns
for i in a:
    print(i.replace("RI_",""),end="   ")
```

```
PARAMETERS:
SNo   Date   series   OPEN   HIGH   LOW   PREV. CLOSE   ltp   close   vwap   52W H   52W L   VOLU
ME   VALUE   No of trades   PE Ratio   Face Value   OPS   NOPS   NPM
```

In [14]:
```
data1.describe()
```

Out[14]:

	RI_SNo	RI_VOLUME	RI_No of trades	RI_PE Ratio	RI_Face Value	RI_OPS	RI_NOPS	RI_NPM
count	250.000000	2.500000e+02	2.500000e+02	250.000000	250.0	250.000000	250.000000	250.000000
mean	125.500000	1.756970e+07	4.019264e+05	35.453383	10.0	75.085240	490.481880	10.104520
std	72.312977	1.035900e+07	2.003720e+05	5.866550	0.0	14.541672	72.398503	1.648257
min	1.000000	2.411900e+06	9.948400e+04	19.431019	10.0	49.540000	363.300000	9.170000
25%	63.250000	1.046829e+07	2.688945e+05	32.288999	10.0	83.330000	531.530000	9.170000
50%	125.500000	1.510037e+07	3.421420e+05	37.194770	10.0	83.330000	531.530000	9.170000
75%	187.750000	2.036028e+07	4.775222e+05	39.783540	10.0	83.330000	531.530000	9.170000
max	250.000000	6.523089e+07	1.428490e+06	44.343536	10.0	83.330000	531.530000	13.000000

In [15]:
```
data2.describe()
```

Out[15]:

	TCS_SNo	TCS_VOLUME	TCS_No of trades	TCS_PE Ratio	TCS_Face Value	TCS_OPS	TCS_NOPS	TCS_NPM
count	250.000000	2.500000e+02	250.000000	250.000000	250.0	250.000000	250.000000	250.000000
mean	125.500000	3.996470e+06	158902.900000	29.046273	1.0	115.540840	424.501520	20.392600
std	72.312977	2.119723e+06	63812.834067	5.953436	0.0	5.857122	11.008463	0.365801
min	1.000000	2.988190e+05	20530.000000	18.662004	1.0	112.220000	418.260000	19.750000
25%	63.250000	2.787744e+06	117378.000000	24.377820	1.0	112.220000	418.260000	20.600000
50%	125.500000	3.478986e+06	146867.500000	28.350350	1.0	112.220000	418.260000	20.600000
75%	187.750000	4.592985e+06	183106.000000	32.991736	1.0	112.220000	418.260000	20.600000
max	250.000000	1.983983e+07	542541.000000	39.971007	1.0	125.830000	443.840000	20.600000

In [16]:
```
data3.describe()
```

Out[16]:

	HDFC_SNo	HDFC_52WL	HDFC_VOLUME	HDFC_No of trades	HDFC_PE Ratio	HDFC_Face Value	HDFC_OPS	HDFC_NOPS	HDFC_NPM
count	250.000000	250.000000	2.500000e+02	250.000000	250.000000	250.0	250.000000	250.000000	250.000000
mean	125.500000	739.320000	1.375565e+07	260676.620000	24.114063	1.0	101.203400	225.365400	22.900240
std	72.312977	6.359984	6.396619e+06	96305.831388	3.465388	0.0	7.466647	4.454167	1.058672
min	1.000000	738.750000	9.175330e+05	30732.000000	16.955208	1.0	96.970000	222.840000	22.300000
25%	63.250000	738.750000	9.185432e+06	190989.500000	21.598437	1.0	96.970000	222.840000	22.300000
50%	125.500000	738.750000	1.183097e+07	233895.000000	23.582812	1.0	96.970000	222.840000	22.300000
75%	187.750000	738.750000	1.760402e+07	311941.750000	27.171820	1.0	96.970000	222.840000	22.300000
max	250.000000	810.000000	3.774493e+07	631552.000000	30.037500	1.0	114.320000	233.190000	24.760000

In [17]:
```
data4.describe()
```

Out[17]:

	INFY_SNo	INFY_52WL	INFY_VOLUME	INFY_No of trades	INFY_PE Ratio	INFY_Face Value	INFY_OPS	INFY_NOPS	INFY_NPM
count	250.000000	250.000000	2.500000e+02	250.000000	250.000000	250.0	250.000000	250.000000	250.000000
mean	125.500000	509.966200	1.054986e+07	198980.504000	24.836328	5.0	55.728360	219.601960	18.511560
std	72.312977	6.561937	7.241045e+06	89412.073866	4.878192	0.0	5.676373	9.721704	0.426051
min	1.000000	509.250000	1.136144e+06	41663.000000	15.029510	5.0	52.510000	214.090000	18.270000
25%	63.250000	509.250000	6.908020e+06	143330.750000	19.579805	5.0	52.510000	214.090000	18.270000
50%	125.500000	509.250000	8.870068e+06	180099.000000	26.034129	5.0	52.510000	214.090000	18.270000
75%	187.750000	509.250000	1.217701e+07	232526.500000	28.862638	5.0	52.510000	214.090000	18.270000
max	250.000000	582.150000	9.043339e+07	936612.000000	32.224788	5.0	65.700000	236.680000	19.260000

In [18]:
```
data5.describe()
```

Out[18]:

	HUL_SNo	HUL_VOLUME	HUL_No of trades	HUL_PE Ratio	HUL_Face Value	HUL_OPS	HUL_NOPS	HUL_NPMP
count	250.000000	2.500000e+02	250.000000	250.000000	250.0	250.000000	250.000000	250.000000
mean	125.500000	3.793888e+06	136509.448000	70.683951	1.0	46.508920	187.769160	16.969760
std	72.312977	1.183791e+07	88802.529523	3.622967	0.0	1.691292	7.053507	0.017214
min	1.000000	2.582760e+05	17372.000000	63.311918	1.0	45.550000	183.770000	16.960000
25%	63.250000	1.809300e+06	88977.750000	68.435994	1.0	45.550000	183.770000	16.960000
50%	125.500000	2.403569e+06	112134.000000	70.023289	1.0	45.550000	183.770000	16.960000
75%	187.750000	3.260976e+06	152958.500000	72.871025	1.0	45.550000	183.770000	16.960000
max	250.000000	1.856700e+08	946784.000000	79.908448	1.0	49.480000	200.160000	17.000000

COMPARISION OF RELIANCE INDUSTRIES WITH OTHER COMPANIES

In [19]:
```
data1.columns
```

Out[19]:
```
Index(['RI_SNo', 'RI_Date ', 'RI_series ', 'RI_OPEN ', 'RI_HIGH ', 'RI_LOW ',
       'RI_PREV. CLOSE ', 'RI_ltp ', 'RI_close ', 'RI_vwap ', 'RI_52W H ',
       'RI_52W L ', 'RI_VOLUME ', 'RI_VALUE ', 'RI_No of trades ',
       'RI_PE Ratio', 'RI_Face Value', 'RI_OPS', 'RI_NOPS', 'RI_NPM'],
      dtype='object')
```

In [20]:
```
data_Reliance_TCS=pd.merge(data1,data2,how='outer',left_on='RI_SNo',right_on='TCS_SNo')
```

In [21]:
```
def compare_PE_RT(df):
    return int(df['RI_PE Ratio']>df['TCS_PE Ratio'])
def compare_OPS_RT(df):
    return int(df['RI_OPS']>=df['TCS_OPS'])
def compare_NOPS_RT(df):
    return int(df['RI_NOPS']>=df['TCS_NOPS'])
def compare_NPM_RT(df):
    return int(df['RI_NPM']>=df['TCS_NPM'])
```

In [22]:
```
data_Reliance_TCS['PE Compare']=data_Reliance_TCS.apply(compare_PE_RT,axis=1)
data_Reliance_TCS['OPS Compare']=data_Reliance_TCS.apply(compare_OPS_RT,axis=1)
data_Reliance_TCS['NOPS Compare']=data_Reliance_TCS.apply(compare_NOPS_RT,axis=1)
data_Reliance_TCS['NPM Compare']=data_Reliance_TCS.apply(compare_NPM_RT,axis=1)
```

In [23]:
```
data_Reliance_TCS
```

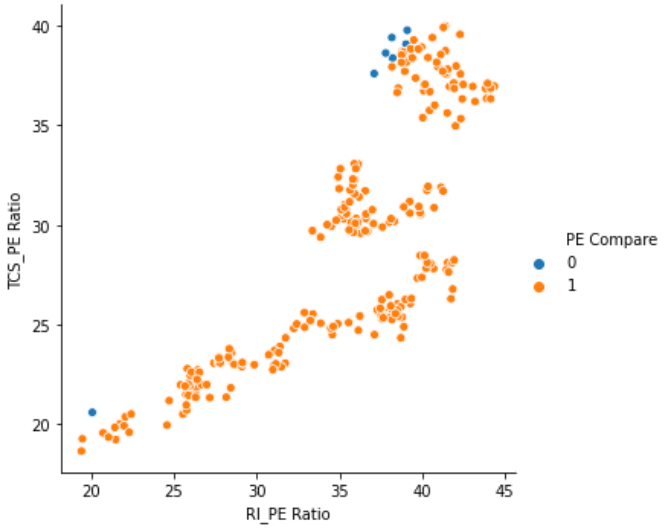
Out[23]:

	RI_SNo	RI_Date	RI_series	RI_OPEN	RI_HIGH	RI_LOW	RI_PREV. CLOSE	RI_ltp	RI_close	RI_vwap	...	TCS_No of trades	TCS_PE Ratio	TCS_F V
0	1	31-Mar-20	EQ	1,073.95	1,129.80	1,048.00	1,030.45	1,100.00	1,113.75	1,093.37	...	190774	20.601309	
1	2	1-Apr-20	EQ	1,122.25	1,124.60	1,045.20	1,113.75	1,084.00	1,080.45	1,072.84	...	221364	19.277414	
2	3	3-Apr-20	EQ	1,134.45	1,134.45	1,056.30	1,080.45	1,088.00	1,077.45	1,077.52	...	244588	18.662004	
3	4	7-Apr-20	EQ	1,102.10	1,214.00	1,100.00	1,077.45	1,211.00	1,206.10	1,161.27	...	232534	20.027076	
4	5	8-Apr-20	EQ	1,180.00	1,229.00	1,160.00	1,206.10	1,197.00	1,192.15	1,194.60	...	276600	19.240185	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	
245	246	24-Mar-21	EQ	2,079.75	2,079.75	2,040.40	2,087.50	2,048.55	2,047.30	2,055.87	...	110682	37.703552	
246	247	25-Mar-21	EQ	2,054.00	2,054.00	1,985.00	2,047.30	1,993.95	1,991.45	2,011.25	...	153808	37.024040	
247	248	26-Mar-21	EQ	2,012.00	2,013.70	1,973.70	1,991.45	1,994.00	1,994.65	1,995.09	...	201134	37.047596	
248	249	30-Mar-21	EQ	2,008.00	2,048.90	1,991.55	1,994.65	2,031.90	2,029.30	2,026.44	...	191356	38.155956	
249	250	31-Mar-21	EQ	2,018.00	2,049.90	1,999.00	2,029.30	2,005.65	2,003.10	2,017.21	...	156653	38.389104	

250 rows × 44 columns

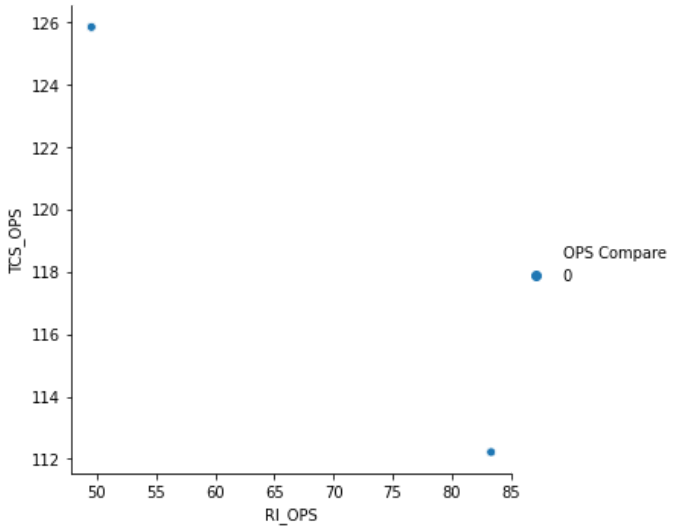
In [24]:
```
sns.relplot(x='RI_PE Ratio',y='TCS_PE Ratio',hue='PE Compare',data=data_Reliance_TCS)
```

Out[24]: <seaborn.axisgrid.FacetGrid at 0x15ed10c9520>



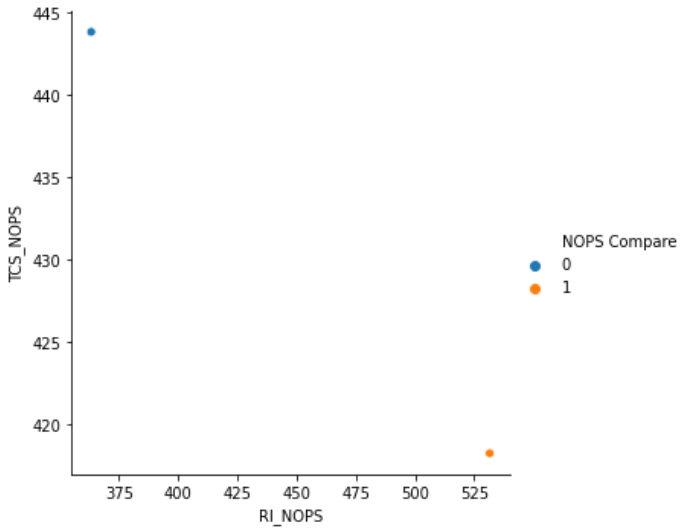
In [25]:
```
sns.relplot(x='RI_OPS',y='TCS_OPS',hue='OPS Compare',data=data_Reliance_TCS)
```

Out[25]: <seaborn.axisgrid.FacetGrid at 0x15ed121e0a0>



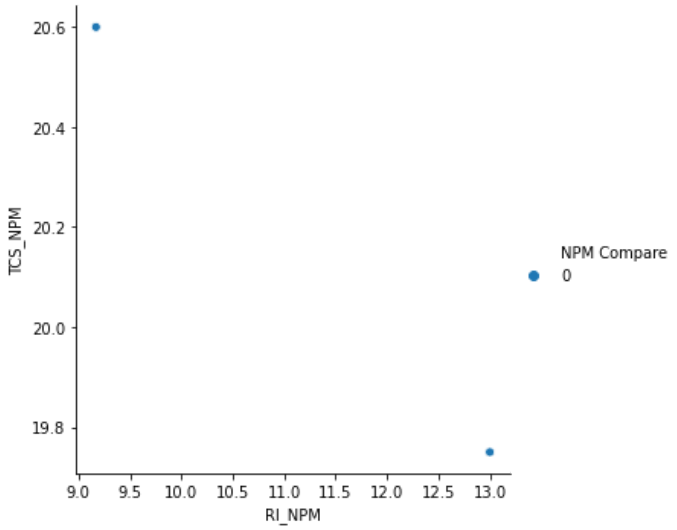
In [26]:
```
sns.relplot(x='RI_NOPS',y='TCS_NOPS',hue='NOPS Compare',data=data_Reliance_TCS)
```

Out[26]: <seaborn.axisgrid.FacetGrid at 0x15ed128d490>



In [27]:
```
sns.relplot(x='RI_NPM',y='TCS_NPM',hue='NPM Compare',data=data_Reliance_TCS)
```

Out[27]:
```
<seaborn.axisgrid.FacetGrid at 0x15ed12c5940>
```



In [28]:
```
data_Reliance_HDFC=pd.merge(data1,data3,how='outer',left_on='RI_SNo',right_on='HDFC_SNo')
```

In [29]:
```
def compare_PE_RH(df):
    return int(df['RI_PE Ratio']>df['HDFC_PE Ratio'])
def compare_OPS_RH(df):
    return int(df['RI_OPS']>=df['HDFC_OPS'])
def compare_NOPS_RH(df):
    return int(df['RI_NOPS']>=df['HDFC_NOPS'])
def compare_NPM_RH(df):
    return int(df['RI_NPM']>=df['HDFC_NPM'])
```

In [30]:
```
data_Reliance_HDFC['PE Compare']=data_Reliance_HDFC.apply(compare_PE_RH,axis=1)
data_Reliance_HDFC['OPS Compare']=data_Reliance_HDFC.apply(compare_OPS_RH,axis=1)
data_Reliance_HDFC['NOPS Compare']=data_Reliance_HDFC.apply(compare_NOPS_RH,axis=1)
data_Reliance_HDFC['NPM Compare']=data_Reliance_HDFC.apply(compare_NPM_RH,axis=1)
```

In [31]:
```
data_Reliance_HDFC
```

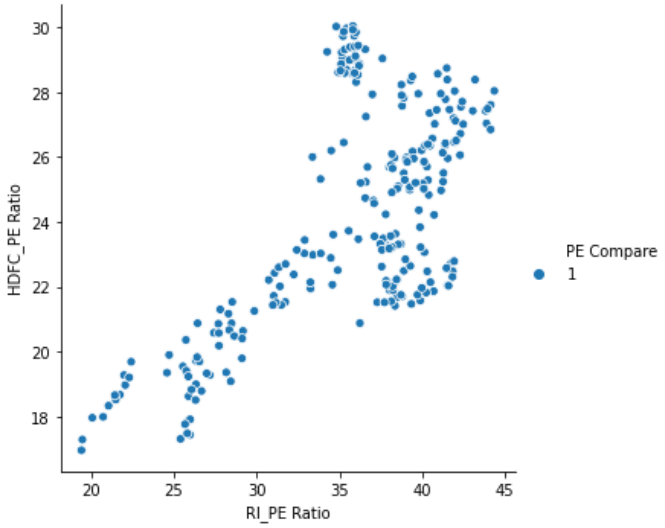
Out[31]:

	RI_SNo	RI_Date	RI_series	RI_OPEN	RI_HIGH	RI_LOW	RI_PREV. CLOSE	RI_ltp	RI_close	RI_vwap	...	HDFC_No of trades	HDFC_PE Ratio	HDFC
0	1	31-Mar-20	EQ	1,073.95	1,129.80	1,048.00	1,030.45	1,100.00	1,113.75	1,093.37	...	411360	17.956250	
1	2	1-Apr-20	EQ	1,122.25	1,124.60	1,045.20	1,113.75	1,084.00	1,080.45	1,072.84	...	354947	17.284375	
2	3	3-Apr-20	EQ	1,134.45	1,134.45	1,056.30	1,080.45	1,088.00	1,077.45	1,077.52	...	392455	16.955208	
3	4	7-Apr-20	EQ	1,102.10	1,214.00	1,100.00	1,077.45	1,211.00	1,206.10	1,161.27	...	475198	18.668750	
4	5	8-Apr-20	EQ	1,180.00	1,229.00	1,160.00	1,206.10	1,197.00	1,192.15	1,194.60	...	503019	18.518750	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	
245	246	24-Mar-21	EQ	2,079.75	2,079.75	2,040.40	2,087.50	2,048.55	2,047.30	2,055.87	...	229246	26.127208	
246	247	25-Mar-21	EQ	2,054.00	2,054.00	1,985.00	2,047.30	1,993.95	1,991.45	2,011.25	...	371490	25.854240	
247	248	26-Mar-21	EQ	2,012.00	2,013.70	1,973.70	1,991.45	1,994.00	1,994.65	1,995.09	...	186603	26.348057	
248	249	30-Mar-21	EQ	2,008.00	2,048.90	1,991.55	1,994.65	2,031.90	2,029.30	2,026.44	...	229161	27.450530	
249	250	31-Mar-21	EQ	2,018.00	2,049.90	1,999.00	2,029.30	2,005.65	2,003.10	2,017.21	...	362409	26.389576	

250 rows × 44 columns

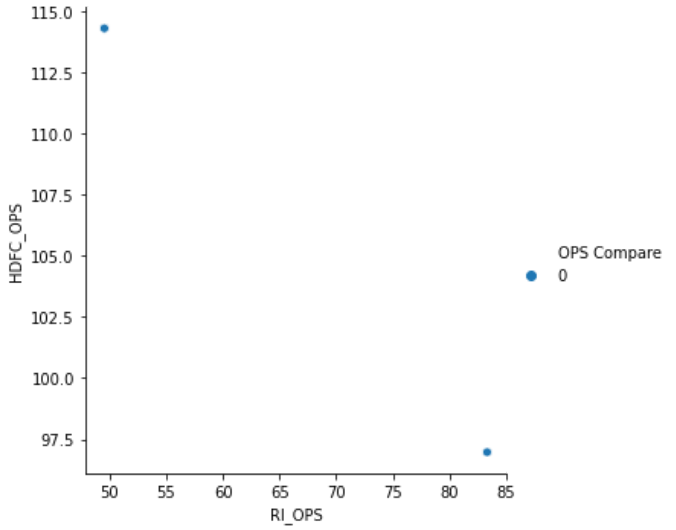
In [32]:
```
sns.relplot(x='RI_PE Ratio',y='HDFC_PE Ratio',hue='PE Compare',data=data_Reliance_HDFC)
```

Out[32]:
```
<seaborn.axisgrid.FacetGrid at 0x15ed136c910>
```



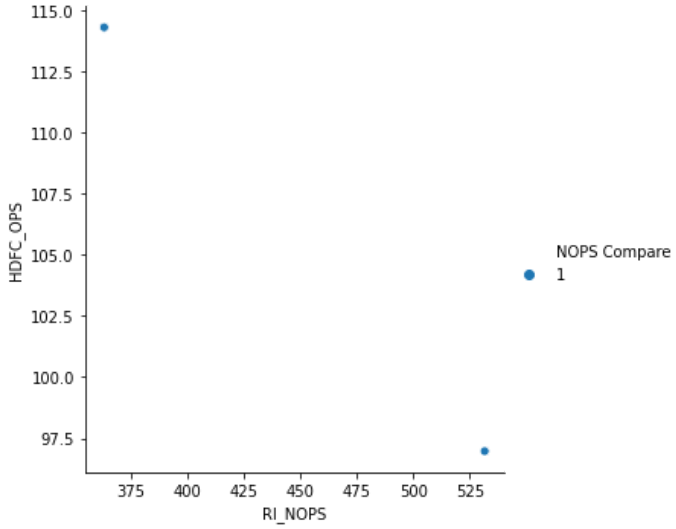
In [33]:
```
sns.relplot(x='RI_OPS',y='HDFC_OPS',hue='OPS Compare',data=data_Reliance_HDFC)
```

Out[33]: <seaborn.axisgrid.FacetGrid at 0x15ed13dcb20>



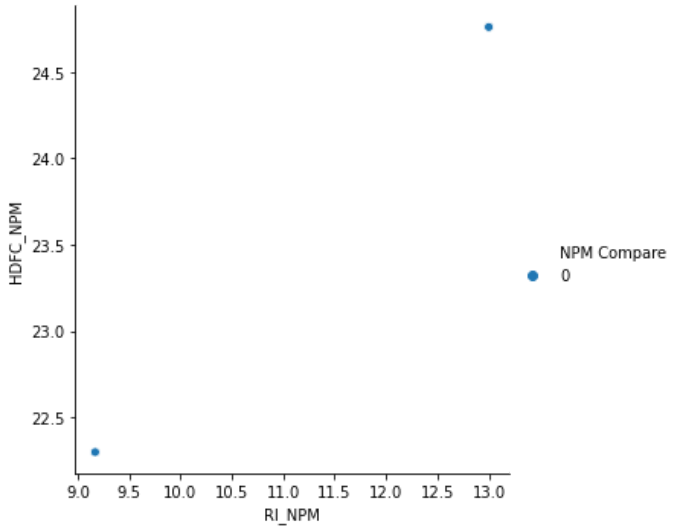
In [34]:
```
sns.relplot(x='RI_NOPS',y='HDFC_OPS',hue='NOPS Compare',data=data_Reliance_HDFC)
```

Out[34]: <seaborn.axisgrid.FacetGrid at 0x15ed144e070>



In [35]:
```
sns.relplot(x='RI_NPM',y='HDFC_NPM',hue='NPM Compare',data=data_Reliance_HDFC)
```

Out[35]: <seaborn.axisgrid.FacetGrid at 0x15ed1425eb0>



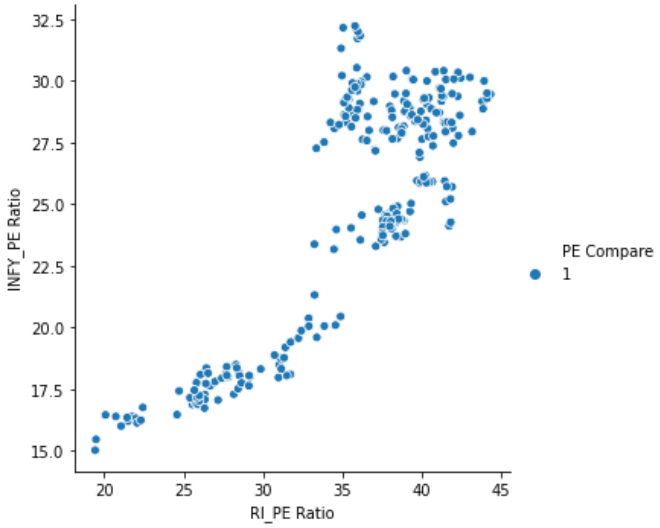
In [36]:
```
data_Reliance_INFY=pd.merge(data1,data4,how='outer',left_on='RI_SNo',right_on='INFY_SNo')
```

In [37]:
```
def compare_PE_RIN(df):
    return int(df['RI_PE Ratio']>df['INFY_PE Ratio'])
def compare_OPS_RIN(df):
    return int(df['RI_OPS']>=df['INFY_OPS'])
def compare_NOPS_RIN(df):
    return int(df['RI_NOPS']>=df['INFY_NOPS'])
def compare_NPM_RIN(df):
    return int(df['RI_NPM']>=df['INFY_NPM'])
```

In [38]:
```
data_Reliance_INFY['PE Compare']=data_Reliance_INFY.apply(compare_PE_RIN,axis=1)
data_Reliance_INFY['OPS Compare']=data_Reliance_INFY.apply(compare_OPS_RIN,axis=1)
data_Reliance_INFY['NOPS Compare']=data_Reliance_INFY.apply(compare_NOPS_RIN,axis=1)
data_Reliance_INFY['NPM Compare']=data_Reliance_INFY.apply(compare_NPM_RIN,axis=1)
```

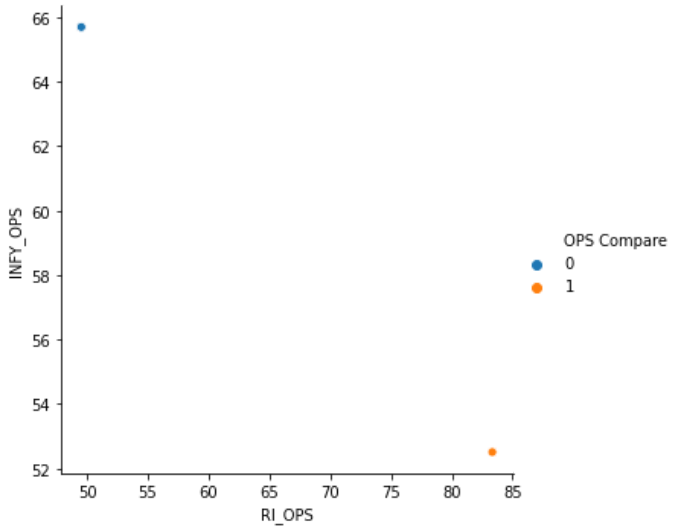
In [39]:
```
sns.relplot(x='RI_PE Ratio',y='INFY_PE Ratio',hue='PE Compare',data=data_Reliance_INFY)
```

Out[39]: <seaborn.axisgrid.FacetGrid at 0x15ed153c610>



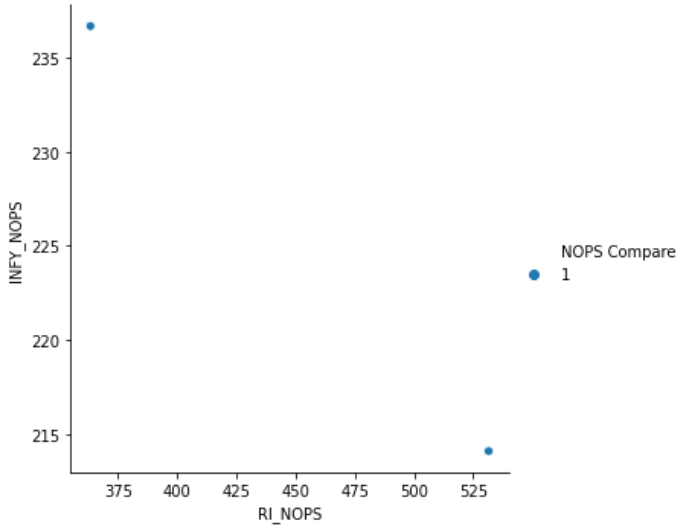
In [40]:
```
sns.relplot(x='RI_OPS',y='INFY_OPS',hue='OPS Compare',data=data_Reliance_INFY)
```

Out[40]: <seaborn.axisgrid.FacetGrid at 0x15ed2555ac0>



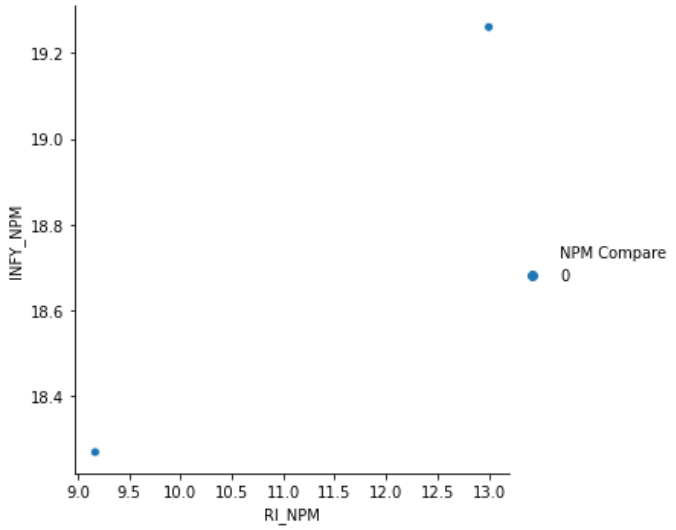
In [41]:
```
sns.relplot(x='RI_NOPS',y='INFY_NOPS',hue='NOPS Compare',data=data_Reliance_INFY)
```

Out[41]: <seaborn.axisgrid.FacetGrid at 0x15ed1469b50>



In [42]:
```
sns.relplot(x='RI_NPM',y='INFY_NPM',hue='NPM Compare',data=data_Reliance_INFY)
```

Out[42]: <seaborn.axisgrid.FacetGrid at 0x15ed1418a00>

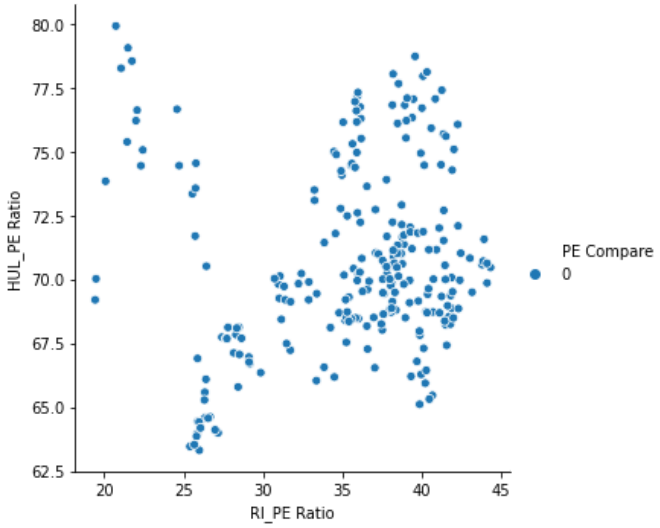


In [43]:
```
data_Reliance_HUL=pd.merge(data1,data5,how='outer',left_on='RI_SNo',right_on='HUL_SNo')
```

In [44]:
```
def compare_PE_RH(df):
    return int(df['RI_PE Ratio']>=df['HUL_PE Ratio'])
def compare_OPS_RH(df):
    return int(df['RI_OPS']>=df['HUL_OPS'])
def compare_NOPS_RH(df):
    return int(df['RI_NOPS']>=df['HUL_NOPS'])
def compare_NPM_RH(df):
    return int(df['RI_NPM']>=df['HUL_NPMP'])
data_Reliance_HUL['PE Compare']=data_Reliance_HUL.apply(compare_PE_RH,axis=1)
data_Reliance_HUL['OPS Compare']=data_Reliance_HUL.apply(compare_OPS_RH,axis=1)
data_Reliance_HUL['NOPS Compare']=data_Reliance_HUL.apply(compare_NOPS_RH,axis=1)
data_Reliance_HUL['NPM Compare']=data_Reliance_HUL.apply(compare_NPM_RH,axis=1)
```

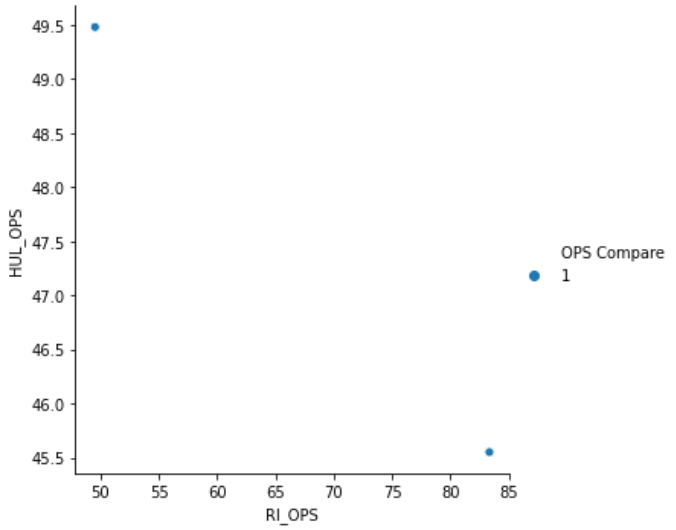
In [45]:
```
sns.relplot(x='RI_PE Ratio',y='HUL_PE Ratio',hue='PE Compare',data=data_Reliance_HUL)
```

Out[45]: <seaborn.axisgrid.FacetGrid at 0x15ed267c730>



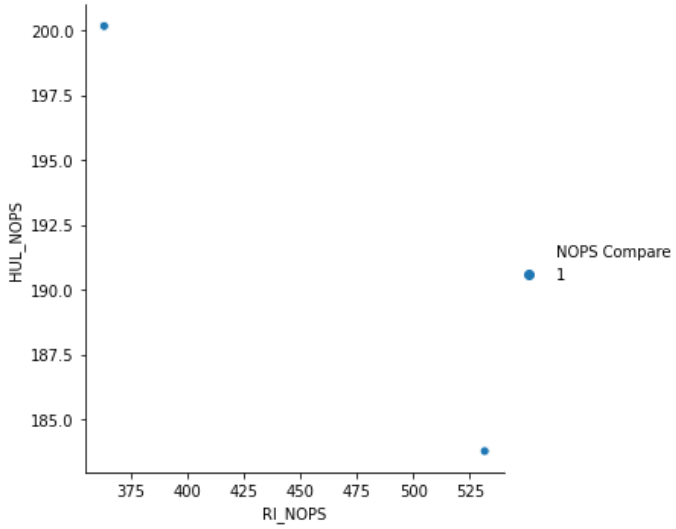
In [46]:
```
sns.relplot(x='RI_OPS',y='HUL_OPS',hue='OPS Compare',data=data_Reliance_HUL)
```

Out[46]: <seaborn.axisgrid.FacetGrid at 0x15ed26d21f0>



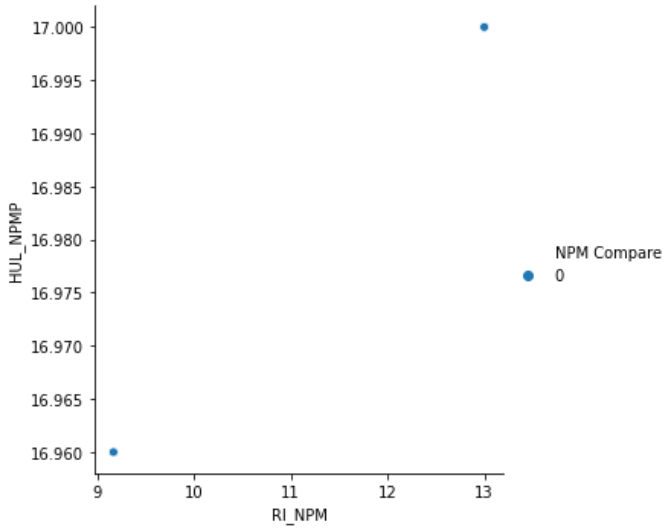
In [47]:
```
sns.relplot(x='RI_NOPS',y='HUL_NOPS',hue='NOPS Compare',data=data_Reliance_HUL)
```

Out[47]: <seaborn.axisgrid.FacetGrid at 0x15ed1526760>



In [48]:
```
sns.relplot(x='RI_NPM',y='HUL_NPMP',hue='NPM Compare',data=data_Reliance_HUL)
```

Out[48]:
```
<seaborn.axisgrid.FacetGrid at 0x15ed27b2ca0>
```



COMPARISION OF TATA CONSULTANCY SERVICES WITH OTHER COMPANIES

In [49]:
```
data2.columns
```

Out[49]:
```
Index(['TCS_SNo', 'TCS_Date ', 'TCS_series ', 'TCS_OPEN ', 'TCS_HIGH ',
       'TCS_LOW ', 'TCS_PREV. CLOSE ', 'TCS_ltp ', 'TCS_close ', 'TCS_vwap ',
       'TCS_52W H ', 'TCS_52W L ', 'TCS_VOLUME ', 'TCS_VALUE ',
       'TCS_No of trades ', 'TCS_PE Ratio', 'TCS_Face Value', 'TCS_OPS',
       'TCS_NOPS', 'TCS_NPM'],
      dtype='object')
```

In [50]:
```
data_TCS_Reliance=pd.merge(data2,data1,how='outer',left_on='TCS_SNo',right_on='RI_SNo')
```

In [51]:
```
def compare_PE_TR(df):
    return int(df['RI_PE Ratio']<df['TCS_PE Ratio'])
def compare_OPS_TR(df):
    return int(df['RI_OPS']<=df['TCS_OPS'])
def compare_NOPS_TR(df):
    return int(df['RI_NOPS']<=df['TCS_NOPS'])
def compare_NPM_TR(df):
    return int(df['RI_NPM']<=df['TCS_NPM'])
data_TCS_Reliance['PE Compare']=data_TCS_Reliance.apply(compare_PE_RT,axis=1)
data_TCS_Reliance['OPS Compare']=data_TCS_Reliance.apply(compare_OPS_RT,axis=1)
data_TCS_Reliance['NOPS Compare']=data_TCS_Reliance.apply(compare_NOPS_RT,axis=1)
data_TCS_Reliance['NPM Compare']=data_TCS_Reliance.apply(compare_NPM_RT,axis=1)
```

In [52]:
```
data_TCS_Reliance
```

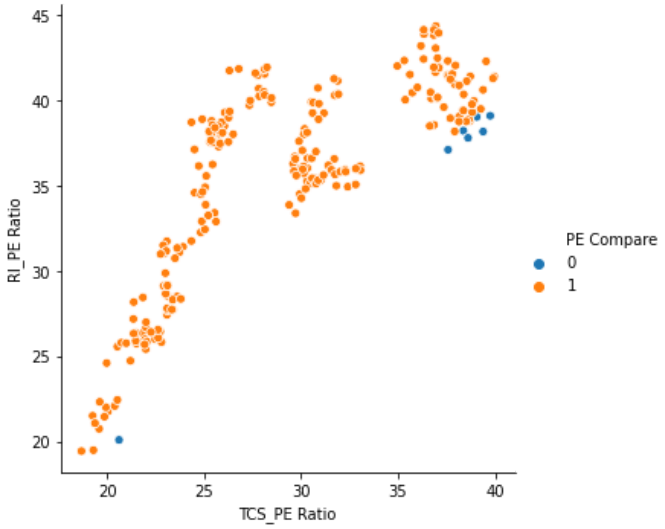
Out[52]:

	TCS_SNo	TCS_Date	TCS_series	TCS_OPEN	TCS_HIGH	TCS_LOW	TCS_PREV. CLOSE	TCS_ltp	TCS_close	TCS_vwap	...	RI_No of trades	
0	1	31-Mar-20	EQ	1,837.40	1,855.00	1,780.00	1,778.50	1,819.00	1,826.10	1,824.45	...	506536	2
1	2	1-Apr-20	EQ	1,825.90	1,834.75	1,702.00	1,826.10	1,714.00	1,708.75	1,763.66	...	414675	1
2	3	3-Apr-20	EQ	1,740.00	1,740.00	1,650.00	1,708.75	1,659.00	1,654.20	1,688.30	...	519365	1
3	4	7-Apr-20	EQ	1,710.00	1,785.85	1,705.00	1,654.20	1,765.85	1,775.20	1,747.20	...	556669	2
4	5	8-Apr-20	EQ	1,760.00	1,806.00	1,701.00	1,775.20	1,708.00	1,705.45	1,736.76	...	538577	2
...	...	...	...	...	...	...	...	...	...	...	...	...	
245	246	24-Mar-21	EQ	3,111.20	3,152.30	3,111.15	3,142.60	3,123.60	3,121.10	3,130.63	...	222445	4
246	247	25-Mar-21	EQ	3,112.20	3,130.85	3,050.00	3,121.10	3,074.50	3,064.85	3,091.11	...	292881	4
247	248	26-Mar-21	EQ	3,090.65	3,118.00	3,043.05	3,064.85	3,062.00	3,066.80	3,078.97	...	296946	4
248	249	30-Mar-21	EQ	3,083.00	3,188.45	3,060.90	3,066.80	3,172.00	3,158.55	3,139.65	...	230499	4
249	250	31-Mar-21	EQ	3,155.00	3,205.00	3,132.00	3,158.55	3,175.30	3,177.85	3,177.88	...	193340	4

250 rows × 44 columns

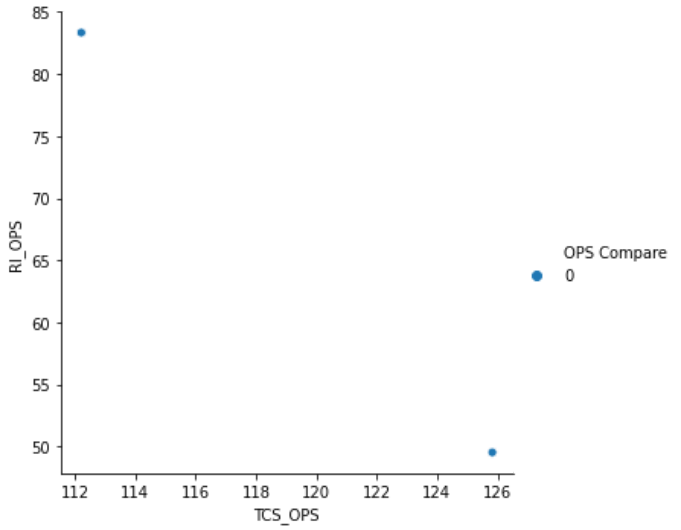
In [53]:
```
sns.relplot(x='TCS_PE Ratio',y='RI_PE Ratio',hue='PE Compare',data=data_TCS_Reliance)
```

Out[53]:
```
<seaborn.axisgrid.FacetGrid at 0x15ed2849a90>
```



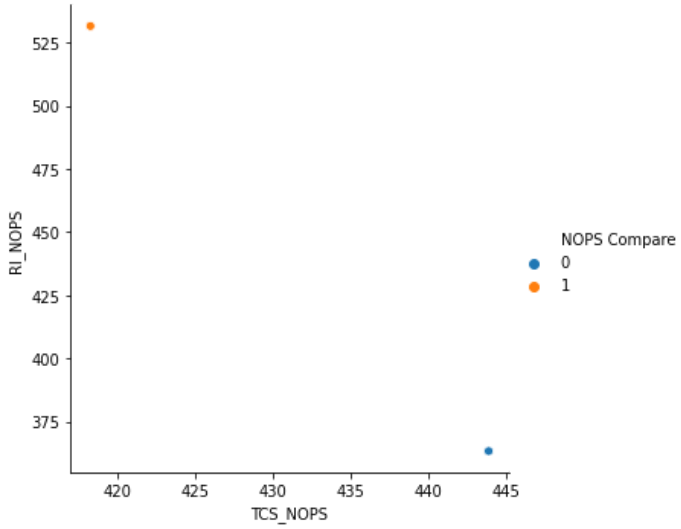
In [54]:
```
sns.relplot(x='TCS_OPS',y='RI_OPS',hue='OPS Compare',data=data_TCS_Reliance)
```

Out[54]: <seaborn.axisgrid.FacetGrid at 0x15ed28497c0>



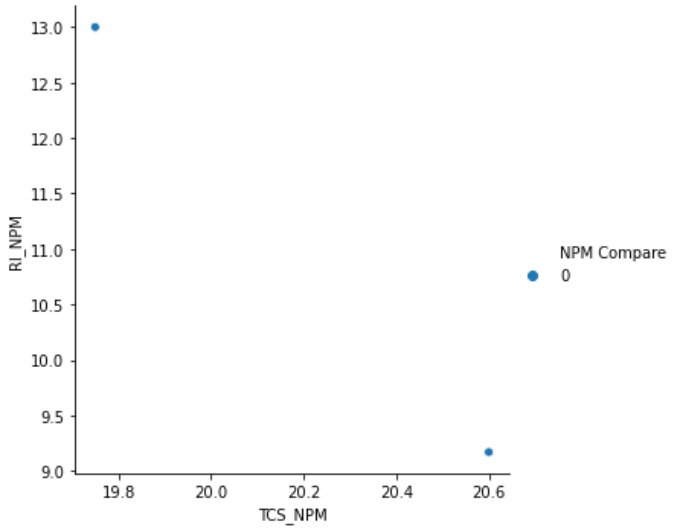
In [55]:
```
sns.relplot(x='TCS_NOPS',y='RI_NOPS',hue='NOPS Compare',data=data_TCS_Reliance)
```

Out[55]: <seaborn.axisgrid.FacetGrid at 0x15ed28434f0>



In [56]:
```
sns.relplot(x='TCS_NPM',y='RI_NPM',hue='NPM Compare',data=data_TCS_Reliance)
```

Out[56]:
```
<seaborn.axisgrid.FacetGrid at 0x15ed28974c0>
```



In [57]:
```
data_TCS_HDFC=pd.merge(data2,data3,how='outer',left_on='TCS_SNo',right_on='HDFC_SNo')
```

In [58]:
```
def compare_PE_TH(df):
    return int(df['HDFC_PE Ratio']<df['TCS_PE Ratio'])
def compare_OPS_TH(df):
    return int(df['HDFC_OPS']<=df['TCS_OPS'])
def compare_NOPS_TH(df):
    return int(df['HDFC_NOPS']<=df['TCS_NOPS'])
def compare_NPM_TH(df):
    return int(df['HDFC_NPM']<=df['TCS_NPM'])
data_TCS_HDFC['PE Compare']=data_TCS_HDFC.apply(compare_PE_TH,axis=1)
data_TCS_HDFC['OPS Compare']=data_TCS_HDFC.apply(compare_OPS_TH,axis=1)
data_TCS_HDFC['NOPS Compare']=data_TCS_HDFC.apply(compare_NOPS_TH,axis=1)
data_TCS_HDFC['NPM Compare']=data_TCS_HDFC.apply(compare_NPM_TH,axis=1)
```

In [59]:
```
data_TCS_HDFC
```

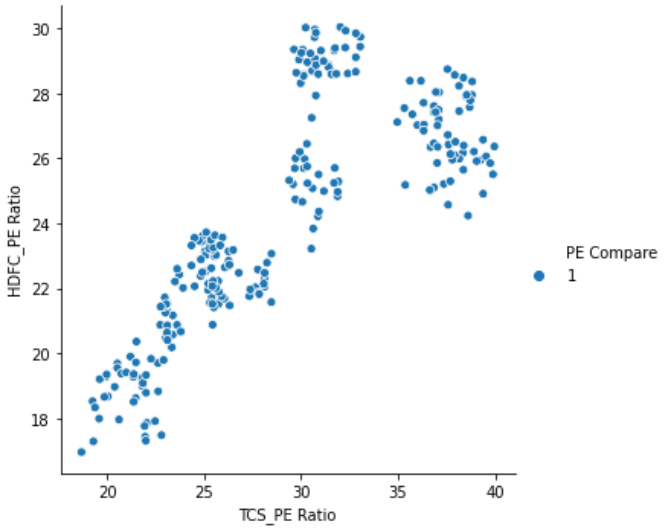
Out[59]:

	TCS_SNo	TCS_Date	TCS_series	TCS_OPEN	TCS_HIGH	TCS_LOW	TCS_PREV. CLOSE	TCS_ltp	TCS_close	TCS_vwap	...	HDFC_No of trades
0	1	31-Mar-20	EQ	1,837.40	1,855.00	1,780.00	1,778.50	1,819.00	1,826.10	1,824.45	...	411360
1	2	1-Apr-20	EQ	1,825.90	1,834.75	1,702.00	1,826.10	1,714.00	1,708.75	1,763.66	...	354947
2	3	3-Apr-20	EQ	1,740.00	1,740.00	1,650.00	1,708.75	1,659.00	1,654.20	1,688.30	...	392455
3	4	7-Apr-20	EQ	1,710.00	1,785.85	1,705.00	1,654.20	1,765.85	1,775.20	1,747.20	...	475198
4	5	8-Apr-20	EQ	1,760.00	1,806.00	1,701.00	1,775.20	1,708.00	1,705.45	1,736.76	...	503019
...	...	...	...	...	...	...	...	...	...	...	...	...
245	246	24-Mar-21	EQ	3,111.20	3,152.30	3,111.15	3,142.60	3,123.60	3,121.10	3,130.63	...	229246
246	247	25-Mar-21	EQ	3,112.20	3,130.85	3,050.00	3,121.10	3,074.50	3,064.85	3,091.11	...	371490
247	248	26-Mar-21	EQ	3,090.65	3,118.00	3,043.05	3,064.85	3,062.00	3,066.80	3,078.97	...	186603
248	249	30-Mar-21	EQ	3,083.00	3,188.45	3,060.90	3,066.80	3,172.00	3,158.55	3,139.65	...	229161
249	250	31-Mar-21	EQ	3,155.00	3,205.00	3,132.00	3,158.55	3,175.30	3,177.85	3,177.88	...	362409

250 rows × 44 columns

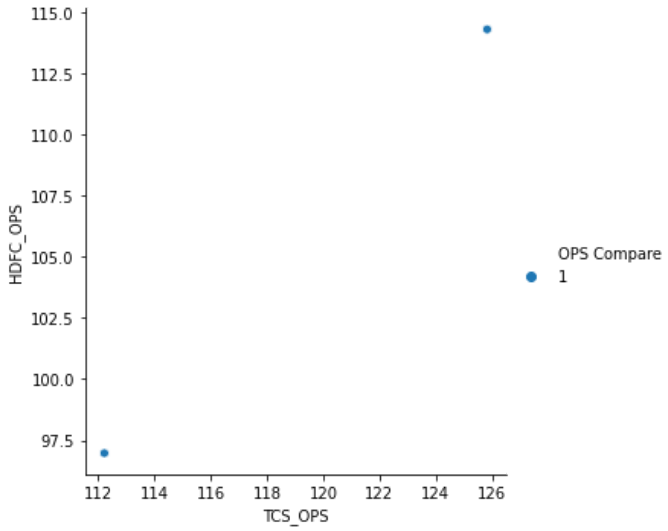
In [60]:
```
sns.relplot(x='TCS_PE Ratio',y='HDFC_PE Ratio',hue='PE Compare',data=data_TCS_HDFC)
```

Out[60]: <seaborn.axisgrid.FacetGrid at 0x15ed29271c0>



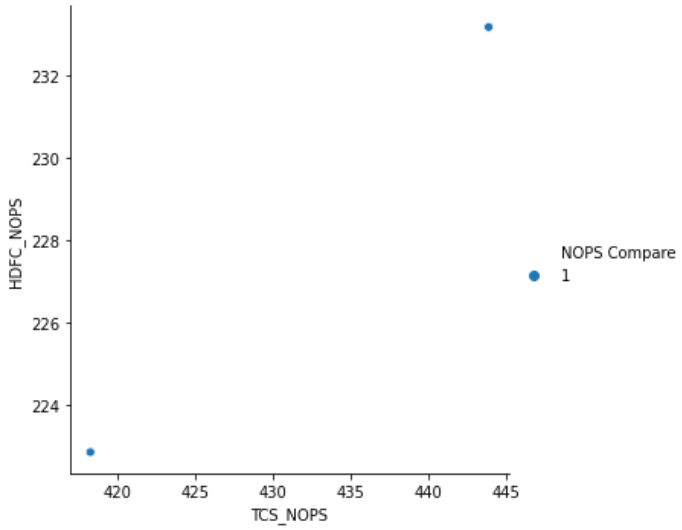
In [61]:
```
sns.relplot(x='TCS_OPS',y='HDFC_OPS',hue='OPS Compare',data=data_TCS_HDFC)
```

Out[61]: <seaborn.axisgrid.FacetGrid at 0x15ed3a28f10>



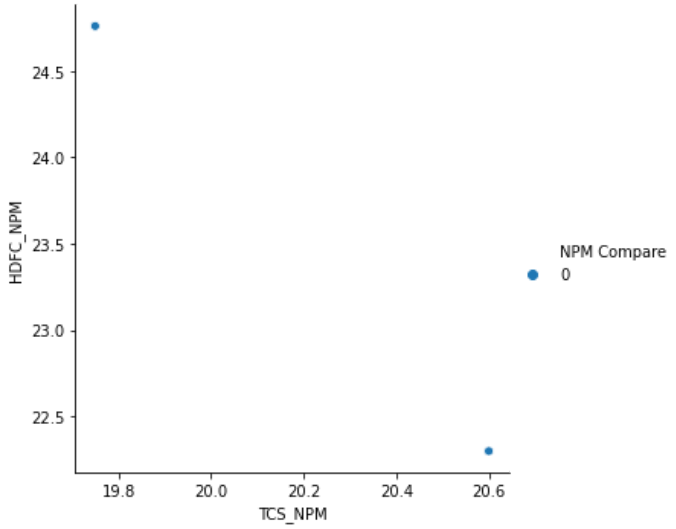
In [62]:
```
sns.relplot(x='TCS_NOPS',y='HDFC_NOPS',hue='NOPS Compare',data=data_TCS_HDFC)
```

Out[62]: <seaborn.axisgrid.FacetGrid at 0x15ed3a09f10>



In [63]:
```
sns.relplot(x='TCS_NPM',y='HDFC_NPM',hue='NPM Compare',data=data_TCS_HDFC)
```

Out[63]: <seaborn.axisgrid.FacetGrid at 0x15ed26d9d00>



In [64]:
```
data_TCS_INFY=pd.merge(data2,data4,how='outer',left_on='TCS_SNo',right_on='INFY_SNo')
```

In [67]:
```
def compare_PE_TI(df):
    return int(df['INFY_PE Ratio']<df['TCS_PE Ratio'])
def compare_OPS_TI(df):
    return int(df['INFY_OPS']<=df['TCS_OPS'])
def compare_NOPS_TI(df):
    return int(df['INFY_NOPS']<=df['TCS_NOPS'])
def compare_NPM_TI(df):
    return int(df['INFY_NPM']<=df['TCS_NPM'])
data_TCS_INFY['PE Compare']=data_TCS_INFY.apply(compare_PE_TI,axis=1)
data_TCS_INFY['OPS Compare']=data_TCS_INFY.apply(compare_OPS_TI,axis=1)
data_TCS_INFY['NOPS Compare']=data_TCS_INFY.apply(compare_NOPS_TI,axis=1)
data_TCS_INFY['NPM Compare']=data_TCS_INFY.apply(compare_NPM_TI,axis=1)
```

In [69]:
```
data_TCS_INFY
```

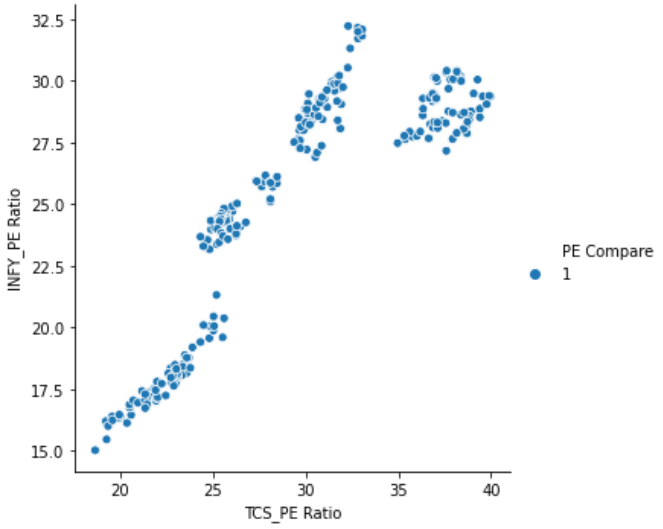
Out[69]:

	TCS_SNo	TCS_Date	TCS_series	TCS_OPEN	TCS_HIGH	TCS_LOW	TCS_PREV. CLOSE	TCS_ltp	TCS_close	TCS_vwap	...	INFY_No of trades
0	1	31-Mar-20	EQ	1,837.40	1,855.00	1,780.00	1,778.50	1,819.00	1,826.10	1,824.45	...	279311
1	2	1-Apr-20	EQ	1,825.90	1,834.75	1,702.00	1,826.10	1,714.00	1,708.75	1,763.66	...	379235
2	3	3-Apr-20	EQ	1,740.00	1,740.00	1,650.00	1,708.75	1,659.00	1,654.20	1,688.30	...	261228
3	4	7-Apr-20	EQ	1,710.00	1,785.85	1,705.00	1,654.20	1,765.85	1,775.20	1,747.20	...	260480
4	5	8-Apr-20	EQ	1,760.00	1,806.00	1,701.00	1,775.20	1,708.00	1,705.45	1,736.76	...	235881
...	...	...	...	...	...	...	...	...	...	...	...	...
245	246	24-Mar-21	EQ	3,111.20	3,152.30	3,111.15	3,142.60	3,123.60	3,121.10	3,130.63	...	143327
246	247	25-Mar-21	EQ	3,112.20	3,130.85	3,050.00	3,121.10	3,074.50	3,064.85	3,091.11	...	184200
247	248	26-Mar-21	EQ	3,090.65	3,118.00	3,043.05	3,064.85	3,062.00	3,066.80	3,078.97	...	138471
248	249	30-Mar-21	EQ	3,083.00	3,188.45	3,060.90	3,066.80	3,172.00	3,158.55	3,139.65	...	227944
249	250	31-Mar-21	EQ	3,155.00	3,205.00	3,132.00	3,158.55	3,175.30	3,177.85	3,177.88	...	218153

250 rows × 44 columns

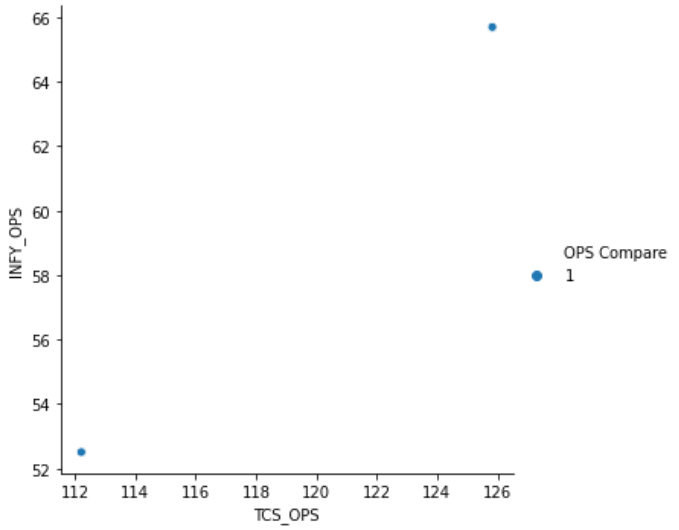
In [70]:
```
sns.relplot(x='TCS_PE Ratio',y='INFY_PE Ratio',hue='PE Compare',data=data_TCS_INFY)
```

Out[70]:
```
<seaborn.axisgrid.FacetGrid at 0x15ed27680d0>
```



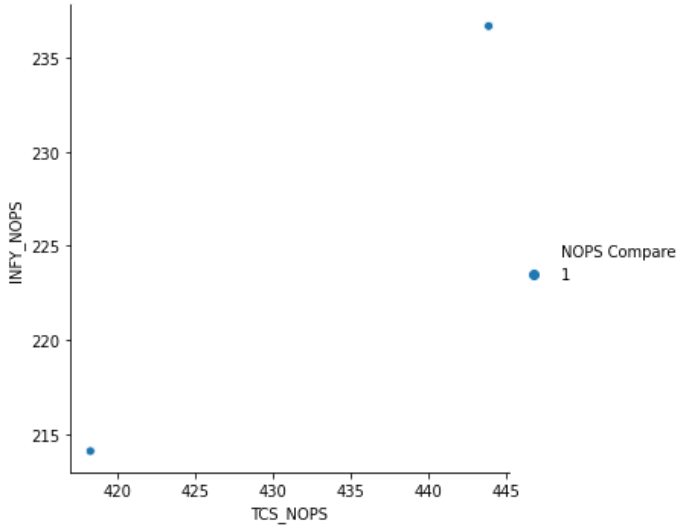
In [71]:
```
sns.relplot(x='TCS_OPS',y='INFY_OPS',hue='OPS Compare',data=data_TCS_INFY)
```

Out[71]: <seaborn.axisgrid.FacetGrid at 0x15ed3ac0910>



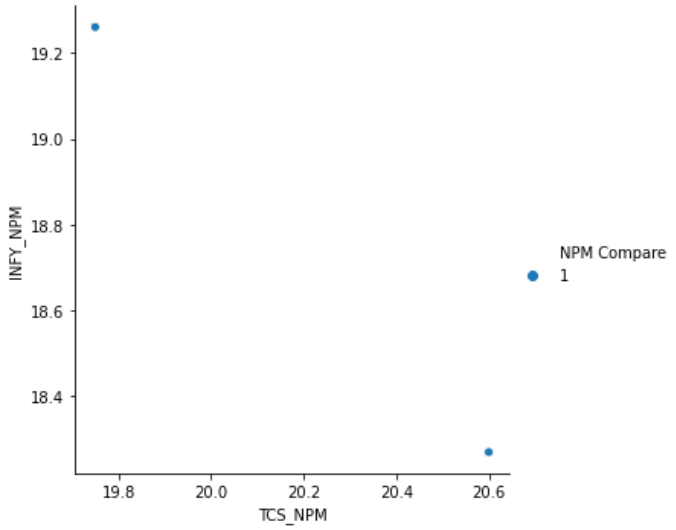
In [72]:
```
sns.relplot(x='TCS_NOPS',y='INFY_NOPS',hue='NOPS Compare',data=data_TCS_INFY)
```

Out[72]: <seaborn.axisgrid.FacetGrid at 0x15ed3daa070>



In [73]:
```
sns.relplot(x='TCS_NPM',y='INFY_NPM',hue='NPM Compare',data=data_TCS_INFY)
```

Out[73]:
```
<seaborn.axisgrid.FacetGrid at 0x15ed3dd1760>
```



In [76]:
```
data_TCS_HUL=pd.merge(data2,data5,how='outer',left_on='TCS_SNo',right_on='HUL_SNo')
```

In [78]:
```
def compare_PE_THUL(df):
    return int(df['HUL_PE Ratio']<df['TCS_PE Ratio'])
def compare_OPS_THUL(df):
    return int(df['HUL_OPS']<=df['TCS_OPS'])
def compare_NOPS_THUL(df):
    return int(df['HUL_NOPS']<=df['TCS_NOPS'])
def compare_NPM_THUL(df):
    return int(df['HUL_NPMP']<=df['TCS_NPM'])
data_TCS_HUL['PE Compare']=data_TCS_HUL.apply(compare_PE_THUL,axis=1)
data_TCS_HUL['OPS Compare']=data_TCS_HUL.apply(compare_OPS_THUL,axis=1)
data_TCS_HUL['NOPS Compare']=data_TCS_HUL.apply(compare_NOPS_THUL,axis=1)
data_TCS_HUL['NPM Compare']=data_TCS_HUL.apply(compare_NPM_THUL,axis=1)
```

In [80]:
```
data_TCS_HUL
```

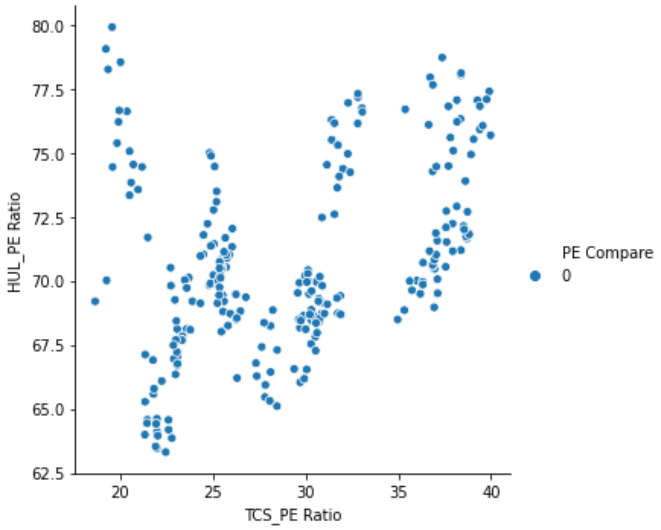
Out[80]:

	TCS_SNo	TCS_Date	TCS_series	TCS_OPEN	TCS_HIGH	TCS_LOW	TCS_PREV. CLOSE	TCS_ltp	TCS_close	TCS_vwap	...	HUL_No of trades
0	1	31-Mar-20	EQ	1,837.40	1,855.00	1,780.00	1,778.50	1,819.00	1,826.10	1,824.45	...	125401
1	2	1-Apr-20	EQ	1,825.90	1,834.75	1,702.00	1,826.10	1,714.00	1,708.75	1,763.66	...	174853
2	3	3-Apr-20	EQ	1,740.00	1,740.00	1,650.00	1,708.75	1,659.00	1,654.20	1,688.30	...	217202
3	4	7-Apr-20	EQ	1,710.00	1,785.85	1,705.00	1,654.20	1,765.85	1,775.20	1,747.20	...	356119
4	5	8-Apr-20	EQ	1,760.00	1,806.00	1,701.00	1,775.20	1,708.00	1,705.45	1,736.76	...	415294
...	...	...	...	...	...	...	...	...	...	...	...	...
245	246	24-Mar-21	EQ	3,111.20	3,152.30	3,111.15	3,142.60	3,123.60	3,121.10	3,130.63	...	83351
246	247	25-Mar-21	EQ	3,112.20	3,130.85	3,050.00	3,121.10	3,074.50	3,064.85	3,091.11	...	118114
247	248	26-Mar-21	EQ	3,090.65	3,118.00	3,043.05	3,064.85	3,062.00	3,066.80	3,078.97	...	110831
248	249	30-Mar-21	EQ	3,083.00	3,188.45	3,060.90	3,066.80	3,172.00	3,158.55	3,139.65	...	156830
249	250	31-Mar-21	EQ	3,155.00	3,205.00	3,132.00	3,158.55	3,175.30	3,177.85	3,177.88	...	138821

250 rows × 44 columns

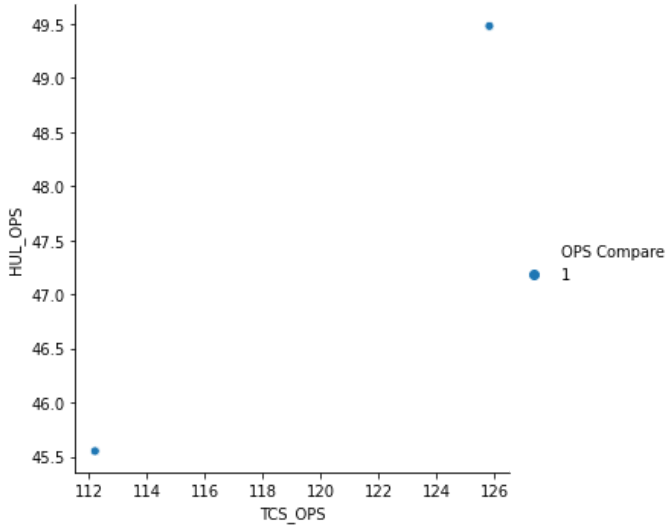
In [81]:
```
sns.relplot(x='TCS_PE Ratio',y='HUL_PE Ratio',hue='PE Compare',data=data_TCS_HUL)
```

Out[81]: <seaborn.axisgrid.FacetGrid at 0x15ed3e5cc40>



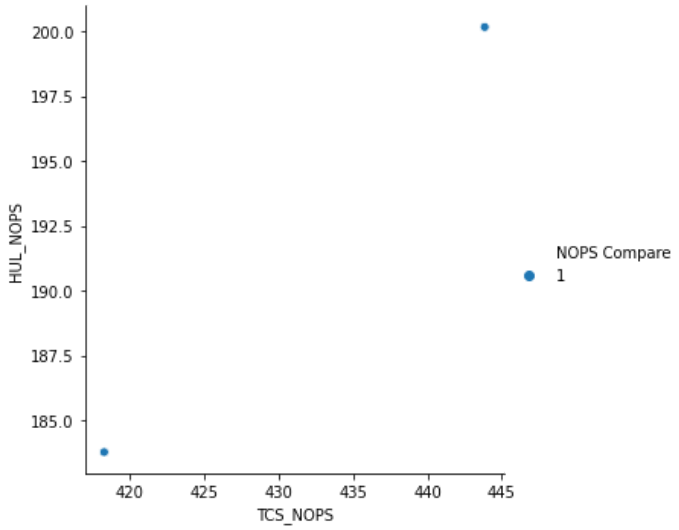
In [82]:
```
sns.relplot(x='TCS_OPS',y='HUL_OPS',hue='OPS Compare',data=data_TCS_HUL)
```

Out[82]: <seaborn.axisgrid.FacetGrid at 0x15ed3e15a60>



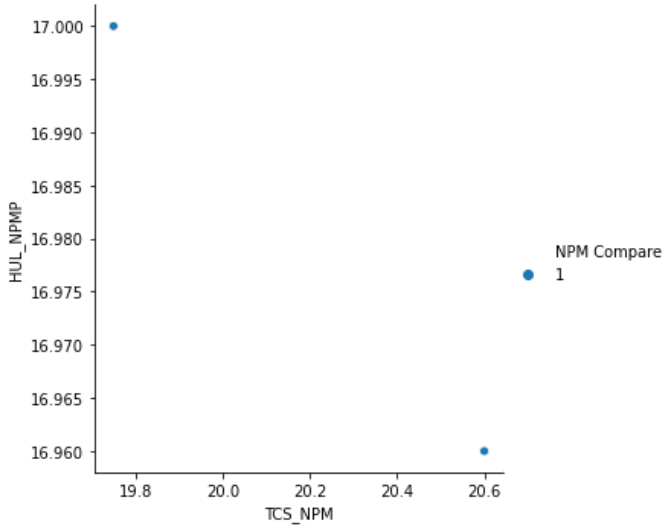
In [83]:
```
sns.relplot(x='TCS_NOPS',y='HUL_NOPS',hue='NOPS Compare',data=data_TCS_HUL)
```

Out[83]:
```
<seaborn.axisgrid.FacetGrid at 0x15ed50de940>
```



In [85]:
```
sns.relplot(x='TCS_NPM',y='HUL_NPMP',hue='NPM Compare',data=data_TCS_HUL)
```

Out[85]:
```
<seaborn.axisgrid.FacetGrid at 0x15ed5078610>
```



COMPARISION OF HDFC BANK WITH OTHER COMPANIES

In [86]:
```
data3.columns
```

Out[86]:
```
Index(['HDFC_SNo', 'HDFC_Date ', 'HDFC_series ', 'HDFC_OPEN ', 'HDFC_HIGH ',
       'HDFC_LOW ', 'HDFC_PREV. CLOSE ', 'HDFC_ltp ', 'HDFC_Close',
       'HDFC_vwap ', 'HDFC_52W H ', 'HDFC_52W L ', 'HDFC_VOLUME ',
       'HDFC_VALUE ', 'HDFC_No of trades ', 'HDFC_PE Ratio', 'HDFC_Face Value',
       'HDFC_OPS', 'HDFC_NOPS', 'HDFC_NPM'],
      dtype='object')
```

In [87]:
```
data_HDFC_Reliance=pd.merge(data3,data1,how='outer',left_on='HDFC_SNo',right_on='RI_SNo')
```

In [89]:
```
def compare_PE_HR(df):
    return int(df['RI_PE Ratio']<df['HDFC_PE Ratio'])
def compare_OPS_HR(df):
    return int(df['RI_OPS']<=df['HDFC_OPS'])
def compare_NOPS_HR(df):
    return int(df['RI_NOPS']<=df['HDFC_NOPS'])
def compare_NPM_HR(df):
    return int(df['RI_NPM']<=df['HDFC_NPM'])
data_HDFC_Reliance['PE Compare']=data_HDFC_Reliance.apply(compare_PE_HR,axis=1)
data_HDFC_Reliance['OPS Compare']=data_HDFC_Reliance.apply(compare_OPS_HR,axis=1)
data_HDFC_Reliance['NOPS Compare']=data_HDFC_Reliance.apply(compare_NOPS_HR,axis=1)
data_HDFC_Reliance['NPM Compare']=data_HDFC_Reliance.apply(compare_NPM_HR,axis=1)
```

In [90]:
```
data_HDFC_Reliance
```

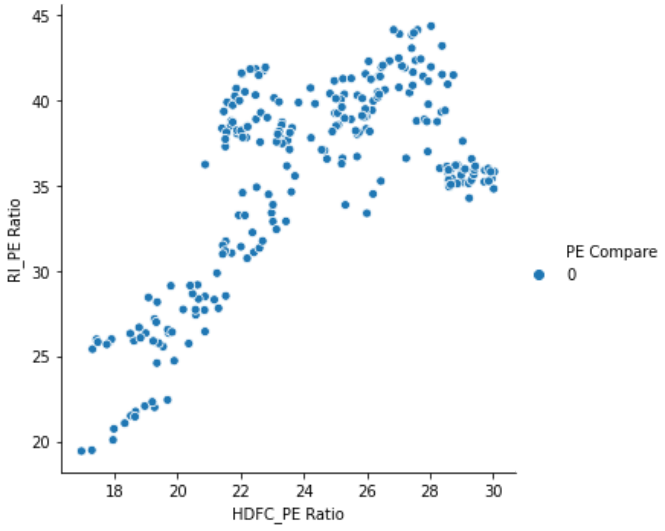
Out[90]:

	HDFC_SNo	HDFC_Date	HDFC_series	HDFC_OPEN	HDFC_HIGH	HDFC_LOW	HDFC_PREV. CLOSE	HDFC_ltp	HDFC_Close	HDFC_vwa
0	1	31-Mar-20	EQ	853.8	873.6	838	831.65	857.95	861.9	854.7
1	2	1-Apr-20	EQ	863.85	863.85	820	861.9	829.55	829.65	831.9
2	3	3-Apr-20	EQ	843	844	810	829.65	811	813.85	825.2
3	4	7-Apr-20	EQ	874	907.3	845.35	813.85	895.8	896.1	871.5
4	5	8-Apr-20	EQ	879.95	945	866.1	896.1	888.7	888.9	902.0
...	...	...	...	...	...	...	...	...	...	...
245	246	24-Mar-21	EQ	1,490.90	1,506.45	1,471.00	1,500.15	1,481.10	1,478.80	1,489.0
246	247	25-Mar-21	EQ	1,490.20	1,495.55	1,450.25	1,478.80	1,468.00	1,463.35	1,468.5
247	248	26-Mar-21	EQ	1,494.00	1,499.00	1,474.00	1,463.35	1,497.55	1,491.30	1,486.8
248	249	30-Mar-21	EQ	1,506.65	1,562.55	1,501.55	1,491.30	1,548.80	1,553.70	1,537.7
249	250	31-Mar-21	EQ	1,548.00	1,548.00	1,488.00	1,553.70	1,494.40	1,493.65	1,499.7

250 rows × 44 columns

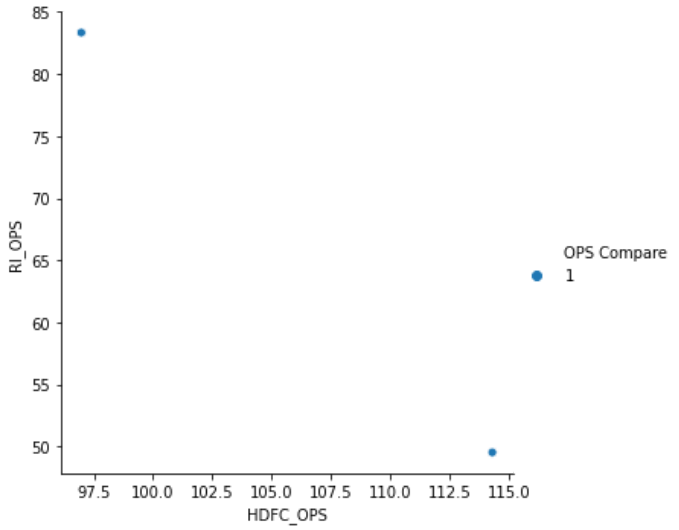
In [91]:
```
sns.relplot(x='HDFC_PE Ratio',y='RI_PE Ratio',hue='PE Compare',data=data_HDFC_Reliance)
```

Out[91]:
```
<seaborn.axisgrid.FacetGrid at 0x15ed4ea7220>
```



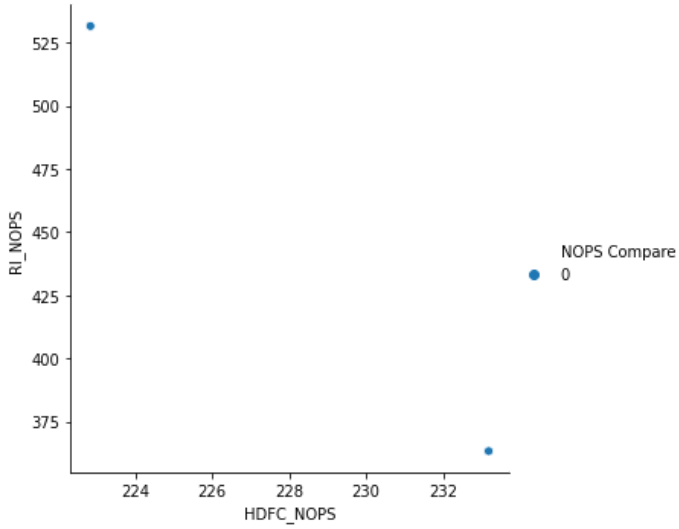
In [92]:
```
sns.relplot(x='HDFC_OPS',y='RI_OPS',hue='OPS Compare',data=data_HDFC_Reliance)
```

Out[92]: <seaborn.axisgrid.FacetGrid at 0x15ed3e1b040>



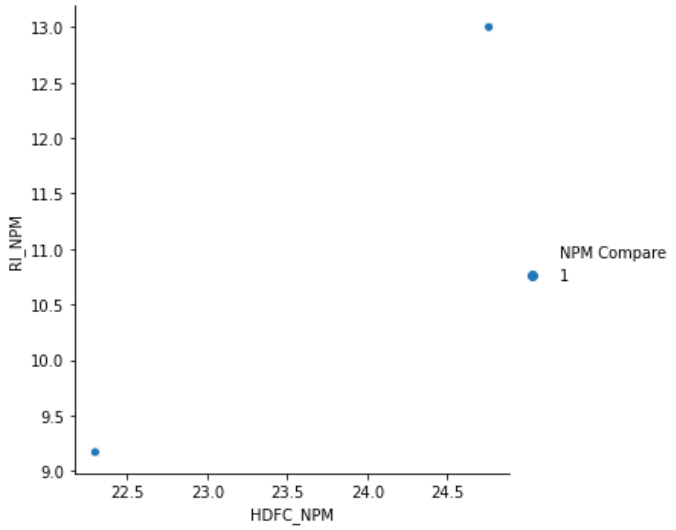
In [93]:
```
sns.relplot(x='HDFC_NOPS',y='RI_NOPS',hue='NOPS Compare',data=data_HDFC_Reliance)
```

Out[93]: <seaborn.axisgrid.FacetGrid at 0x15ed527afd0>



In [94]:
```
sns.relplot(x='HDFC_NPM',y='RI_NPM',hue='NPM Compare',data=data_HDFC_Reliance)
```

Out[94]:
```
<seaborn.axisgrid.FacetGrid at 0x15ed530fc70>
```



In [95]:
```
data_HDFC_TCS=pd.merge(data3,data2,how='outer',left_on='HDFC_SNo',right_on='TCS_SNo')
```

In [96]:
```
def compare_PE_HT(df):
    return int(df['TCS_PE Ratio']<df['HDFC_PE Ratio'])
def compare_OPS_HT(df):
    return int(df['TCS_OPS']<=df['HDFC_OPS'])
def compare_NOPS_HT(df):
    return int(df['TCS_NOPS']<=df['HDFC_NOPS'])
def compare_NPM_HT(df):
    return int(df['TCS_NPM']<=df['HDFC_NPM'])
data_HDFC_TCS['PE Compare']=data_HDFC_TCS.apply(compare_PE_HT,axis=1)
data_HDFC_TCS['OPS Compare']=data_HDFC_TCS.apply(compare_OPS_HT,axis=1)
data_HDFC_TCS['NOPS Compare']=data_HDFC_TCS.apply(compare_NOPS_HT,axis=1)
data_HDFC_TCS['NPM Compare']=data_HDFC_TCS.apply(compare_NPM_HT,axis=1)
```

In [97]:
```
data_HDFC_TCS
```

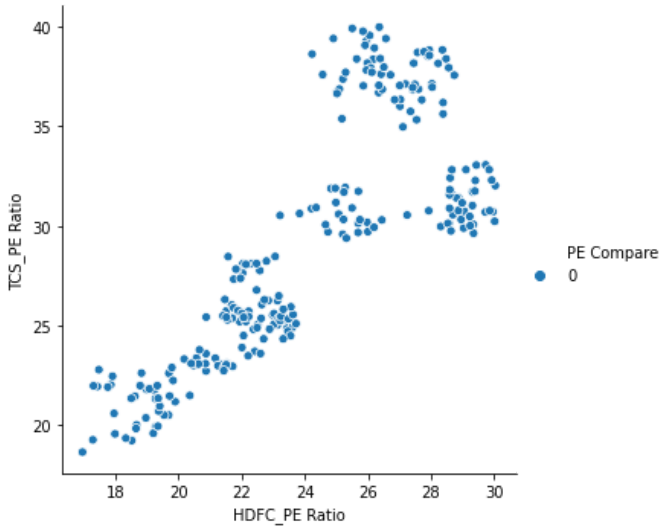
Out[97]:

	HDFC_SNo	HDFC_Date	HDFC_series	HDFC_OPEN	HDFC_HIGH	HDFC_LOW	HDFC_PREV. CLOSE	HDFC_ltp	HDFC_Close	HDFC_vwap
0	1	31-Mar-20	EQ	853.8	873.6	838	831.65	857.95	861.9	854.7
1	2	1-Apr-20	EQ	863.85	863.85	820	861.9	829.55	829.65	831.9
2	3	3-Apr-20	EQ	843	844	810	829.65	811	813.85	825.2
3	4	7-Apr-20	EQ	874	907.3	845.35	813.85	895.8	896.1	871.5
4	5	8-Apr-20	EQ	879.95	945	866.1	896.1	888.7	888.9	902.0
...	...	...	...	...	...	...	...	...	...	...
245	246	24-Mar-21	EQ	1,490.90	1,506.45	1,471.00	1,500.15	1,481.10	1,478.80	1,489.0
246	247	25-Mar-21	EQ	1,490.20	1,495.55	1,450.25	1,478.80	1,468.00	1,463.35	1,468.5
247	248	26-Mar-21	EQ	1,494.00	1,499.00	1,474.00	1,463.35	1,497.55	1,491.30	1,486.8
248	249	30-Mar-21	EQ	1,506.65	1,562.55	1,501.55	1,491.30	1,548.80	1,553.70	1,537.7
249	250	31-Mar-21	EQ	1,548.00	1,548.00	1,488.00	1,553.70	1,494.40	1,493.65	1,499.7

250 rows × 44 columns

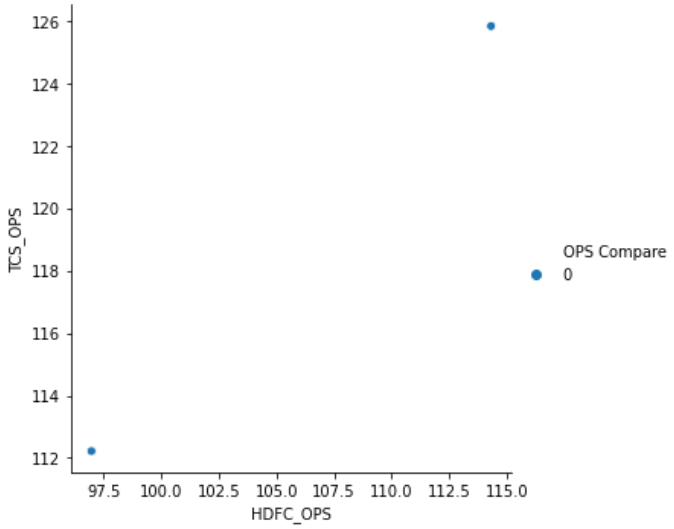
In [98]:
```
sns.relplot(x='HDFC_PE Ratio',y='TCS_PE Ratio',hue='PE Compare',data=data_HDFC_TCS)
```

Out[98]: <seaborn.axisgrid.FacetGrid at 0x15ed4ea73a0>



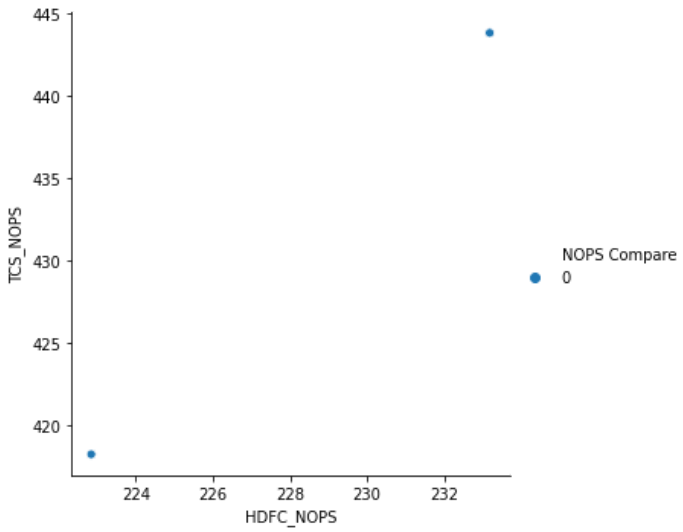
In [99]:
```
sns.relplot(x='HDFC_OPS',y='TCS_OPS',hue='OPS Compare',data=data_HDFC_TCS)
```

Out[99]: <seaborn.axisgrid.FacetGrid at 0x15ed2768d00>



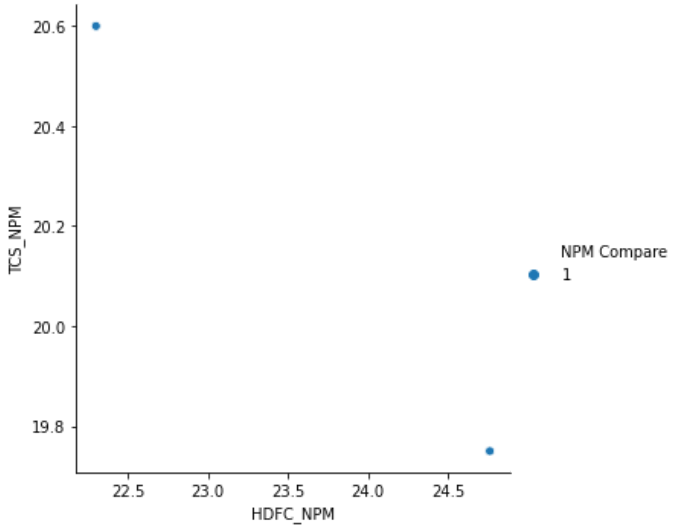
In [100]:
```
sns.relplot(x='HDFC_NOPS',y='TCS_NOPS',hue='NOPS Compare',data=data_HDFC_TCS)
```

Out[100]: <seaborn.axisgrid.FacetGrid at 0x15ed53a2460>



In [101]:
```
sns.relplot(x='HDFC_NPM',y='TCS_NPM',hue='NPM Compare',data=data_HDFC_TCS)
```

Out[101]: <seaborn.axisgrid.FacetGrid at 0x15ed63fb7c0>



In [102]:
```
data_HDFC_INFY=pd.merge(data3,data4,how='outer',left_on='HDFC_SNo',right_on='INFY_SNo')
```

In [103]:
```
def compare_PE_HI(df):
    return int(df['INFY_PE Ratio']<df['HDFC_PE Ratio'])
def compare_OPS_HI(df):
    return int(df['INFY_OPS']<=df['HDFC_OPS'])
def compare_NOPS_HI(df):
    return int(df['INFY_NOPS']<=df['HDFC_NOPS'])
def compare_NPM_HI(df):
    return int(df['INFY_NPM']<=df['HDFC_NPM'])
data_HDFC_INFY['PE Compare']=data_HDFC_INFY.apply(compare_PE_HI,axis=1)
data_HDFC_INFY['OPS Compare']=data_HDFC_INFY.apply(compare_OPS_HI,axis=1)
data_HDFC_INFY['NOPS Compare']=data_HDFC_INFY.apply(compare_NOPS_HI,axis=1)
data_HDFC_INFY['NPM Compare']=data_HDFC_INFY.apply(compare_NPM_HI,axis=1)
```

In [104]:
```
data_HDFC_INFY
```

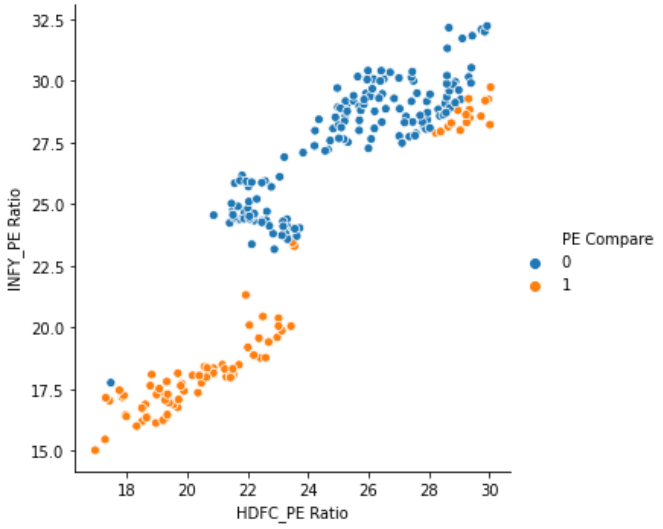
Out[104]:

	HDFC_SNo	HDFC_Date	HDFC_series	HDFC_OPEN	HDFC_HIGH	HDFC_LOW	HDFC_PREV. CLOSE	HDFC_ltp	HDFC_Close	HDFC_vwap
0	1	31-Mar-20	EQ	853.8	873.6	838	831.65	857.95	861.9	854.7
1	2	1-Apr-20	EQ	863.85	863.85	820	861.9	829.55	829.65	831.9
2	3	3-Apr-20	EQ	843	844	810	829.65	811	813.85	825.2
3	4	7-Apr-20	EQ	874	907.3	845.35	813.85	895.8	896.1	871.5
4	5	8-Apr-20	EQ	879.95	945	866.1	896.1	888.7	888.9	902.0
...	...	...	...	...	...	...	...	...	...	...
245	246	24-Mar-21	EQ	1,490.90	1,506.45	1,471.00	1,500.15	1,481.10	1,478.80	1,489.0
246	247	25-Mar-21	EQ	1,490.20	1,495.55	1,450.25	1,478.80	1,468.00	1,463.35	1,468.5
247	248	26-Mar-21	EQ	1,494.00	1,499.00	1,474.00	1,463.35	1,497.55	1,491.30	1,486.8
248	249	30-Mar-21	EQ	1,506.65	1,562.55	1,501.55	1,491.30	1,548.80	1,553.70	1,537.7
249	250	31-Mar-21	EQ	1,548.00	1,548.00	1,488.00	1,553.70	1,494.40	1,493.65	1,499.7

250 rows × 44 columns

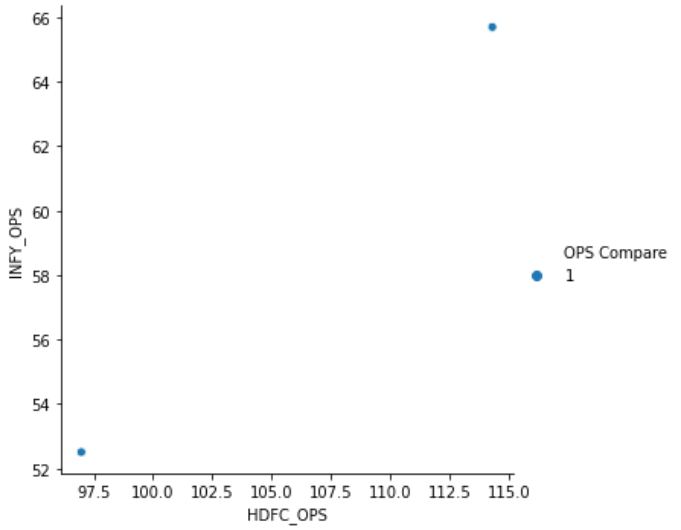
In [105]:
```
sns.relplot(x='HDFC_PE Ratio',y='INFY_PE Ratio',hue='PE Compare',data=data_HDFC_INFY)
```

Out[105]: <seaborn.axisgrid.FacetGrid at 0x15ed64c5370>



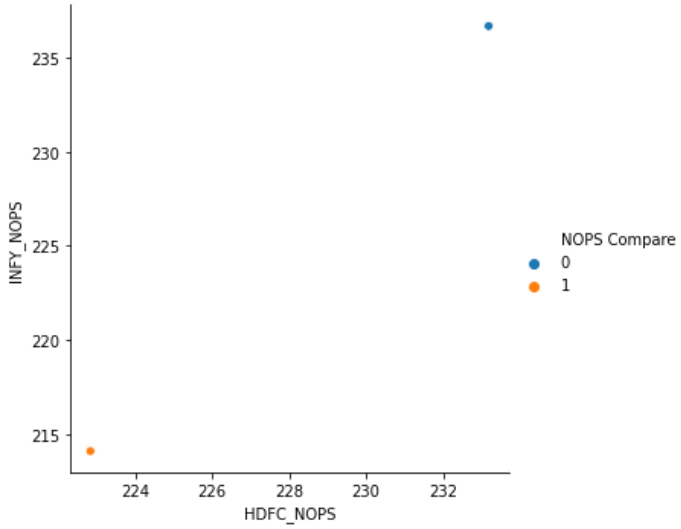
In [106]:
```
sns.relplot(x='HDFC_OPS',y='INFY_OPS',hue='OPS Compare',data=data_HDFC_INFY)
```

Out[106]: <seaborn.axisgrid.FacetGrid at 0x15ed653c490>



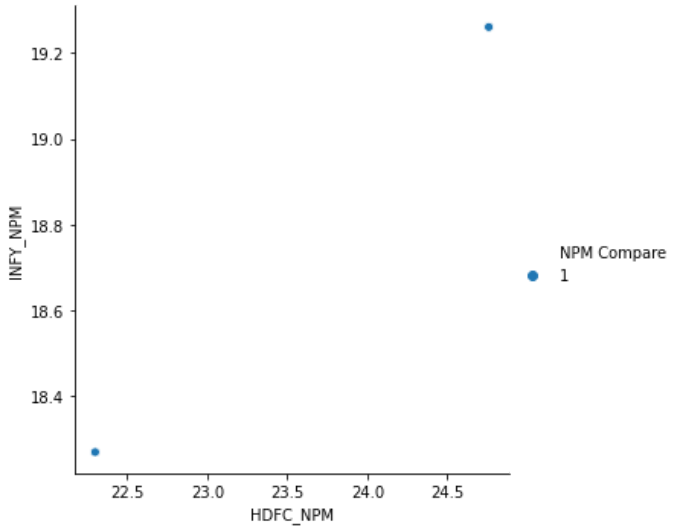
In [107]:
```
sns.relplot(x='HDFC_NOPS',y='INFY_NOPS',hue='NOPS Compare',data=data_HDFC_INFY)
```

Out[107]: <seaborn.axisgrid.FacetGrid at 0x15ed659adc0>



In [108]:
```
sns.relplot(x='HDFC_NPM',y='INFY_NPM',hue='NPM Compare',data=data_HDFC_INFY)
```

Out[108]:
```
<seaborn.axisgrid.FacetGrid at 0x15ed64c5fd0>
```



In [109]:
```
data_HDFC_HUL=pd.merge(data3,data5,how='outer',left_on='HDFC_SNo',right_on='HUL_SNo')
```

In [111]:
```
def compare_PE_HHUL(df):
    return int(df['HUL_PE Ratio']<df['HDFC_PE Ratio'])
def compare_OPS_HHUL(df):
    return int(df['HUL_OPS']<=df['HDFC_OPS'])
def compare_NOPS_HHUL(df):
    return int(df['HUL_NOPS']<=df['HDFC_NOPS'])
def compare_NPM_HHUL(df):
    return int(df['HUL_NPMP']<=df['HDFC_NPM'])
data_HDFC_HUL['PE Compare']=data_HDFC_HUL.apply(compare_PE_HHUL,axis=1)
data_HDFC_HUL['OPS Compare']=data_HDFC_HUL.apply(compare_OPS_HHUL,axis=1)
data_HDFC_HUL['NOPS Compare']=data_HDFC_HUL.apply(compare_NOPS_HHUL,axis=1)
data_HDFC_HUL['NPM Compare']=data_HDFC_HUL.apply(compare_NPM_HHUL,axis=1)
```

In [112]:
```
data_HDFC_HUL
```

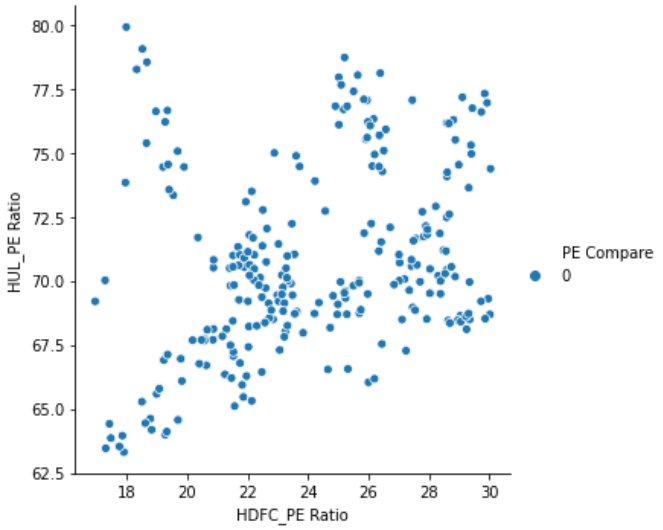
Out[112]:

	HDFC_SNo	HDFC_Date	HDFC_series	HDFC_OPEN	HDFC_HIGH	HDFC_LOW	HDFC_PREV. CLOSE	HDFC_ltp	HDFC_Close	HDFC_vwap
0	1	31-Mar-20	EQ	853.8	873.6	838	831.65	857.95	861.9	854.7
1	2	1-Apr-20	EQ	863.85	863.85	820	861.9	829.55	829.65	831.9
2	3	3-Apr-20	EQ	843	844	810	829.65	811	813.85	825.2
3	4	7-Apr-20	EQ	874	907.3	845.35	813.85	895.8	896.1	871.5
4	5	8-Apr-20	EQ	879.95	945	866.1	896.1	888.7	888.9	902.0
...	...	...	...	...	...	...	...	...	...	...
245	246	24-Mar-21	EQ	1,490.90	1,506.45	1,471.00	1,500.15	1,481.10	1,478.80	1,489.0
246	247	25-Mar-21	EQ	1,490.20	1,495.55	1,450.25	1,478.80	1,468.00	1,463.35	1,468.5
247	248	26-Mar-21	EQ	1,494.00	1,499.00	1,474.00	1,463.35	1,497.55	1,491.30	1,486.8
248	249	30-Mar-21	EQ	1,506.65	1,562.55	1,501.55	1,491.30	1,548.80	1,553.70	1,537.7
249	250	31-Mar-21	EQ	1,548.00	1,548.00	1,488.00	1,553.70	1,494.40	1,493.65	1,499.7

250 rows × 44 columns

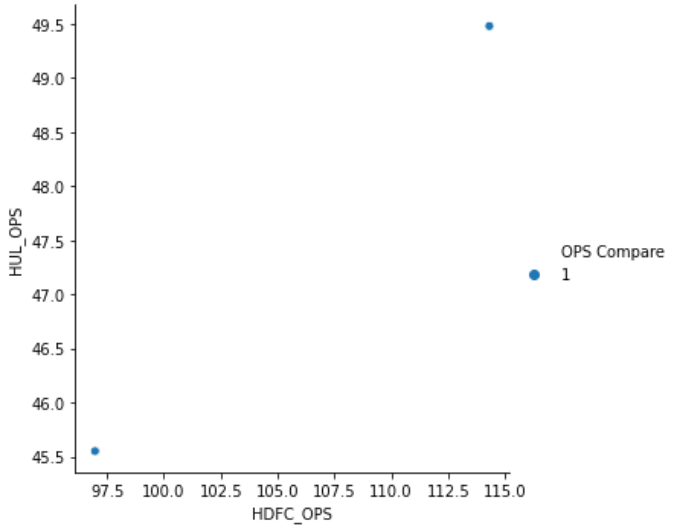
In [113]:
```
sns.relplot(x='HDFC_PE Ratio',y='HUL_PE Ratio',hue='PE Compare',data=data_HDFC_HUL)
```

Out[113]: <seaborn.axisgrid.FacetGrid at 0x15ed6540850>



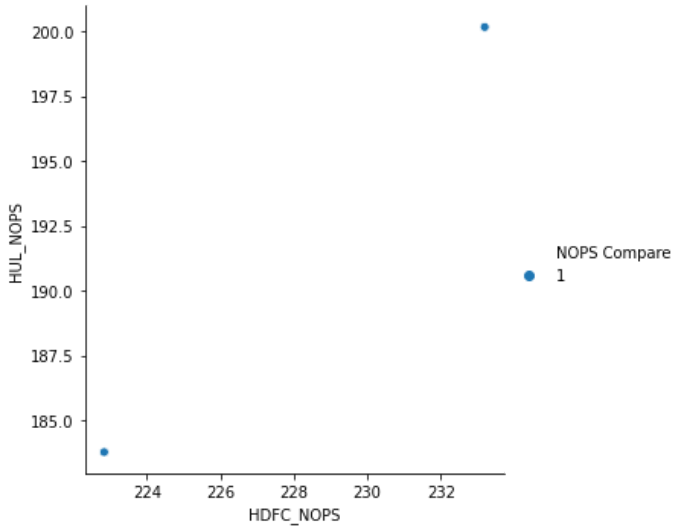
In [114]:
```
sns.relplot(x='HDFC_OPS',y='HUL_OPS',hue='OPS Compare',data=data_HDFC_HUL)
```

Out[114]: <seaborn.axisgrid.FacetGrid at 0x15ed66e0ca0>



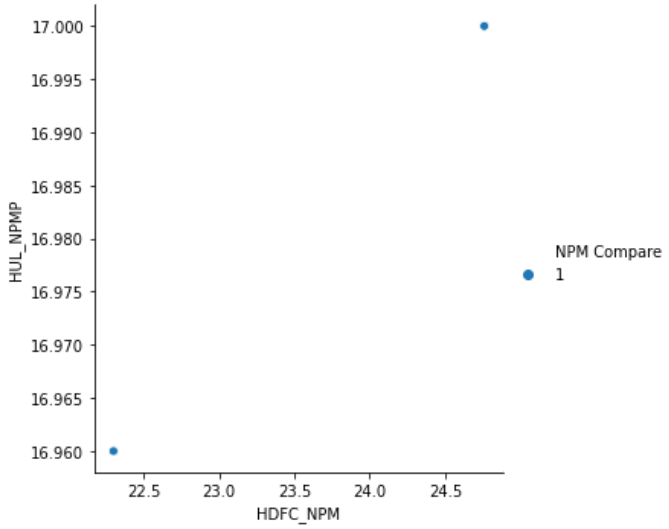
In [115]:
```
sns.relplot(x='HDFC_NOPS',y='HUL_NOPS',hue='NOPS Compare',data=data_HDFC_HUL)
```

Out[115]:
```
<seaborn.axisgrid.FacetGrid at 0x15ed6704850>
```



In [116]:
```
sns.relplot(x='HDFC_NPM',y='HUL_NPMP',hue='NPM Compare',data=data_HDFC_HUL)
```

Out[116]:
```
<seaborn.axisgrid.FacetGrid at 0x15ed676f460>
```



COMPARISION OF INFOSYS WITH OTHER COMPANIES

In [117]:
```
data4.columns
```

Out[117]:
```
Index(['INFY_SNo', 'INFY_Date ', 'INFY_series ', 'INFY_OPEN ', 'INFY_HIGH ',
       'INFY_LOW ', 'INFY_PREV. CLOSE ', 'INFY_ltp ', 'INFY_close ',
       'INFY_vwap ', 'INFY_52W H ', 'INFY_52W L ', 'INFY_VOLUME ',
       'INFY_VALUE ', 'INFY_No of trades ', 'INFY_PE Ratio', 'INFY_Face Value',
       'INFY_OPS', 'INFY_NOPS', 'INFY_NPM'],
      dtype='object')
```

In [118]:
```
data_INFY_Reliance=pd.merge(data4,data1,how='outer',left_on='INFY_SNo',right_on='RI_SNo')
```

In [119]:
```
def compare_PE_IR(df):
    return int(df['RI_PE Ratio']<df['INFY_PE Ratio'])
def compare_OPS_IR(df):
    return int(df['RI_OPS']<=df['INFY_OPS'])
def compare_NOPS_IR(df):
    return int(df['RI_NOPS']<=df['INFY_NOPS'])
def compare_NPM_IR(df):
    return int(df['RI_NPM']<=df['INFY_NPM'])
data_INFY_Reliance['PE Compare']=data_INFY_Reliance.apply(compare_PE_IR,axis=1)
data_INFY_Reliance['OPS Compare']=data_INFY_Reliance.apply(compare_OPS_IR,axis=1)
data_INFY_Reliance['NOPS Compare']=data_INFY_Reliance.apply(compare_NOPS_IR,axis=1)
data_INFY_Reliance['NPM Compare']=data_INFY_Reliance.apply(compare_NPM_IR,axis=1)
```

In [120]:
```
data_INFY_Reliance
```

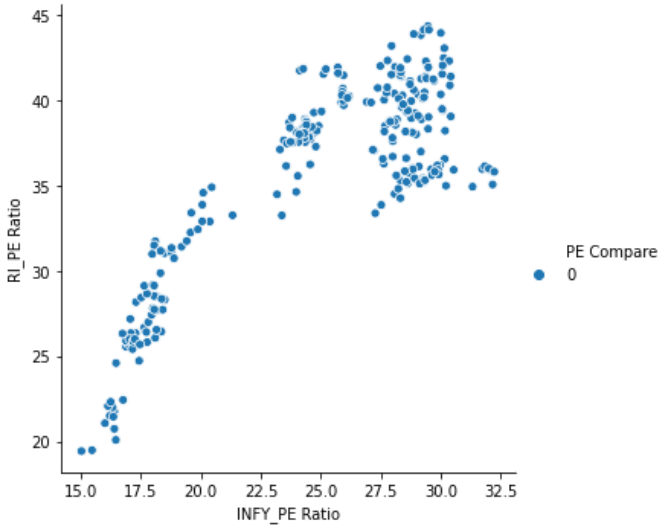
Out[120]:

	INFY_SNo	INFY_Date	INFY_series	INFY_OPEN	INFY_HIGH	INFY_LOW	INFY_PREV. CLOSE	INFY_ltp	INFY_close	INFY_vwap	...	RI_ trac
0	1	31-Mar-20	EQ	650	662	633.7	626.7	639.6	641.5	647.8	...	506
1	2	1-Apr-20	EQ	634.35	637.5	594	641.5	603.9	602.8	611.89	...	414
2	3	3-Apr-20	EQ	603.5	606	582.15	602.8	588.5	585.7	592.53	...	519
3	4	7-Apr-20	EQ	615	644.25	612.9	585.7	633.8	639	627.65	...	556
4	5	8-Apr-20	EQ	630	655.65	626.35	639	632.25	631.6	637.44	...	538
...	...	...	...	...	...	...	...	...	...	...	...	
245	246	24-Mar-21	EQ	1,357.85	1,370.45	1,346.25	1,371.55	1,355.00	1,353.75	1,357.63	...	222
246	247	25-Mar-21	EQ	1,346.75	1,352.50	1,327.60	1,353.75	1,337.60	1,333.80	1,338.88	...	292
247	248	26-Mar-21	EQ	1,344.70	1,356.70	1,332.00	1,333.80	1,338.70	1,336.20	1,340.61	...	296
248	249	30-Mar-21	EQ	1,346.90	1,400.00	1,336.15	1,336.20	1,386.50	1,385.30	1,373.99	...	230
249	250	31-Mar-21	EQ	1,382.00	1,388.00	1,363.30	1,385.30	1,367.30	1,368.05	1,370.72	...	193

250 rows × 44 columns

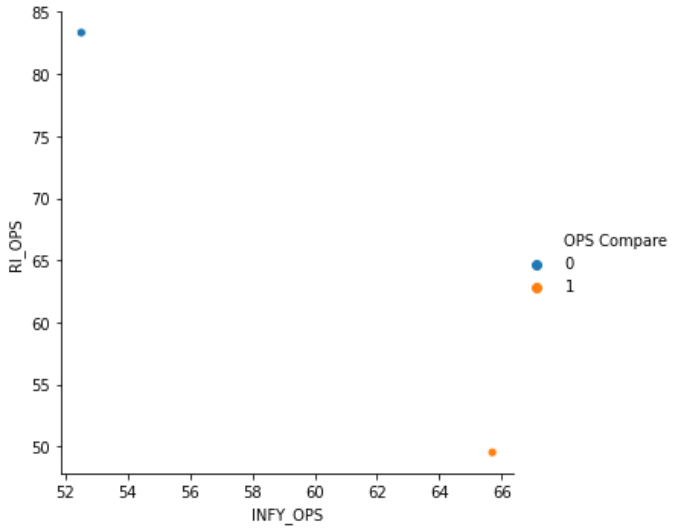
In [121]:
```
sns.relplot(x='INFY_PE Ratio',y='RI_PE Ratio',hue='PE Compare',data=data_INFY_Reliance)
```

Out[121]:
```
<seaborn.axisgrid.FacetGrid at 0x15ed3a288b0>
```



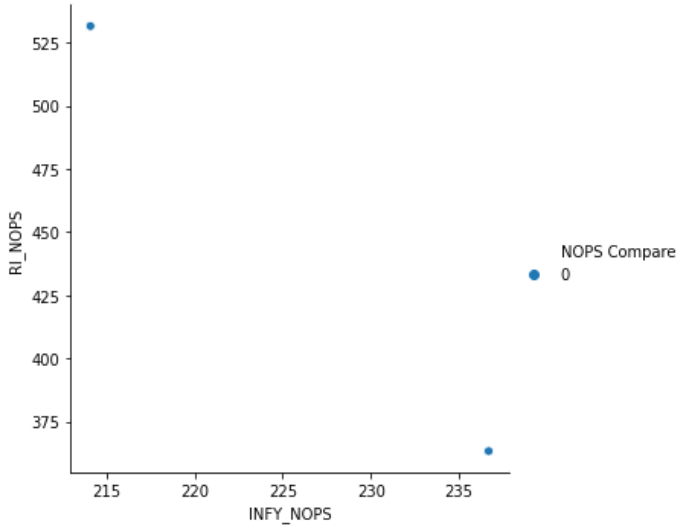
In [122]:
```
sns.relplot(x='INFY_OPS',y='RI_OPS',hue='OPS Compare',data=data_INFY_Reliance)
```

Out[122]: <seaborn.axisgrid.FacetGrid at 0x15ed6746c10>



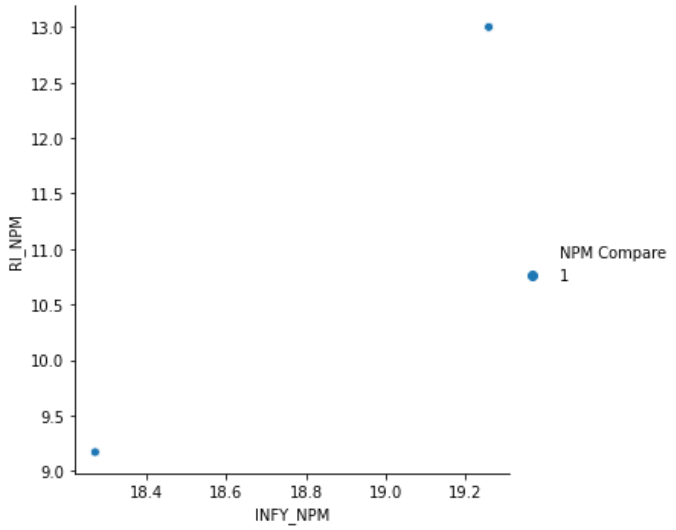
In [123]:
```
sns.relplot(x='INFY_NOPS',y='RI_NOPS',hue='NOPS Compare',data=data_INFY_Reliance)
```

Out[123]: <seaborn.axisgrid.FacetGrid at 0x15ed66164f0>



In [124]:
```
sns.relplot(x='INFY_NPM',y='RI_NPM',hue='NPM Compare',data=data_INFY_Reliance)
```

Out[124]: <seaborn.axisgrid.FacetGrid at 0x15ed7873040>



In [125]:
```
data_INFY_TCS=pd.merge(data4,data2,how='outer',left_on='INFY_SNo',right_on='TCS_SNo')
```

In [126]:
```
def compare_PE_IT(df):
    return int(df['TCS_PE Ratio']<df['INFY_PE Ratio'])
def compare_OPS_IT(df):
    return int(df['TCS_OPS']<=df['INFY_OPS'])
def compare_NOPS_IT(df):
    return int(df['TCS_NOPS']<=df['INFY_NOPS'])
def compare_NPM_IT(df):
    return int(df['TCS_NPM']<=df['INFY_NPM'])
data_INFY_TCS['PE Compare']=data_INFY_TCS.apply(compare_PE_IT,axis=1)
data_INFY_TCS['OPS Compare']=data_INFY_TCS.apply(compare_OPS_IT,axis=1)
data_INFY_TCS['NOPS Compare']=data_INFY_TCS.apply(compare_NOPS_IT,axis=1)
data_INFY_TCS['NPM Compare']=data_INFY_TCS.apply(compare_NPM_IT,axis=1)
```

In [127]:
```
data_INFY_TCS
```

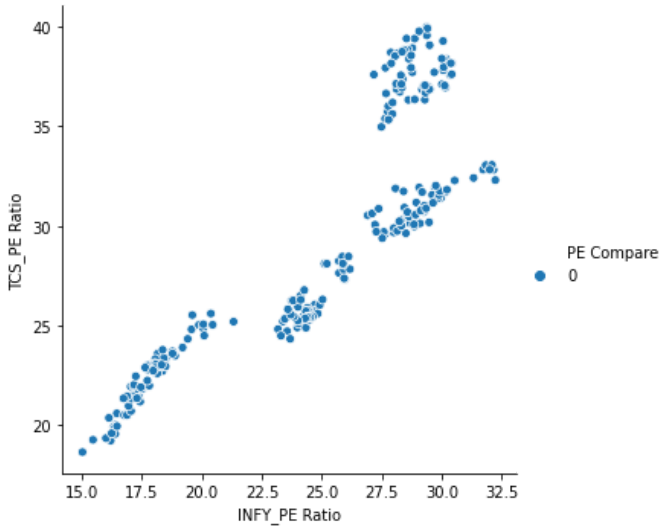
Out[127]:

	INFY_SNo	INFY_Date	INFY_series	INFY_OPEN	INFY_HIGH	INFY_LOW	INFY_PREV. CLOSE	INFY_ltp	INFY_close	INFY_vwap	...	TCS tra
0	1	31-Mar-20	EQ	650	662	633.7	626.7	639.6	641.5	647.8	...	19(
1	2	1-Apr-20	EQ	634.35	637.5	594	641.5	603.9	602.8	611.89	...	22
2	3	3-Apr-20	EQ	603.5	606	582.15	602.8	588.5	585.7	592.53	...	24
3	4	7-Apr-20	EQ	615	644.25	612.9	585.7	633.8	639	627.65	...	23
4	5	8-Apr-20	EQ	630	655.65	626.35	639	632.25	631.6	637.44	...	27(
...	...	...	...	...	...	...	...	...	...	...	...	
245	246	24-Mar-21	EQ	1,357.85	1,370.45	1,346.25	1,371.55	1,355.00	1,353.75	1,357.63	...	11(
246	247	25-Mar-21	EQ	1,346.75	1,352.50	1,327.60	1,353.75	1,337.60	1,333.80	1,338.88	...	15
247	248	26-Mar-21	EQ	1,344.70	1,356.70	1,332.00	1,333.80	1,338.70	1,336.20	1,340.61	...	20
248	249	30-Mar-21	EQ	1,346.90	1,400.00	1,336.15	1,336.20	1,386.50	1,385.30	1,373.99	...	19
249	250	31-Mar-21	EQ	1,382.00	1,388.00	1,363.30	1,385.30	1,367.30	1,368.05	1,370.72	...	15(

250 rows × 44 columns

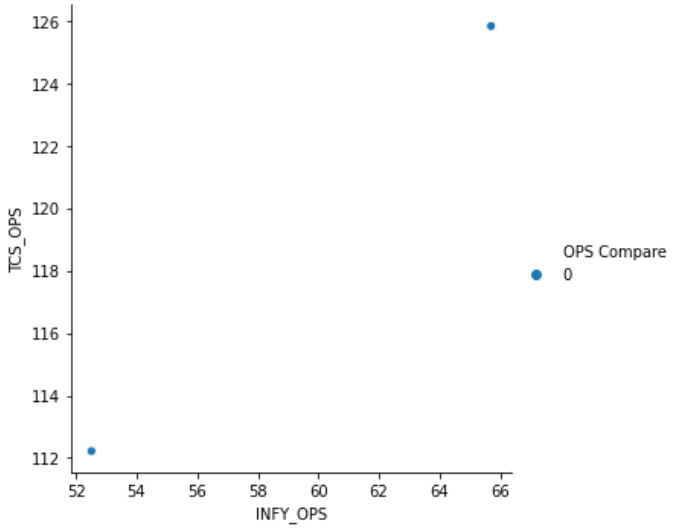
In [128]:
```
sns.relplot(x='INFY_PE Ratio',y='TCS_PE Ratio',hue='PE Compare',data=data_INFY_TCS)
```

Out[128]:
```
<seaborn.axisgrid.FacetGrid at 0x15ed799afd0>
```



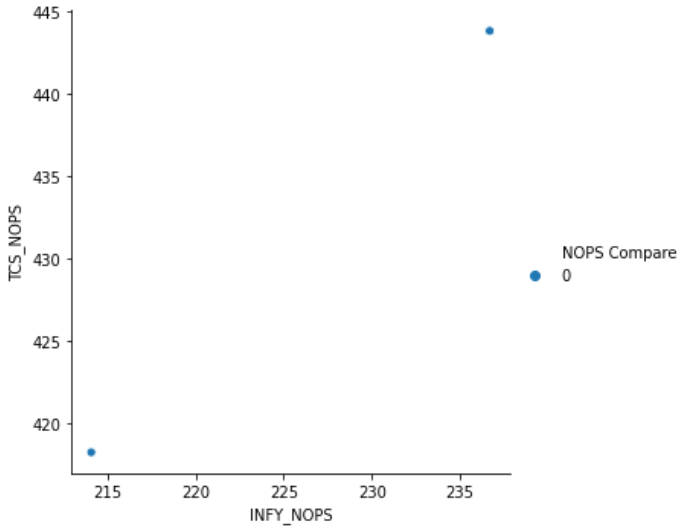
In [129]:
```
sns.relplot(x='INFY_OPS',y='TCS_OPS',hue='OPS Compare',data=data_INFY_TCS)
```

Out[129]:
```
<seaborn.axisgrid.FacetGrid at 0x15ed797f940>
```



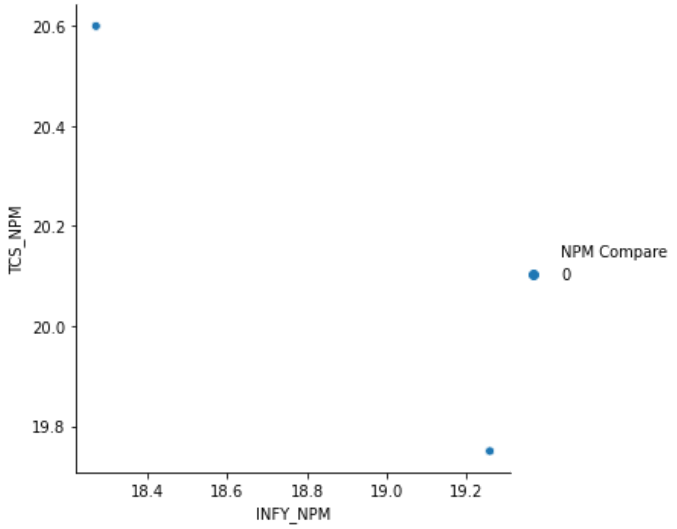
In [130]:
```
sns.relplot(x='INFY_NOPS',y='TCS_NOPS',hue='NOPS Compare',data=data_INFY_TCS)
```

Out[130]:
```
<seaborn.axisgrid.FacetGrid at 0x15ed7945160>
```



In [131]:
```
sns.relplot(x='INFY_NPM',y='TCS_NPM',hue='NPM Compare',data=data_INFY_TCS)
```

Out[131]:
```
<seaborn.axisgrid.FacetGrid at 0x15ed79fad30>
```



In [132]:
```
data_INFY_HDFC=pd.merge(data4,data3,how='outer',left_on='INFY_SNo',right_on='HDFC_SNo')
```

In [133]:
```
def compare_PE_IH(df):
    return int(df['HDFC_PE Ratio']<df['INFY_PE Ratio'])
def compare_OPS_IH(df):
    return int(df['HDFC_OPS']<=df['INFY_OPS'])
def compare_NOPS_IH(df):
    return int(df['HDFC_NOPS']<=df['INFY_NOPS'])
def compare_NPM_IH(df):
    return int(df['HDFC_NPM']<=df['INFY_NPM'])
data_INFY_HDFC['PE Compare']=data_INFY_HDFC.apply(compare_PE_IH,axis=1)
data_INFY_HDFC['OPS Compare']=data_INFY_HDFC.apply(compare_OPS_IH,axis=1)
data_INFY_HDFC['NOPS Compare']=data_INFY_HDFC.apply(compare_NOPS_IH,axis=1)
data_INFY_HDFC['NPM Compare']=data_INFY_HDFC.apply(compare_NPM_IH,axis=1)
```

In [134]:
```
data_INFY_HDFC
```

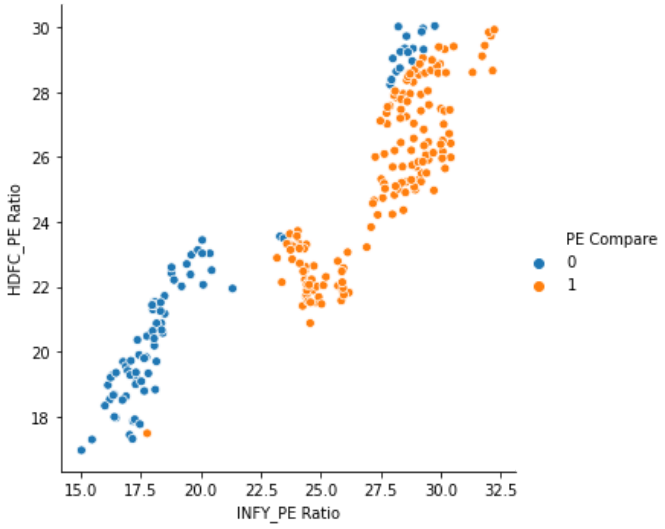
Out[134]:

	INFY_SNo	INFY_Date	INFY_series	INFY_OPEN	INFY_HIGH	INFY_LOW	INFY_PREV. CLOSE	INFY_ltp	INFY_close	INFY_vwap	...	HDF of t
0	1	31-Mar-20	EQ	650	662	633.7	626.7	639.6	641.5	647.8	...	4
1	2	1-Apr-20	EQ	634.35	637.5	594	641.5	603.9	602.8	611.89	...	3
2	3	3-Apr-20	EQ	603.5	606	582.15	602.8	588.5	585.7	592.53	...	3
3	4	7-Apr-20	EQ	615	644.25	612.9	585.7	633.8	639	627.65	...	4
4	5	8-Apr-20	EQ	630	655.65	626.35	639	632.25	631.6	637.44	...	5
...	...	...	...	...	...	...	...	...	...	...	...	
245	246	24-Mar-21	EQ	1,357.85	1,370.45	1,346.25	1,371.55	1,355.00	1,353.75	1,357.63	...	2
246	247	25-Mar-21	EQ	1,346.75	1,352.50	1,327.60	1,353.75	1,337.60	1,333.80	1,338.88	...	3
247	248	26-Mar-21	EQ	1,344.70	1,356.70	1,332.00	1,333.80	1,338.70	1,336.20	1,340.61	...	1
248	249	30-Mar-21	EQ	1,346.90	1,400.00	1,336.15	1,336.20	1,386.50	1,385.30	1,373.99	...	2
249	250	31-Mar-21	EQ	1,382.00	1,388.00	1,363.30	1,385.30	1,367.30	1,368.05	1,370.72	...	3

250 rows × 44 columns

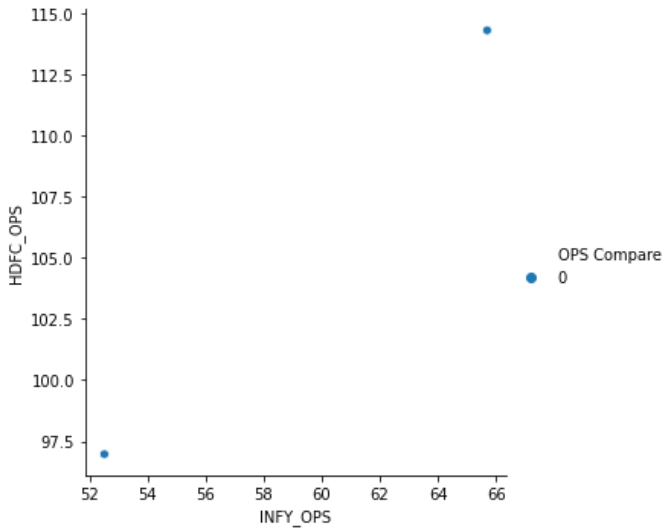
In [135]:
```
sns.relplot(x='INFY_PE Ratio',y='HDFC_PE Ratio',hue='PE Compare',data=data_INFY_HDFC)
```

Out[135]:
```
<seaborn.axisgrid.FacetGrid at 0x15ed5149850>
```



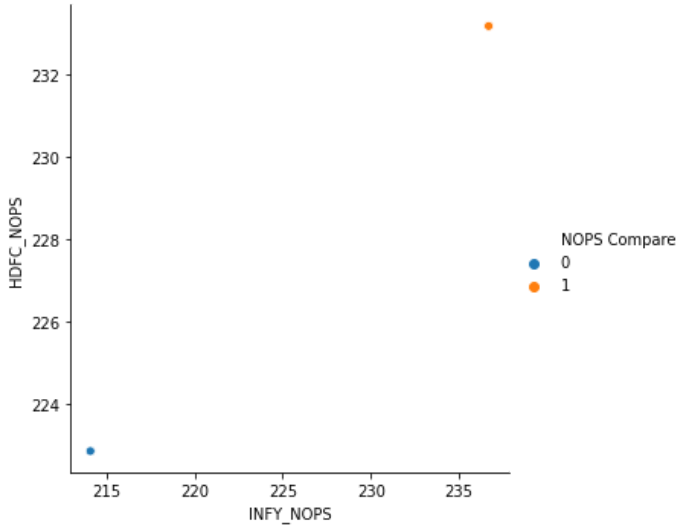
In [136]:
```
sns.relplot(x='INFY_OPS',y='HDFC_OPS',hue='OPS Compare',data=data_INFY_HDFC)
```

Out[136]: <seaborn.axisgrid.FacetGrid at 0x15ed660c0d0>



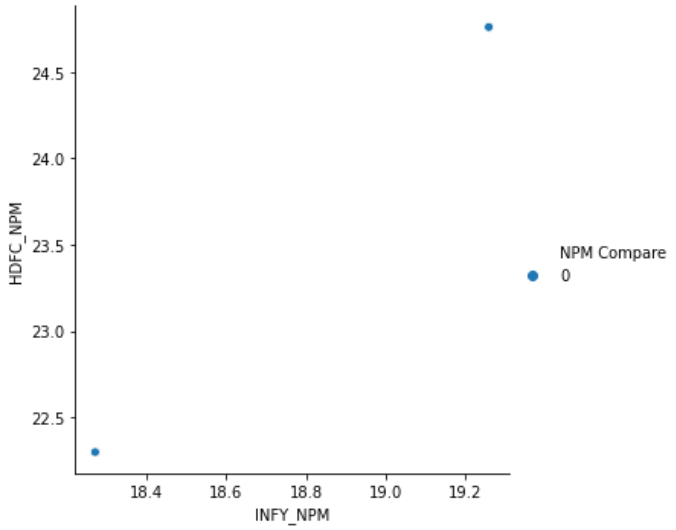
In [137]:
```
sns.relplot(x='INFY_NOPS',y='HDFC_NOPS',hue='NOPS Compare',data=data_INFY_HDFC)
```

Out[137]: <seaborn.axisgrid.FacetGrid at 0x15ed7a4ec10>



In [138]:
```
sns.relplot(x='INFY_NPM',y='HDFC_NPM',hue='NPM Compare',data=data_INFY_HDFC)
```

Out[138]: <seaborn.axisgrid.FacetGrid at 0x15ed8bc9f40>



In [139]:
```
data_INFY_HUL=pd.merge(data4,data5,how='outer',left_on='INFY_SNo',right_on='HUL_SNo')
```

In [144]:
```
def compare_PE_IHUL(df):
    return int(df['HUL_PE Ratio']<df['INFY_PE Ratio'])
def compare_OPS_IHUL(df):
    return int(df['HUL_OPS']<=df['INFY_OPS'])
def compare_NOPS_IHUL(df):
    return int(df['HUL_NOPS']<=df['INFY_NOPS'])
def compare_NPM_IHUL(df):
    return int(df['HUL_NPMP']<=df['INFY_NPM'])
data_INFY_HUL['PE Compare']=data_INFY_HUL.apply(compare_PE_IHUL,axis=1)
data_INFY_HUL['OPS Compare']=data_INFY_HUL.apply(compare_OPS_IHUL,axis=1)
data_INFY_HUL['NOPS Compare']=data_INFY_HUL.apply(compare_NOPS_IHUL,axis=1)
data_INFY_HUL['NPM Compare']=data_INFY_HUL.apply(compare_NPM_IHUL,axis=1)
```

In [145]:
```
data_INFY_HUL
```

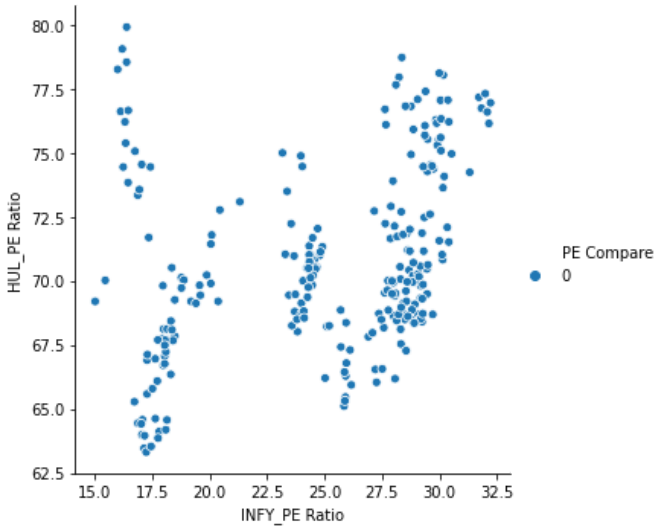
Out[145]:

	INFY_SNo	INFY_Date	INFY_series	INFY_OPEN	INFY_HIGH	INFY_LOW	INFY_PREV. CLOSE	INFY_ltp	INFY_close	INFY_vwap	...	HUL tr
0	1	31-Mar-20	EQ	650	662	633.7	626.7	639.6	641.5	647.8	...	12
1	2	1-Apr-20	EQ	634.35	637.5	594	641.5	603.9	602.8	611.89	...	17
2	3	3-Apr-20	EQ	603.5	606	582.15	602.8	588.5	585.7	592.53	...	21
3	4	7-Apr-20	EQ	615	644.25	612.9	585.7	633.8	639	627.65	...	35
4	5	8-Apr-20	EQ	630	655.65	626.35	639	632.25	631.6	637.44	...	41
...	...	...	...	...	...	...	...	...	...	...	...	
245	246	24-Mar-21	EQ	1,357.85	1,370.45	1,346.25	1,371.55	1,355.00	1,353.75	1,357.63	...	8
246	247	25-Mar-21	EQ	1,346.75	1,352.50	1,327.60	1,353.75	1,337.60	1,333.80	1,338.88	...	11
247	248	26-Mar-21	EQ	1,344.70	1,356.70	1,332.00	1,333.80	1,338.70	1,336.20	1,340.61	...	11
248	249	30-Mar-21	EQ	1,346.90	1,400.00	1,336.15	1,336.20	1,386.50	1,385.30	1,373.99	...	15
249	250	31-Mar-21	EQ	1,382.00	1,388.00	1,363.30	1,385.30	1,367.30	1,368.05	1,370.72	...	13

250 rows × 44 columns

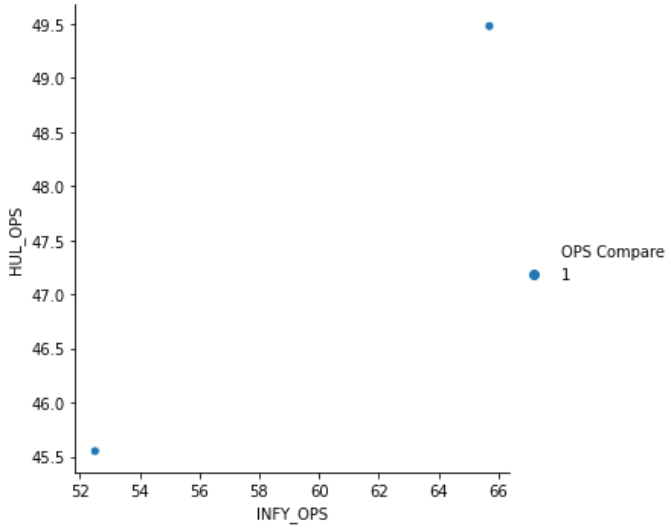
In [146]:
```
sns.relplot(x='INFY_PE Ratio',y='HUL_PE Ratio',hue='PE Compare',data=data_INFY_HUL)
```

Out[146]: <seaborn.axisgrid.FacetGrid at 0x15ed8c66d30>



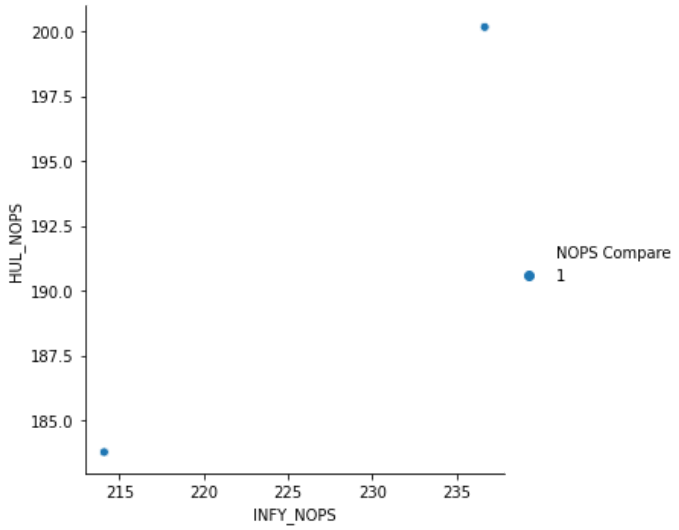
In [147]:
```
sns.relplot(x='INFY_OPS',y='HUL_OPS',hue='OPS Compare',data=data_INFY_HUL)
```

Out[147]: <seaborn.axisgrid.FacetGrid at 0x15ed8c46220>



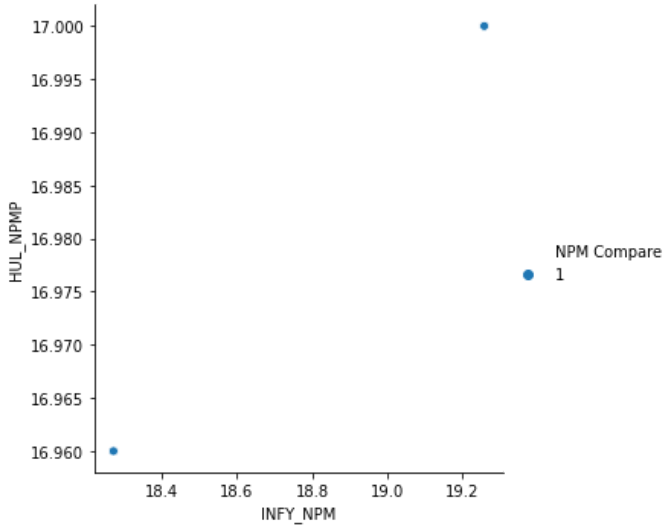
In [148]:
```
sns.relplot(x='INFY_NOPS',y='HUL_NOPS',hue='NOPS Compare',data=data_INFY_HUL)
```

Out[148]:
```
<seaborn.axisgrid.FacetGrid at 0x15ed8d4b7c0>
```



In [150]:
```
sns.relplot(x='INFY_NPM',y='HUL_NPMP',hue='NPM Compare',data=data_INFY_HUL)
```

Out[150]:
```
<seaborn.axisgrid.FacetGrid at 0x15ed8d34190>
```



COMPARISION OF HINDUSTAN UNILEVER WITH OTHER COMPANIES

In [151]:
```
data5.columns
```

Out[151]:
```
Index(['HUL_SNo', 'HUL_Date ', 'HUL_series ', 'HUL_OPEN ', 'HUL_HIGH ',
       'HUL_LOW ', 'HUL_PREV. CLOSE ', 'HUL_ltp ', 'HUL_Close', 'HUL_vwap ',
       'HUL_52W H ', 'HUL_52W L ', 'HUL_VOLUME ', 'HUL_VALUE ',
       'HUL_No of trades ', 'HUL_PE Ratio', 'HUL_Face Value', 'HUL_OPS',
       'HUL_NOPS', 'HUL_NPMP'],
      dtype='object')
```

In [152]:
```
data_HUL_Reliance=pd.merge(data5,data1,how='outer',left_on='HUL_SNo',right_on='RI_SNo')
```

In [154]:
```
def compare_PE_HULR(df):
    return int(df['RI_PE Ratio']<df['HUL_PE Ratio'])
def compare_OPS_HULR(df):
    return int(df['RI_OPS']<=df['HUL_OPS'])
def compare_NOPS_HULR(df):
    return int(df['RI_NOPS']<=df['HUL_NOPS'])
def compare_NPM_HULR(df):
    return int(df['RI_NPM']<=df['HUL_NPMP'])
data_HUL_Reliance['PE Compare']=data_HUL_Reliance.apply(compare_PE_HULR,axis=1)
data_HUL_Reliance['OPS Compare']=data_HUL_Reliance.apply(compare_OPS_HULR,axis=1)
data_HUL_Reliance['NOPS Compare']=data_HUL_Reliance.apply(compare_NOPS_HULR,axis=1)
data_HUL_Reliance['NPM Compare']=data_HUL_Reliance.apply(compare_NPM_HULR,axis=1)
```

In [155]:
```
data_HUL_Reliance
```

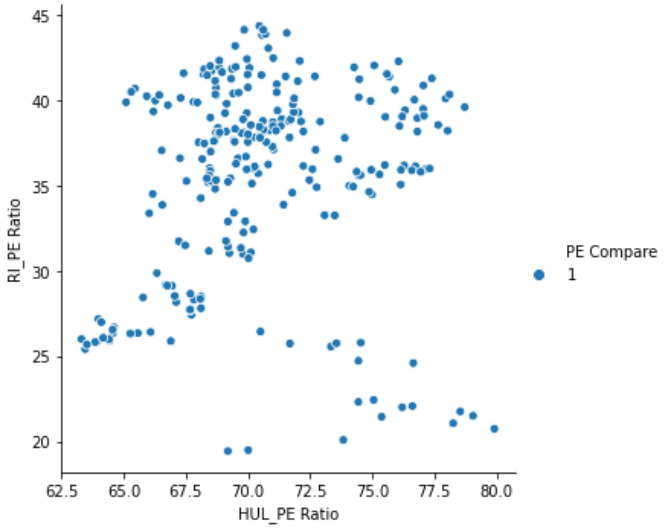
Out[155]:

	HUL_SNo	HUL_Date	HUL_series	HUL_OPEN	HUL_HIGH	HUL_LOW	HUL_PREV. CLOSE	HUL_ltp	HUL_Close	HUL_vwap	...	RI_No of trades
0	1	31-Mar-20	EQ	2,234.80	2,313.00	2,185.00	2,184.35	2,298.50	2,298.50	2,260.32	...	506536
1	2	1-Apr-20	EQ	2,293.20	2,324.90	2,158.05	2,298.50	2,179.00	2,179.65	2,219.18	...	414675
2	3	3-Apr-20	EQ	2,234.00	2,254.10	2,127.95	2,179.65	2,153.00	2,154.10	2,183.12	...	519365
3	4	7-Apr-20	EQ	2,220.00	2,460.00	2,220.00	2,154.10	2,449.00	2,444.90	2,361.65	...	556669
4	5	8-Apr-20	EQ	2,432.00	2,614.30	2,417.40	2,444.90	2,455.00	2,460.85	2,520.36	...	538577
...	...	...	...	...	...	...	...	...	...	...	...	...
245	246	24-Mar-21	EQ	2,337.30	2,350.90	2,315.55	2,337.30	2,319.70	2,318.60	2,337.43	...	222445
246	247	25-Mar-21	EQ	2,318.60	2,322.00	2,231.05	2,318.60	2,248.95	2,237.05	2,265.02	...	292881
247	248	26-Mar-21	EQ	2,255.00	2,325.00	2,248.80	2,237.05	2,307.05	2,317.90	2,300.37	...	296946
248	249	30-Mar-21	EQ	2,325.00	2,406.00	2,325.00	2,317.90	2,393.00	2,398.75	2,388.17	...	230499
249	250	31-Mar-21	EQ	2,386.00	2,438.60	2,381.65	2,398.75	2,420.00	2,431.50	2,417.72	...	193340

250 rows × 44 columns

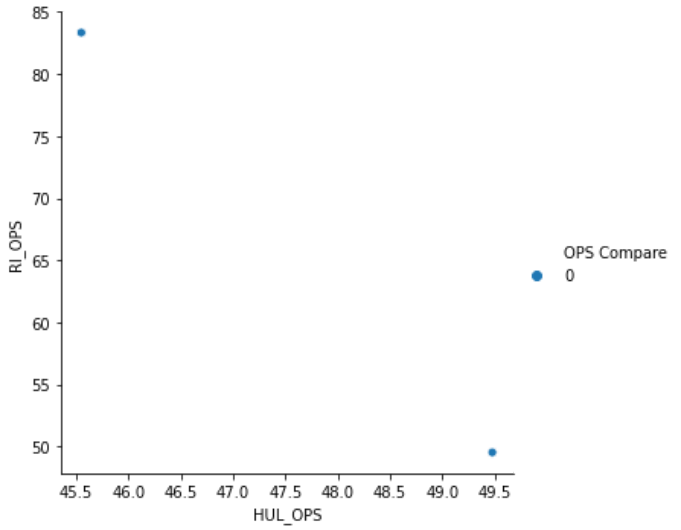
In [156]:
```
sns.relplot(x='HUL_PE Ratio',y='RI_PE Ratio',hue='PE Compare',data=data_HUL_Reliance)
```

Out[156]:
```
<seaborn.axisgrid.FacetGrid at 0x15ed8e016d0>
```



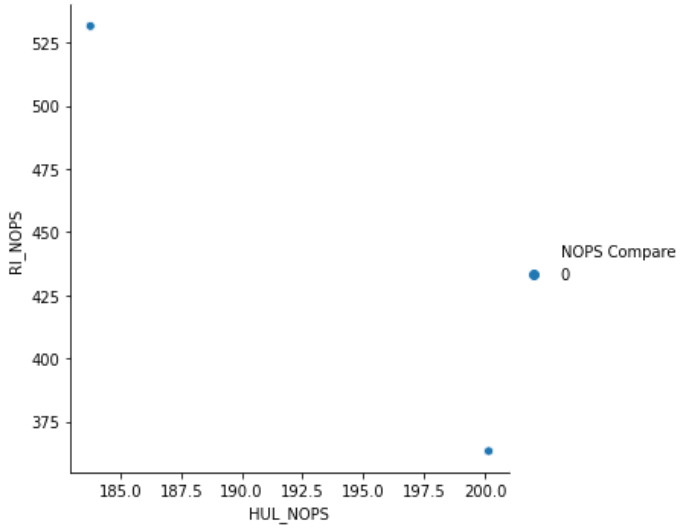
In [158]:
```
sns.relplot(x='HUL_OPS',y='RI_OPS',hue='OPS Compare',data=data_HUL_Reliance)
```

Out[158]: <seaborn.axisgrid.FacetGrid at 0x15ed8d4baf0>



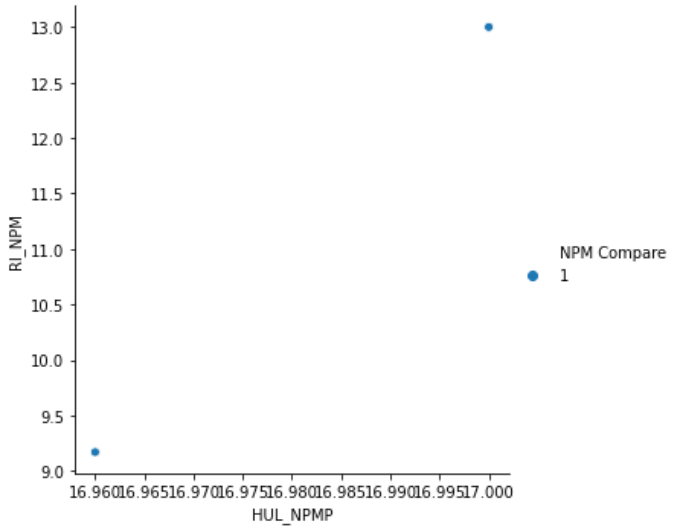
In [159]:
```
sns.relplot(x='HUL_NOPS',y='RI_NOPS',hue='NOPS Compare',data=data_HUL_Reliance)
```

Out[159]: <seaborn.axisgrid.FacetGrid at 0x15ed9f28a30>



In [160]:
```
sns.relplot(x='HUL_NPMP',y='RI_NPM',hue='NPM Compare',data=data_HUL_Reliance)
```

Out[160]:
```
<seaborn.axisgrid.FacetGrid at 0x15ed9f280d0>
```



In [161]:
```
data_HUL_TCS=pd.merge(data5,data2,how='outer',left_on='HUL_SNo',right_on='TCS_SNo')
```

In [162]:
```
def compare_PE_HULT(df):
    return int(df['TCS_PE Ratio']<df['HUL_PE Ratio'])
def compare_OPS_HULT(df):
    return int(df['TCS_OPS']<=df['HUL_OPS'])
def compare_NOPS_HULT(df):
    return int(df['TCS_NOPS']<=df['HUL_NOPS'])
def compare_NPM_HULT(df):
    return int(df['TCS_NPM']<=df['HUL_NPMP'])
data_HUL_TCS['PE Compare']=data_HUL_TCS.apply(compare_PE_HULT,axis=1)
data_HUL_TCS['OPS Compare']=data_HUL_TCS.apply(compare_OPS_HULT,axis=1)
data_HUL_TCS['NOPS Compare']=data_HUL_TCS.apply(compare_NOPS_HULT,axis=1)
data_HUL_TCS['NPM Compare']=data_HUL_TCS.apply(compare_NPM_HULT,axis=1)
```

In [163]:
```
data_HUL_TCS
```

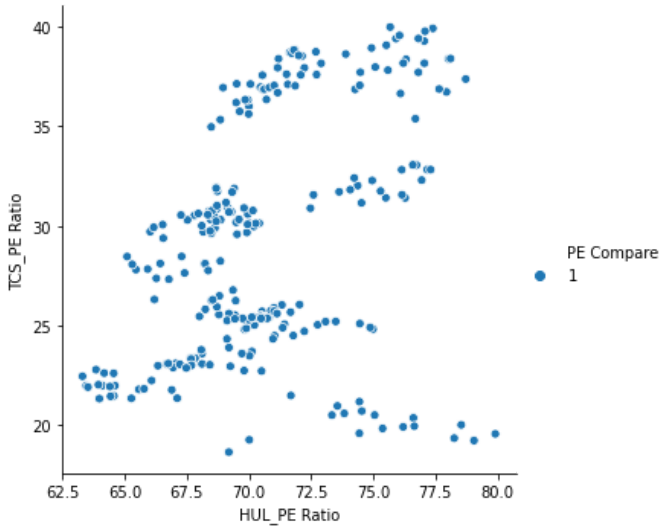
Out[163]:

	HUL_SNo	HUL_Date	HUL_series	HUL_OPEN	HUL_HIGH	HUL_LOW	HUL_PREV. CLOSE	HUL_ltp	HUL_Close	HUL_vwap	...	TCS_No of trades
0	1	31-Mar-20	EQ	2,234.80	2,313.00	2,185.00	2,184.35	2,298.50	2,298.50	2,260.32	...	190774
1	2	1-Apr-20	EQ	2,293.20	2,324.90	2,158.05	2,298.50	2,179.00	2,179.65	2,219.18	...	221364
2	3	3-Apr-20	EQ	2,234.00	2,254.10	2,127.95	2,179.65	2,153.00	2,154.10	2,183.12	...	244588
3	4	7-Apr-20	EQ	2,220.00	2,460.00	2,220.00	2,154.10	2,449.00	2,444.90	2,361.65	...	232534
4	5	8-Apr-20	EQ	2,432.00	2,614.30	2,417.40	2,444.90	2,455.00	2,460.85	2,520.36	...	276600
...	...	...	...	...	...	...	...	...	...	...	...	...
245	246	24-Mar-21	EQ	2,337.30	2,350.90	2,315.55	2,337.30	2,319.70	2,318.60	2,337.43	...	110682
246	247	25-Mar-21	EQ	2,318.60	2,322.00	2,231.05	2,318.60	2,248.95	2,237.05	2,265.02	...	153808
247	248	26-Mar-21	EQ	2,255.00	2,325.00	2,248.80	2,237.05	2,307.05	2,317.90	2,300.37	...	201134
248	249	30-Mar-21	EQ	2,325.00	2,406.00	2,325.00	2,317.90	2,393.00	2,398.75	2,388.17	...	191356
249	250	31-Mar-21	EQ	2,386.00	2,438.60	2,381.65	2,398.75	2,420.00	2,431.50	2,417.72	...	156653

250 rows × 44 columns

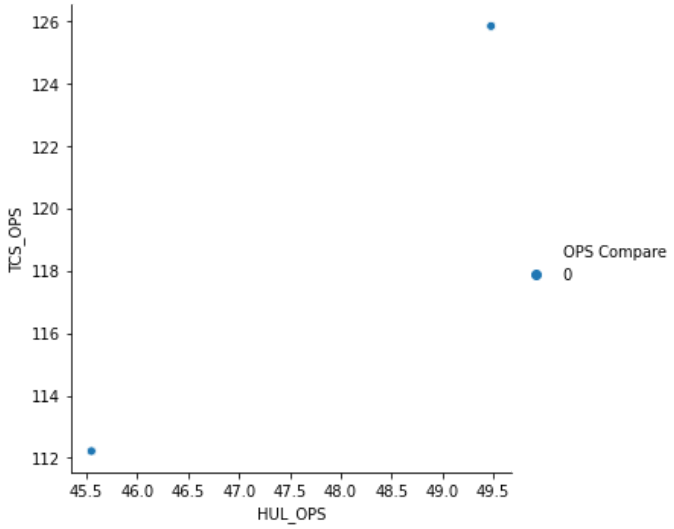
In [164]:
```
sns.relplot(x='HUL_PE Ratio',y='TCS_PE Ratio',hue='PE Compare',data=data_HUL_TCS)
```

Out[164]: <seaborn.axisgrid.FacetGrid at 0x15ed9fa6160>



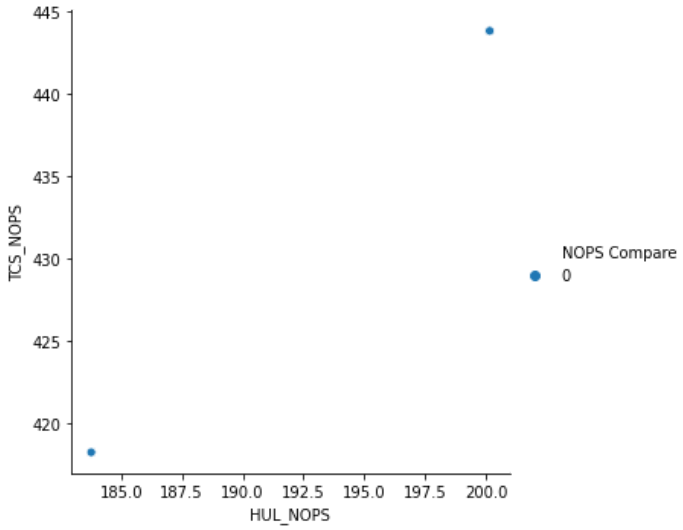
In [165]:
```
sns.relplot(x='HUL_OPS',y='TCS_OPS',hue='OPS Compare',data=data_HUL_TCS)
```

Out[165]: <seaborn.axisgrid.FacetGrid at 0x15ed9f88e50>



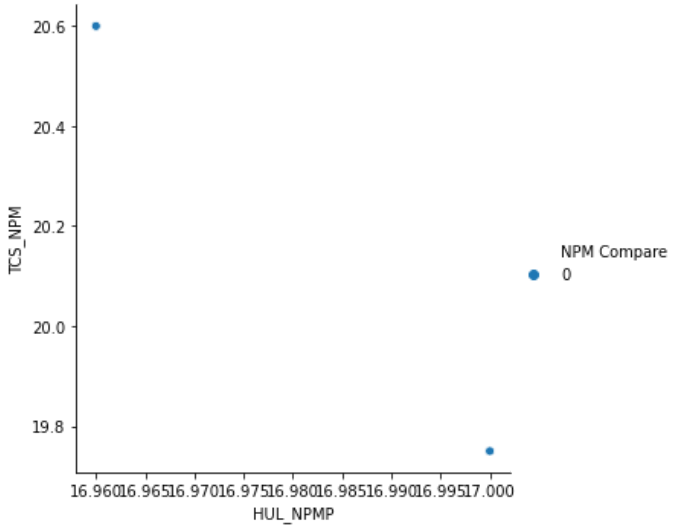
In [166]:
```
sns.relplot(x='HUL_NOPS',y='TCS_NOPS',hue='NOPS Compare',data=data_HUL_TCS)
```

Out[166]:
```
<seaborn.axisgrid.FacetGrid at 0x15ed9fe02b0>
```



In [167]:
```
sns.relplot(x='HUL_NPMP',y='TCS_NPM',hue='NPM Compare',data=data_HUL_TCS)
```

Out[167]:
```
<seaborn.axisgrid.FacetGrid at 0x15eda054430>
```



In [168]:
```
data_HUL_HDFC=pd.merge(data5,data3,how='outer',left_on='HUL_SNo',right_on='HDFC_SNo')
```

In [169]:
```
def compare_PE_HULH(df):
    return int(df['HDFC_PE Ratio']<df['HUL_PE Ratio'])
def compare_OPS_HULH(df):
    return int(df['HDFC_OPS']<=df['HUL_OPS'])
def compare_NOPS_HULH(df):
    return int(df['HDFC_NOPS']<=df['HUL_NOPS'])
def compare_NPM_HULH(df):
    return int(df['HDFC_NPM']<=df['HUL_NPMP'])
data_HUL_HDFC['PE Compare']=data_HUL_HDFC.apply(compare_PE_HULH,axis=1)
data_HUL_HDFC['OPS Compare']=data_HUL_HDFC.apply(compare_OPS_HULH,axis=1)
data_HUL_HDFC['NOPS Compare']=data_HUL_HDFC.apply(compare_NOPS_HULH,axis=1)
data_HUL_HDFC['NPM Compare']=data_HUL_HDFC.apply(compare_NPM_HULH,axis=1)
```

In [171]:
```
data_HUL_HDFC
```

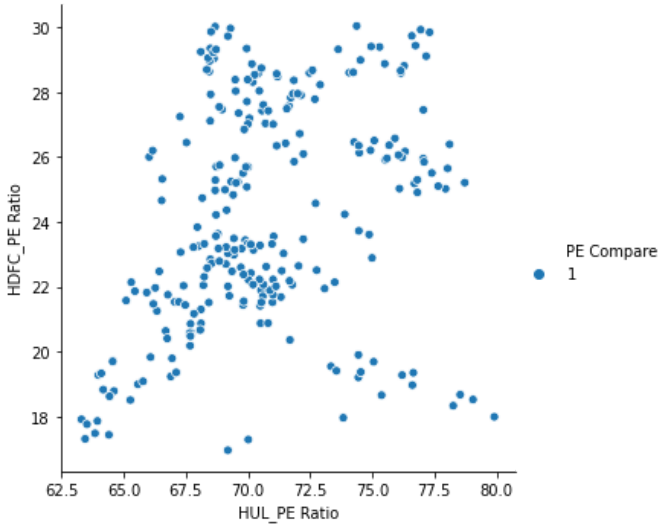
Out[171]:

	HUL_SNo	HUL_Date	HUL_series	HUL_OPEN	HUL_HIGH	HUL_LOW	HUL_PREV. CLOSE	HUL_ltp	HUL_Close	HUL_vwap	...	HDFC_N of trade
0	1	31-Mar-20	EQ	2,234.80	2,313.00	2,185.00	2,184.35	2,298.50	2,298.50	2,260.32	...	4113(
1	2	1-Apr-20	EQ	2,293.20	2,324.90	2,158.05	2,298.50	2,179.00	2,179.65	2,219.18	...	3549
2	3	3-Apr-20	EQ	2,234.00	2,254.10	2,127.95	2,179.65	2,153.00	2,154.10	2,183.12	...	3924
3	4	7-Apr-20	EQ	2,220.00	2,460.00	2,220.00	2,154.10	2,449.00	2,444.90	2,361.65	...	4751
4	5	8-Apr-20	EQ	2,432.00	2,614.30	2,417.40	2,444.90	2,455.00	2,460.85	2,520.36	...	5030
...	...	...	...	...	...	...	...	...	...	...	...	
245	246	24-Mar-21	EQ	2,337.30	2,350.90	2,315.55	2,337.30	2,319.70	2,318.60	2,337.43	...	2292
246	247	25-Mar-21	EQ	2,318.60	2,322.00	2,231.05	2,318.60	2,248.95	2,237.05	2,265.02	...	3714
247	248	26-Mar-21	EQ	2,255.00	2,325.00	2,248.80	2,237.05	2,307.05	2,317.90	2,300.37	...	1866
248	249	30-Mar-21	EQ	2,325.00	2,406.00	2,325.00	2,317.90	2,393.00	2,398.75	2,388.17	...	2291
249	250	31-Mar-21	EQ	2,386.00	2,438.60	2,381.65	2,398.75	2,420.00	2,431.50	2,417.72	...	3624

250 rows × 44 columns

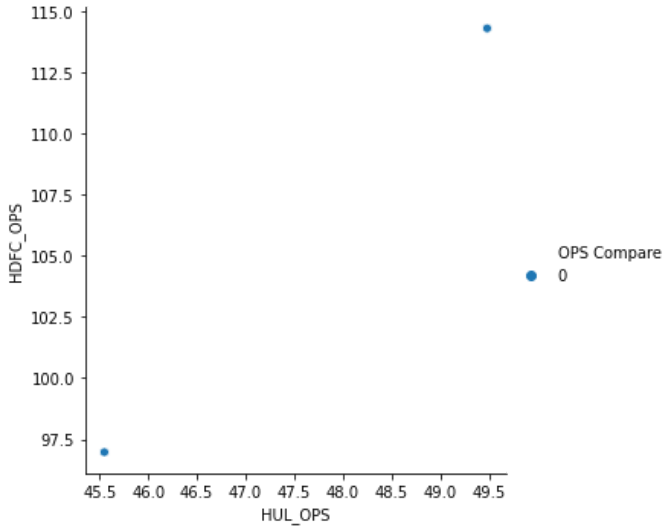
In [172]:
```
sns.relplot(x='HUL_PE Ratio',y='HDFC_PE Ratio',hue='PE Compare',data=data_HUL_HDFC)
```

Out[172]: <seaborn.axisgrid.FacetGrid at 0x15eda1b06d0>



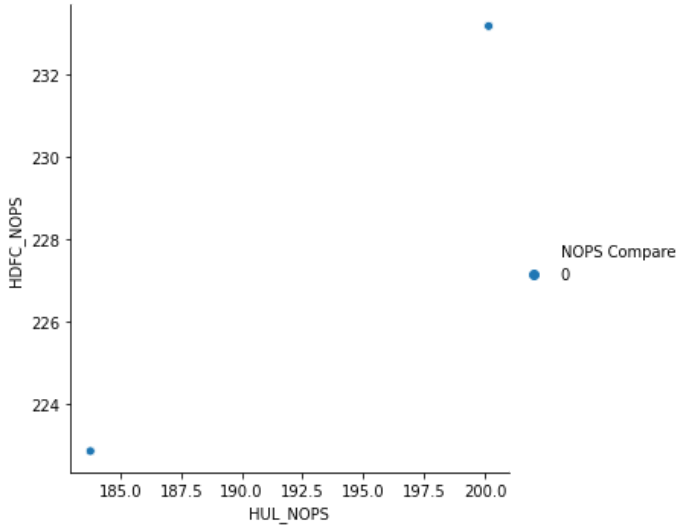
In [173]:
```
sns.relplot(x='HUL_OPS',y='HDFC_OPS',hue='OPS Compare',data=data_HUL_HDFC)
```

Out[173]: <seaborn.axisgrid.FacetGrid at 0x15eda1f6d00>



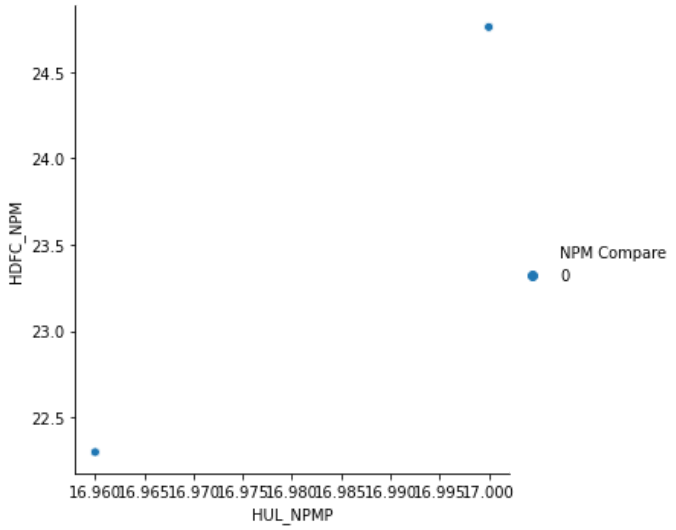
In [174]:
```
sns.relplot(x='HUL_NOPS',y='HDFC_NOPS',hue='NOPS Compare',data=data_HUL_HDFC)
```

Out[174]: <seaborn.axisgrid.FacetGrid at 0x15eda259b80>



In [175]:
```
sns.relplot(x='HUL_NPMP',y='HDFC_NPM',hue='NPM Compare',data=data_HUL_HDFC)
```

Out[175]:
```
<seaborn.axisgrid.FacetGrid at 0x15eda2eeb50>
```



In [176]:
```
data_HUL_INFY=pd.merge(data5,data4,how='outer',left_on='HUL_SNo',right_on='INFY_SNo')
```

In [177]:
```
def compare_PE_HULI(df):
    return int(df['INFY_PE Ratio']<df['HUL_PE Ratio'])
def compare_OPS_HULI(df):
    return int(df['INFY_OPS']<=df['HUL_OPS'])
def compare_NOPS_HULI(df):
    return int(df['INFY_NOPS']<=df['HUL_NOPS'])
def compare_NPM_HULI(df):
    return int(df['INFY_NPM']<=df['HUL_NPMP'])
data_HUL_INFY['PE Compare']=data_HUL_INFY.apply(compare_PE_HULI,axis=1)
data_HUL_INFY['OPS Compare']=data_HUL_INFY.apply(compare_OPS_HULI,axis=1)
data_HUL_INFY['NOPS Compare']=data_HUL_INFY.apply(compare_NOPS_HULI,axis=1)
data_HUL_INFY['NPM Compare']=data_HUL_INFY.apply(compare_NPM_HULI,axis=1)
```

In [178]:
```
data_HUL_INFY
```

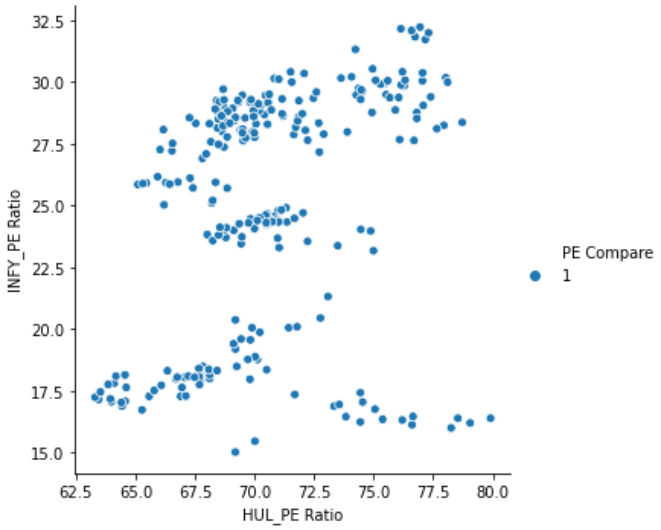
Out[178]:

	HUL_SNo	HUL_Date	HUL_series	HUL_OPEN	HUL_HIGH	HUL_LOW	HUL_PREV. CLOSE	HUL_ltp	HUL_Close	HUL_vwap	...	INFY_N of trade
0	1	31-Mar-20	EQ	2,234.80	2,313.00	2,185.00	2,184.35	2,298.50	2,298.50	2,260.32	...	27931
1	2	1-Apr-20	EQ	2,293.20	2,324.90	2,158.05	2,298.50	2,179.00	2,179.65	2,219.18	...	37923
2	3	3-Apr-20	EQ	2,234.00	2,254.10	2,127.95	2,179.65	2,153.00	2,154.10	2,183.12	...	26122
3	4	7-Apr-20	EQ	2,220.00	2,460.00	2,220.00	2,154.10	2,449.00	2,444.90	2,361.65	...	26048
4	5	8-Apr-20	EQ	2,432.00	2,614.30	2,417.40	2,444.90	2,455.00	2,460.85	2,520.36	...	23588
...	...	...	...	...	...	...	...	...	...	...	...	.
245	246	24-Mar-21	EQ	2,337.30	2,350.90	2,315.55	2,337.30	2,319.70	2,318.60	2,337.43	...	14332
246	247	25-Mar-21	EQ	2,318.60	2,322.00	2,231.05	2,318.60	2,248.95	2,237.05	2,265.02	...	18420
247	248	26-Mar-21	EQ	2,255.00	2,325.00	2,248.80	2,237.05	2,307.05	2,317.90	2,300.37	...	13847
248	249	30-Mar-21	EQ	2,325.00	2,406.00	2,325.00	2,317.90	2,393.00	2,398.75	2,388.17	...	22794
249	250	31-Mar-21	EQ	2,386.00	2,438.60	2,381.65	2,398.75	2,420.00	2,431.50	2,417.72	...	21815

250 rows × 44 columns

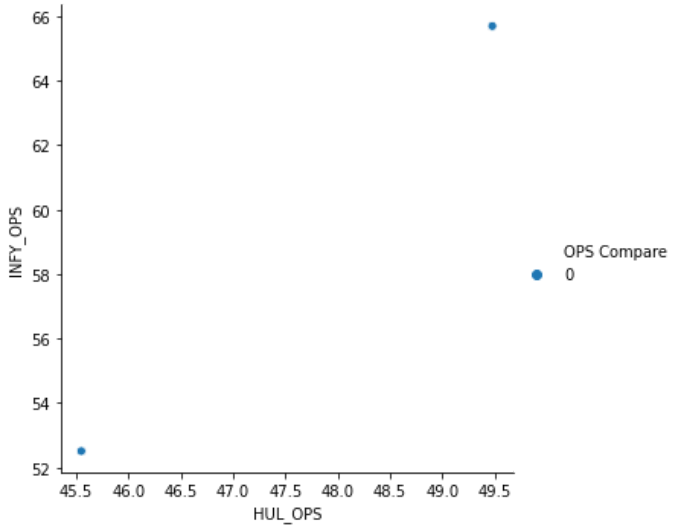
In [179]:
```
sns.relplot(x='HUL_PE Ratio',y='INFY_PE Ratio',hue='PE Compare',data=data_HUL_INFY)
```

Out[179]: <seaborn.axisgrid.FacetGrid at 0x15eda21a520>



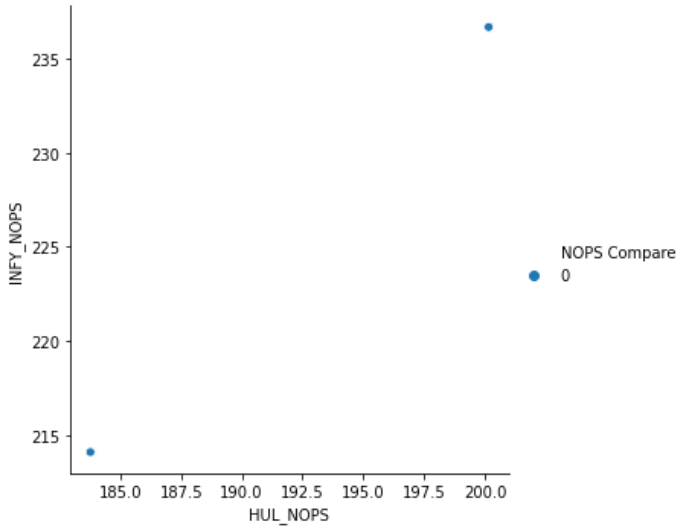
In [180]:
```
sns.relplot(x='HUL_OPS',y='INFY_OPS',hue='OPS Compare',data=data_HUL_INFY)
```

Out[180]: <seaborn.axisgrid.FacetGrid at 0x15ed8c243a0>



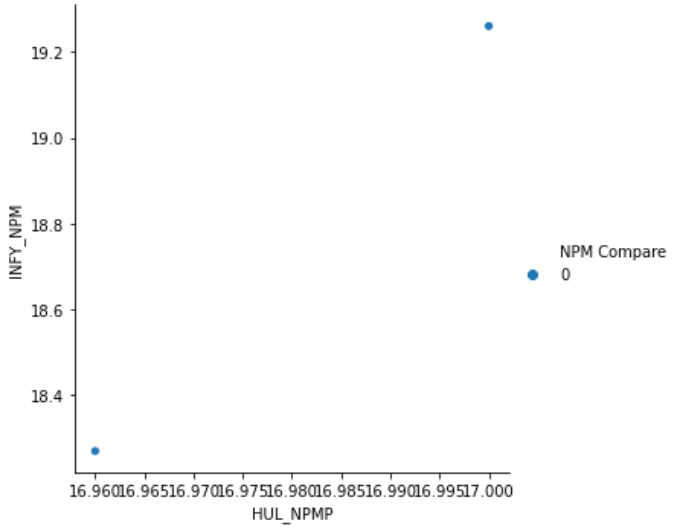
In [181]:
```
sns.relplot(x='HUL_NOPS',y='INFY_NOPS',hue='NOPS Compare',data=data_HUL_INFY)
```

Out[181]: <seaborn.axisgrid.FacetGrid at 0x15edb3b3760>



In [182]:
```
sns.relplot(x='HUL_NPMP',y='INFY_NPM',hue='NPM Compare',data=data_HUL_INFY)
```

Out[182]: <seaborn.axisgrid.FacetGrid at 0x15ed8cf8310>



MERGING ALL DATA SET INTO ONE

In [183]:
```
x=pd.merge(data_Reliance_TCS,data_HDFC_INFY,how='outer',left_on='TCS_SNo',right_on='HDFC_SNo')
data_all=pd.merge(x,data5,how='outer',left_on='TCS_SNo',right_on='HUL_SNo')
```

In [192]:
```
data_all
```

Out[192]:

	RI_SNo	RI_Date	RI_series	RI_OPEN	RI_HIGH	RI_LOW	RI_PREV. CLOSE	RI_ltp	RI_close	RI_vwap	...	HUL_52W H	HUL_52W L	HUL_
0	1	31-Mar-20	EQ	1,073.95	1,129.80	1,048.00	1,030.45	1,100.00	1,113.75	1,093.37	...	2,313.00	1,650.00	
1	2	1-Apr-20	EQ	1,122.25	1,124.60	1,045.20	1,113.75	1,084.00	1,080.45	1,072.84	...	2,324.90	1,650.00	
2	3	3-Apr-20	EQ	1,134.45	1,134.45	1,056.30	1,080.45	1,088.00	1,077.45	1,077.52	...	2,324.90	1,650.00	
3	4	7-Apr-20	EQ	1,102.10	1,214.00	1,100.00	1,077.45	1,211.00	1,206.10	1,161.27	...	2,460.00	1,656.00	
4	5	8-Apr-20	EQ	1,180.00	1,229.00	1,160.00	1,206.10	1,197.00	1,192.15	1,194.60	...	2,614.30	1,656.00	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	
245	246	24-Mar-21	EQ	2,079.75	2,079.75	2,040.40	2,087.50	2,048.55	2,047.30	2,055.87	...	2,614.30	1,850.00	
246	247	25-Mar-21	EQ	2,054.00	2,054.00	1,985.00	2,047.30	1,993.95	1,991.45	2,011.25	...	2,614.30	1,850.00	
247	248	26-Mar-21	EQ	2,012.00	2,013.70	1,973.70	1,991.45	1,994.00	1,994.65	1,995.09	...	2,614.30	1,850.00	
248	249	30-Mar-21	EQ	2,008.00	2,048.90	1,991.55	1,994.65	2,031.90	2,029.30	2,026.44	...	2,614.30	1,902.00	
249	250	31-Mar-21	EQ	2,018.00	2,049.90	1,999.00	2,029.30	2,005.65	2,003.10	2,017.21	...	2,614.30	1,902.00	

250 rows × 108 columns

In [193]:
```
sns.pairplot(data_all)
```

Out[193]:
```
<seaborn.axisgrid.PairGrid at 0x15edb47df40>
```