```
import pandas as pd
from sqlalchemy import create_engine

engine = create_engine('postgresql+psycopg2://postgres:admin@localhost:5432/port_development')
conpg = engine.connect()
```

Start of loop

```
year = 2017
quarter = 1

sql = 'SELECT name, year, quarter, q_amt \
FROM epss \
WHERE ((year = ' + str(year) + ' AND quarter <= ' + str(quarter) + ') \
OR (year = ' + str(year-1) + ' AND quarter >= ' + str(quarter+1) + ')) \
ORDER BY year DESC, quarter DESC'
sql

dfc = pd.read_sql(sql, conpg)
dfc

dfc_grp = dfc.groupby(['name'], as_index=False).sum()
dfc_grp.shape

sql = 'SELECT name, year, quarter, q_amt \
FROM epss \
WHERE ((year = ' + str(year-1) + ' AND quarter <= ' + str(quarter+3) + ') \
OR (year = ' + str(year-1) + ' AND quarter >= ' + str(quarter) + ')) \
ORDER BY year DESC, quarter DESC'
sql

dfp = pd.read_sql(sql, conpg)
dfp

dfp_grp = dfp.groupby(['name'], as_index=False).sum()
dfp_grp.shape

dfm = pd.merge(dfc_grp, dfp_grp, on='name', suffixes=(['_c','_p']), how='inner')
dfm

dfm['inc_profit'] = dfm['q_amt_c']-dfm['q_amt_p']
dfm['Pct'] = dfm['inc_profit']/abs(dfm['q_amt_p'])*100
dfm['year'] = year
dfm['quarter'] = 'Q'+str(quarter)
dfm

df_pct = dfm[['name','year','quarter','q_amt_c','q_amt_p','inc_profit','Pct']]
df_pct

sql = 'DELETE FROM profits WHERE year = ' + str(year) + \
' AND quarter = "' + "Q"+str(quarter) + '"'
print(sql)

rp = conpg.execute(sql)
rp.rowcount

rcds = df_pct.values.tolist()
len(rcds)

for rcd in rcds:
    print(rcd)

sql = """INSERT INTO profits (name, year, quarter, latest_profit, previous_profit, inc_profit, inc_percent) \
 VALUES (?, ?, ?, ?, ?, ?, ?)"""
sql

for rcd in rcds:
    conpg.execute(sql, rcd)
```