

## balance\_sheets

July 13, 2022

```
[ ]: import yahoo_fin.stock_info as si
import pandas as pd
import numpy as np
import concurrent.futures
import time
startTime = time.time()

[ ]: def pull_fin_info(function_call, stock_list):
    futures_df = {}
    with concurrent.futures.ProcessPoolExecutor() as executor:
        for ticker in stock_list:
            futures_df[ticker] = executor.submit(function_call,ticker)

    results_df = {}
    for ticker in stock_list:
        try:
            results_df[ticker] = futures_df[ticker].result(60) # 60 sec timeout
        except:
            print('pull error on ' + ticker)
            break

    # print(results_df)

    recent_sheets = pd.DataFrame(np.empty((0, 1)))
    recent_sheets = {ticker : sheet.iloc[:, :1] for ticker, sheet in results_df.
↪items()}
    for ticker in recent_sheets.keys():
        # if recent_sheets[ticker].columns() > 0:
        try:
            recent_sheets[ticker].columns = ['Recent']
        except ValueError:
            print('column re-name error on ' + ticker)

    recent_sheets = pd.concat(recent_sheets)
    recent_sheets = recent_sheets.reset_index()
    recent_sheets.columns = ['Ticker', 'Breakdown', 'Recent']
    return recent_sheets
```

```
[ ]: stock_list = ['AMZN','KO','TSLA','GME','AAPL','GOOG','SPOT']
stock_list.extend(['ELV'])

stock_list.extend(si.tickers_dow())
# stock_list.extend(si.tickers_sp500())
print('stock list pull done seconds - ' + str(round(time.time() - startTime,2)))

stock_list = list(dict.fromkeys(stock_list))
# print(stock_list)
```

stock list pull done seconds - 0.91

```
[ ]: balance_sheets = pull_fin_info(si.get_balance_sheet, stock_list)
print('balance sheets done seconds - ' + str(round(time.time() - startTime,2)))
```

balance sheets done seconds - 6.13

```
[ ]: income_statements = pull_fin_info(si.get_income_statement, stock_list)
print('income statements done seconds - ' + str(round(time.time() -
↪startTime,2)))
```

pull error on JNJ

income statements done seconds - 16.39

```
[ ]: cash_flow_statements = pull_fin_info(si.get_cash_flow, stock_list)
print('cash flow statements done seconds - ' + str(round(time.time() -
↪startTime,2)))
```

pull error on ELV

cash flow statements done seconds - 31.42

```
[ ]: frames = [balance_sheets, income_statements, cash_flow_statements]
combined_df = pd.concat(frames)
combined_df = combined_df.reset_index()
```

```
[ ]: pivot_df = combined_df.pivot_table(index='Ticker', columns='Breakdown',
↪values='Recent', aggfunc='sum')
```

```
[ ]: pivot_df.query("Ticker == 'AMZN'")
```

```
[ ]: Breakdown  accountsPayable  capitalExpenditures  capitalSurplus      cash \
Ticker
AMZN          7.866400e+10      -6.105300e+10      5.553800e+10  3.622000e+10

Breakdown  changeInCash  changeToAccountReceivables  changeToInventory \
Ticker
AMZN          -5.900000e+09      -1.816300e+10      -9.487000e+09
```

```
Breakdown changeToLiabilities changeToNetincome \
Ticker
AMZN          5.916000e+09      -1.722000e+09
```

```
Breakdown changeToOperatingActivities ... totalCashFromOperatingActivities \
Ticker
AMZN          2.123000e+09 ...          4.632700e+10
```

```
Breakdown totalCashflowsFromInvestingActivities totalCurrentAssets \
Ticker
AMZN          -5.815400e+10      1.615800e+11
```

```
Breakdown totalCurrentLiabilities totalLiab totalOperatingExpenses \
Ticker
AMZN          1.422660e+11  2.823040e+11      4.449430e+11
```

```
Breakdown totalOtherIncomeExpenseNet totalRevenue totalStockholderEquity \
Ticker
AMZN          1.327600e+10  4.698220e+11      1.382450e+11
```

```
Breakdown treasuryStock
Ticker
AMZN          -3.213000e+09
```

[1 rows x 69 columns]

```
[ ]: pivot_df.query("ebit >= 0")
```

```
[ ]: Breakdown accountsPayable capitalExpenditures capitalSurplus cash \
Ticker
AAPL          5.476300e+10      -1.108500e+10      NaN  3.494000e+10
AMGN          1.366000e+09           NaN      NaN  7.989000e+09
AMZN          7.866400e+10      -6.105300e+10  5.553800e+10  3.622000e+10
AXP           9.495600e+10           NaN  1.149500e+10  2.104000e+10
CAT           8.154000e+09           NaN      NaN  8.428000e+09
CRM           2.956000e+09           NaN  5.091900e+10  5.464000e+09
CSCO          2.513000e+09           NaN      NaN  9.175000e+09
CVX           1.645400e+10           NaN  1.728200e+10  5.640000e+09
DIS           1.567900e+10           NaN      NaN  1.595900e+10
DOW           8.416000e+09           NaN  8.151000e+09  2.988000e+09
ELV           2.400900e+10           NaN  9.148000e+09  4.880000e+09
GOOG          6.037000e+09      -2.464000e+10      NaN  2.094500e+10
GS            2.519310e+11           NaN  5.639600e+10  2.610360e+11
HD            1.346200e+10           NaN  1.213200e+10  2.343000e+09
HON           6.484000e+09           NaN  8.141000e+09  1.095900e+10
IBM           3.955000e+09           NaN      NaN  6.650000e+09
INTC          5.747000e+09           NaN      NaN  4.827000e+09
```

KO	4.602000e+09	-1.367000e+09	1.811600e+10	9.684000e+09
SPOT	5.340000e+08	-8.500000e+07	4.746000e+09	2.744000e+09
TSLA	1.002500e+10	-8.014000e+09	2.980300e+10	1.757600e+10

Breakdown	changeInCash	changeToAccountReceivables	changeToInventory	\
Ticker				
AAPL	-3.860000e+09	-1.012500e+10	-2.642000e+09	
AMGN	NaN	NaN	NaN	
AMZN	-5.900000e+09	-1.816300e+10	-9.487000e+09	
AXP	NaN	NaN	NaN	
CAT	NaN	NaN	NaN	
CRM	NaN	NaN	NaN	
CSCO	NaN	NaN	NaN	
CVX	NaN	NaN	NaN	
DIS	NaN	NaN	NaN	
DOW	NaN	NaN	NaN	
ELV	NaN	NaN	NaN	
GOOG	-5.520000e+09	-9.095000e+09	NaN	
GS	NaN	NaN	NaN	
HD	NaN	NaN	NaN	
HON	NaN	NaN	NaN	
IBM	NaN	NaN	NaN	
INTC	NaN	NaN	NaN	
KO	2.915000e+09	-2.250000e+08	-1.350000e+08	
SPOT	1.593000e+09	-2.450000e+08	NaN	
TSLA	-1.757000e+09	-1.300000e+08	-1.709000e+09	

Breakdown	changeToLiabilities	changeToNetincome	\
Ticker			
AAPL	1.400200e+10	2.985000e+09	
AMGN	NaN	NaN	
AMZN	5.916000e+09	-1.722000e+09	
AXP	NaN	NaN	
CAT	NaN	NaN	
CRM	NaN	NaN	
CSCO	NaN	NaN	
CVX	NaN	NaN	
DIS	NaN	NaN	
DOW	NaN	NaN	
ELV	NaN	NaN	
GOOG	1.057000e+09	4.712000e+09	
GS	NaN	NaN	
HD	NaN	NaN	
HON	NaN	NaN	
IBM	NaN	NaN	
INTC	NaN	NaN	
KO	2.843000e+09	7.700000e+07	

SPOT	2.040000e+08	2.860000e+08
TSLA	5.371000e+09	2.650000e+09

Breakdown	changeToOperatingActivities	...	totalCashFromOperatingActivities	\
Ticker				
AAPL	-6.146000e+09	...	1.040380e+11	
AMGN	NaN	...	NaN	
AMZN	2.123000e+09	...	4.632700e+10	
AXP	NaN	...	NaN	
CAT	NaN	...	NaN	
CRM	NaN	...	NaN	
CSCO	NaN	...	NaN	
CVX	NaN	...	NaN	
DIS	NaN	...	NaN	
DOW	NaN	...	NaN	
ELV	NaN	...	NaN	
GOOG	7.140000e+09	...	9.165200e+10	
GS	NaN	...	NaN	
HD	NaN	...	NaN	
HON	NaN	...	NaN	
IBM	NaN	...	NaN	
INTC	NaN	...	NaN	
KO	-5.920000e+08	...	1.262500e+10	
SPOT	5.000000e+06	...	3.610000e+08	
TSLA	-3.014000e+09	...	1.149700e+10	

Breakdown	totalCashflowsFromInvestingActivities	totalCurrentAssets	\
Ticker			
AAPL	-1.454500e+10	1.348360e+11	
AMGN	NaN	1.938500e+10	
AMZN	-5.815400e+10	1.615800e+11	
AXP	NaN	1.640180e+11	
CAT	NaN	4.345500e+10	
CRM	NaN	2.285000e+10	
CSCO	NaN	3.911200e+10	
CVX	NaN	3.373800e+10	
DIS	NaN	3.365700e+10	
DOW	NaN	2.084800e+10	
ELV	NaN	5.112200e+10	
GOOG	-3.552300e+10	1.881430e+11	
GS	NaN	1.349466e+12	
HD	NaN	2.905500e+10	
HON	NaN	2.537200e+10	
IBM	NaN	2.953900e+10	
INTC	NaN	5.771800e+10	
KO	-2.765000e+09	2.254500e+10	
SPOT	-1.870000e+08	4.372000e+09	

TSLA	-7.868000e+09	2.710000e+10
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Breakdown Ticker	totalCurrentLiabilities	totalLiab	totalOperatingExpenses \
AAPL	1.254810e+11	2.879120e+11	2.568680e+11
AMGN	1.218400e+10	5.446500e+10	1.664100e+10
AMZN	1.422660e+11	2.823040e+11	4.449430e+11
AXP	1.058250e+11	1.663710e+11	3.363000e+10
CAT	2.984700e+10	6.627700e+10	4.269700e+10
CRM	2.178800e+10	3.707800e+10	2.589000e+10
CSCO	2.625700e+10	5.622200e+10	3.605300e+10
CVX	2.679100e+10	9.959500e+10	1.397460e+11
DIS	3.107700e+10	1.013850e+11	6.392600e+10
DOW	1.322600e+10	4.425100e+10	4.674900e+10
ELV	3.488500e+10	6.133200e+10	1.296860e+11
GOOG	6.425400e+10	1.076330e+11	1.789230e+11
GS	8.041480e+11	1.353222e+12	3.140400e+10
HD	2.869300e+10	7.357200e+10	1.278550e+11
HON	1.950800e+10	4.522100e+10	2.691900e+10
IBM	3.361900e+10	1.130050e+11	5.157900e+10
INTC	2.746200e+10	7.301500e+10	5.694200e+10
KO	1.995000e+10	6.949400e+10	2.749400e+10
SPOT	3.226000e+09	5.051000e+09	9.572000e+09
TSLA	1.970500e+10	3.054800e+10	4.730000e+10

Breakdown Ticker	totalOtherIncomeExpenseNet	totalRevenue	totalStockholderEquity \
AAPL	2.580000e+08	3.658170e+11	6.309000e+10
AMGN	-2.637000e+09	2.597900e+10	6.700000e+09
AMZN	1.327600e+10	4.698220e+11	1.382450e+11
AXP	5.200000e+08	4.379900e+10	2.217700e+10
CAT	-3.900000e+07	5.097100e+10	1.648400e+10
CRM	9.300000e+08	2.649200e+10	5.813100e+10
CSCO	-5.030000e+08	4.981800e+10	4.127500e+10
CVX	5.779000e+09	1.556060e+11	1.390670e+11
DIS	-9.310000e+08	6.741800e+10	8.855300e+10
DOW	-7.400000e+07	5.496800e+10	1.816500e+10
ELV	-1.032000e+09	1.386430e+11	3.606000e+10
GOOG	1.202000e+10	2.576370e+11	2.516350e+11
GS	-5.340000e+08	5.898200e+10	9.922300e+10
HD	-1.565000e+09	1.511570e+11	-1.696000e+09
HON	-2.380000e+08	3.439200e+10	1.856900e+10
IBM	-9.350000e+08	5.735100e+10	1.890100e+10
INTC	-3.790000e+08	7.902400e+10	9.539100e+10
KO	1.264000e+09	3.865500e+10	2.299900e+10
SPOT	1.530000e+08	9.668000e+09	2.119000e+09
TSLA	-1.800000e+08	5.382300e+10	3.018900e+10

Breakdown	treasuryStock
Ticker	
AAPL	1.630000e+08
AMGN	-7.960000e+08
AMZN	-3.213000e+09
AXP	-2.945000e+09
CAT	-2.919600e+10
CRM	-1.660000e+08
CSCO	-4.170000e+08
CVX	-4.559300e+10
DIS	-7.347000e+09
DOW	-1.061700e+10
ELV	-1.780000e+08
GOOG	-1.623000e+09
GS	-8.899300e+10
HD	-8.149800e+10
HON	-3.335700e+10
IBM	-1.926270e+11
INTC	-8.800000e+08
KO	-6.597100e+10
SPOT	5.930000e+08
TSLA	5.400000e+07

[20 rows x 69 columns]

```
[ ]: executionTime = (time.time() - startTime)
      print('Execution time in seconds: ' + str(executionTime))
```

Execution time in seconds: 31.84090304374695