

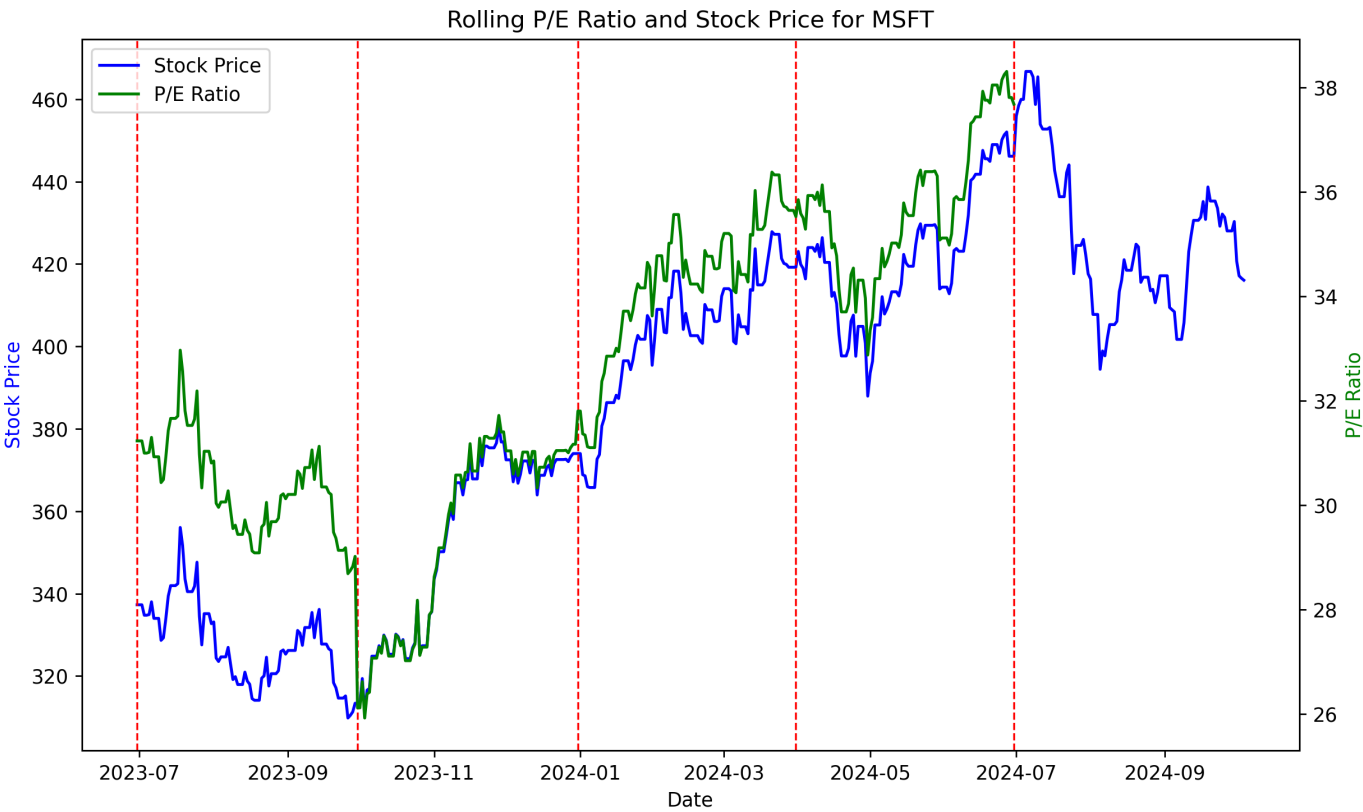
Company Analysis: MSFT

```
In [1]: # Modify the system path to include the 'analysis' directory
import sys
sys.path.append(r"C:\Users\claes\OneDrive\Python\StockAnalysis\analysis")

# Define the Company object for MSFT
from company import Company
company = Company("MSFT")
```

Stock Price and Rolling P/E Ratio

```
In [2]: # Plot the rolling P/E ratio and stock price for MSFT
company.plot_rolling_PE()
```



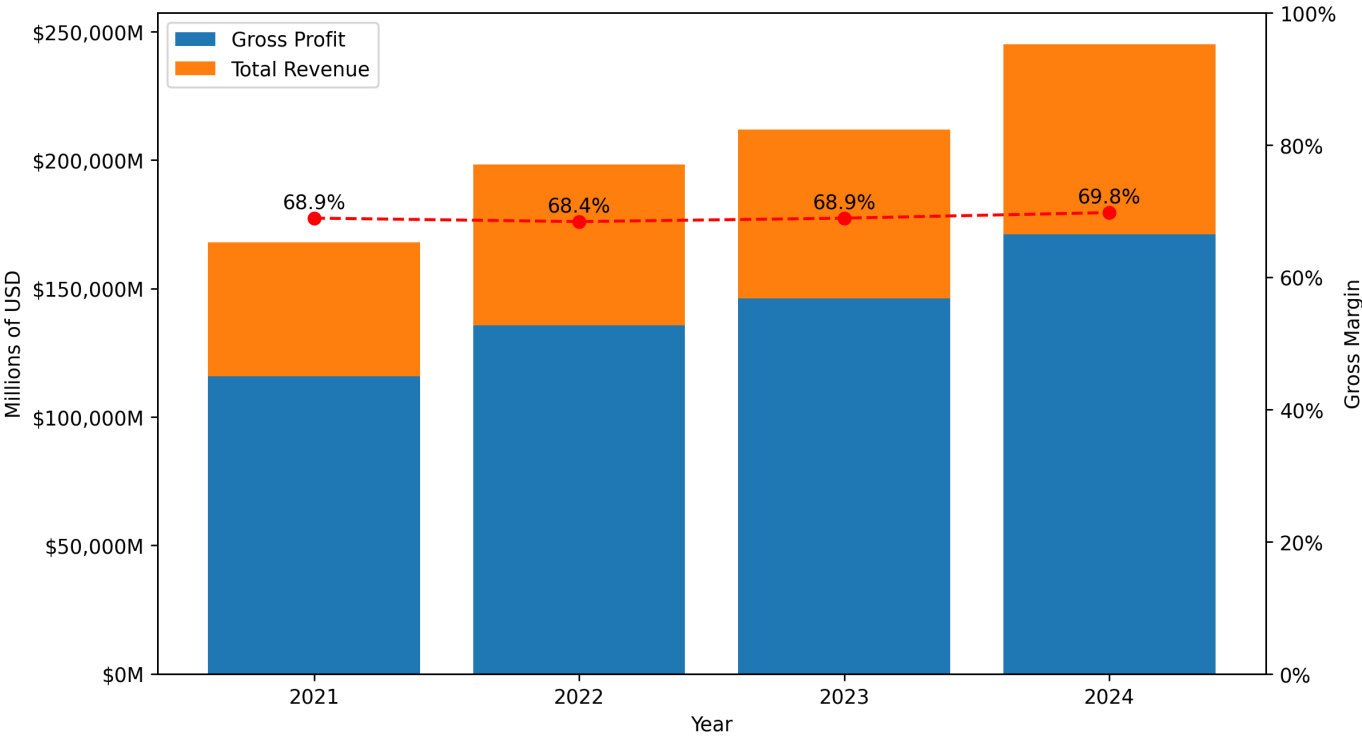
1. Profitability

```
In [3]: # Display key profitability metrics for MSFT
financials = company.get_financials()
financials.loc[['Gross Profit', 'Operating Income', 'Net Income']]
```

	2024-06-30	2023-06-30	2022-06-30	2021-06-30
Gross Profit	171008000000.0	146052000000.0	135620000000.0	115856000000.0
Operating Income	109433000000.0	88523000000.0	83383000000.0	69916000000.0
Net Income	88136000000.0	72361000000.0	72738000000.0	61271000000.0

Revenue and Gross Profit

```
In [4]: # Display Revenue and gross profit Plot
company.plot_revenue_grossprofit()
```



2. Financial Position

```
In [5]: # Display the balance sheet for MSFT
balance_sheet = company.get_balance_sheet()
balance_sheet
```

	2024-06-30	2023-06-30	2022-06-30	2021-06-30
Ordinary Shares Number	7434000000.0	7432000000.0	7464000000.0	7519000000.0
Share Issued	7434000000.0	7432000000.0	7464000000.0	7519000000.0
Net Debt	33315000000.0	12533000000.0	35850000000.0	43922000000.0
Total Debt	67127000000.0	59965000000.0	61270000000.0	67775000000.0
Tangible Book Value	121660000000.0	128971000000.0	87720000000.0	84477000000.0
...
Cash Cash Equivalents And Short Term Investments	75531000000.0	111256000000.0	104749000000.0	130256000000.0
Other Short Term Investments	57216000000.0	76552000000.0	90818000000.0	116032000000.0
Cash And Cash Equivalents	18315000000.0	34704000000.0	13931000000.0	14224000000.0
Cash Equivalents	6744000000.0	26226000000.0	5673000000.0	6952000000.0
Cash Financial	11571000000.0	8478000000.0	8258000000.0	7272000000.0

3. Cash Flow Analysis

```
In [6]: # Display the cash flow statement for MSFT
cashflow = company.get_cashflow()
cashflow
```

Out[6]:		2024-06-30	2023-06-30	2022-06-30	2021-06-30	2020-06-30
	Free Cash Flow	74071000000.0	59475000000.0	65149000000.0	56118000000.0	NaN
	Repurchase Of Capital Stock	-17254000000.0	-22245000000.0	-32696000000.0	-27385000000.0	NaN
	Repayment Of Debt	-29070000000.0	-2750000000.0	-9023000000.0	-3750000000.0	NaN
	Issuance Of Debt	29645000000.0	0.0	0.0	NaN	0.0
	Issuance Of Capital Stock	2002000000.0	1866000000.0	1841000000.0	1693000000.0	NaN
	Capital Expenditure	-44477000000.0	-28107000000.0	-23886000000.0	-20622000000.0	NaN
	End Cash Position	18315000000.0	34704000000.0	13931000000.0	14224000000.0	NaN
	Beginning Cash Position	34704000000.0	13931000000.0	14224000000.0	13576000000.0	NaN
	Effect Of Exchange Rate Changes	-210000000.0	-194000000.0	-141000000.0	-29000000.0	NaN
	Changes In Cash	-16179000000.0	20967000000.0	-152000000.0	677000000.0	NaN
	Financing Cash Flow	-37757000000.0	-43935000000.0	-58876000000.0	-48486000000.0	NaN
	Cash Flow From Continuing Financing Activities	-37757000000.0	-43935000000.0	-58876000000.0	-48486000000.0	NaN
	Net Other Financing Charges	-1309000000.0	-1006000000.0	-863000000.0	-2523000000.0	NaN
	Cash Dividends Paid	-21771000000.0	-19800000000.0	-18135000000.0	-16521000000.0	NaN
	Common Stock Dividend Paid	-21771000000.0	-19800000000.0	-18135000000.0	-16521000000.0	NaN
	Net Common Stock Issuance	-15252000000.0	-20379000000.0	-30855000000.0	-25692000000.0	NaN
	Common Stock Payments	-17254000000.0	-22245000000.0	-32696000000.0	-27385000000.0	NaN
	Common Stock Issuance	2002000000.0	1866000000.0	1841000000.0	1693000000.0	NaN
	Net Issuance Payments Of Debt	575000000.0	-2750000000.0	-9023000000.0	-3750000000.0	NaN
	Net Short Term Debt Issuance	5250000000.0	0.0	0.0	NaN	0.0
	Short Term Debt Issuance	5250000000.0	0.0	0.0	NaN	NaN
	Net Long Term Debt Issuance	-4675000000.0	-2750000000.0	-9023000000.0	-3750000000.0	NaN
	Long Term Debt Payments	-29070000000.0	-2750000000.0	-9023000000.0	-3750000000.0	NaN
	Long Term Debt Issuance	24395000000.0	0.0	0.0	NaN	0.0
	Investing Cash Flow	-96970000000.0	-22680000000.0	-30311000000.0	-27577000000.0	NaN
	Cash Flow From Continuing Investing Activities	-96970000000.0	-22680000000.0	-30311000000.0	-27577000000.0	NaN
	Net Other Investing Changes	-1298000000.0	-3116000000.0	-2825000000.0	-922000000.0	NaN
	Net Investment Purchase And Sale	17937000000.0	10213000000.0	18438000000.0	2876000000.0	NaN
	Sale Of Investment	35669000000.0	47864000000.0	44894000000.0	65800000000.0	NaN

Purchase Of Investment	-17732000000.0	-37651000000.0	-26456000000.0	-62924000000.0	NaN
Net Business Purchase And Sale	-69132000000.0	-16700000000.0	-22038000000.0	-89090000000.0	NaN
Purchase Of Business	-69132000000.0	-16700000000.0	-22038000000.0	-89090000000.0	NaN
Net PPE Purchase And Sale	-44477000000.0	-28107000000.0	-23886000000.0	-20622000000.0	NaN
Purchase Of PPE	-44477000000.0	-28107000000.0	-23886000000.0	-20622000000.0	NaN
Operating Cash Flow	118548000000.0	87582000000.0	89035000000.0	76740000000.0	NaN
Cash Flow From Continuing Operating Activities	118548000000.0	87582000000.0	89035000000.0	76740000000.0	NaN
Change In Working Capital	1824000000.0	-2388000000.0	446000000.0	-936000000.0	NaN
Change In Other Working Capital	5348000000.0	5535000000.0	5805000000.0	2324000000.0	NaN
Change In Other Current Liabilities	5616000000.0	2825000000.0	3169000000.0	5551000000.0	NaN
Change In Other Current Assets	-8465000000.0	-4824000000.0	-3514000000.0	-4391000000.0	NaN
Change In Payables And Accrued Expense	5232000000.0	-3079000000.0	2943000000.0	2798000000.0	NaN
Change In Payable	5232000000.0	-3079000000.0	2943000000.0	2798000000.0	NaN
Change In Account Payable	3545000000.0	-2721000000.0	2943000000.0	2798000000.0	NaN
Change In Tax Payable	1687000000.0	-358000000.0	NaN	NaN	NaN
Change In Income Tax Payable	1687000000.0	-358000000.0	NaN	NaN	NaN
Change In Inventory	1284000000.0	1242000000.0	-1123000000.0	-737000000.0	NaN
Change In Receivables	-7191000000.0	-4087000000.0	-6834000000.0	-6481000000.0	NaN
Changes In Account Receivables	-7191000000.0	-4087000000.0	-6834000000.0	-6481000000.0	NaN
Stock Based Compensation	10734000000.0	9611000000.0	7502000000.0	6118000000.0	NaN
Deferred Tax	-4738000000.0	-6059000000.0	-5702000000.0	-1500000000.0	NaN
Deferred Income Tax	-4738000000.0	-6059000000.0	-5702000000.0	-1500000000.0	NaN
Depreciation Amortization Depletion	22287000000.0	13861000000.0	14460000000.0	11686000000.0	NaN
Depreciation And Amortization	22287000000.0	13861000000.0	14460000000.0	11686000000.0	NaN
Depreciation	22287000000.0	13861000000.0	14460000000.0	11686000000.0	NaN
Operating Gains Losses	305000000.0	196000000.0	-409000000.0	-1249000000.0	NaN
Gain Loss On Investment Securities	NaN	NaN	NaN	NaN	-219000000.0
Net Income From Continuing Operations	88136000000.0	72361000000.0	72738000000.0	61271000000.0	NaN

4. Market Sentiment

```
In [7]: # Display the latest market sentiment (analyst recommendations) for MSFT
recommendations = company.get_recommendations()
```

```
recommendations.tail(10)
```

Out[7]:

	period	strongBuy	buy	hold	sell	strongSell
0	0m	14	13	6	0	1
1	-1m	21	34	2	0	0
2	-2m	21	34	2	0	0
3	-3m	20	27	6	0	0