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DATA MANAGEMENT

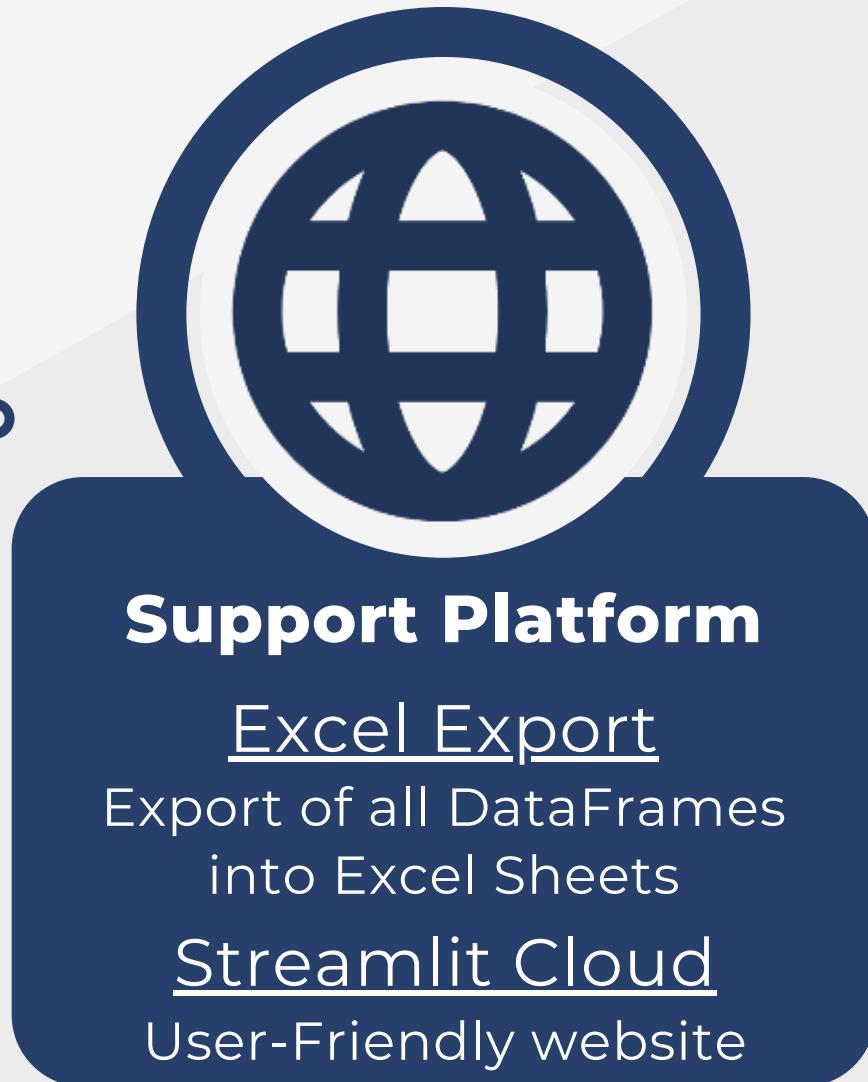
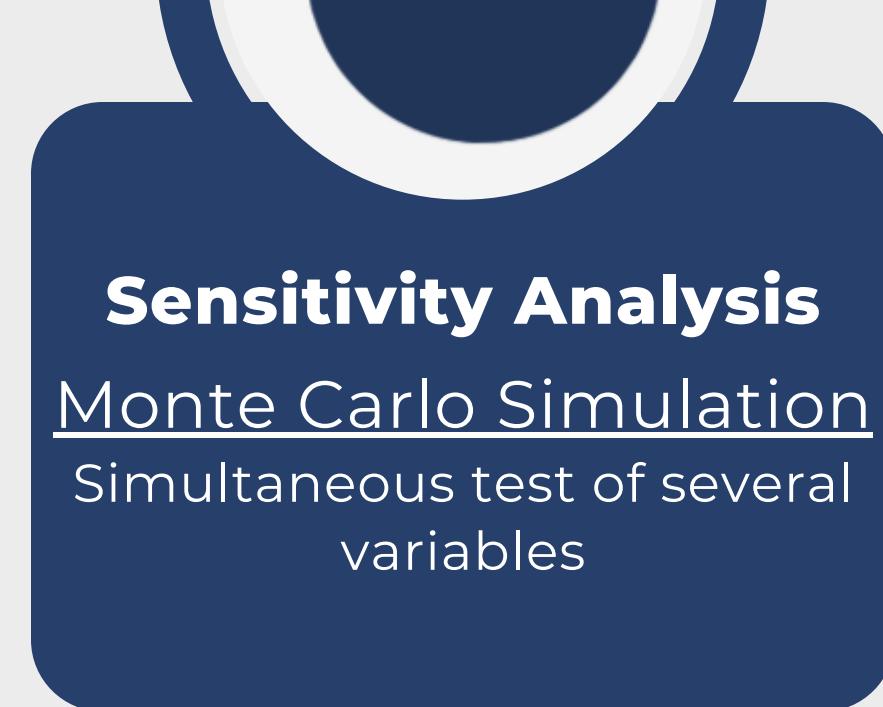
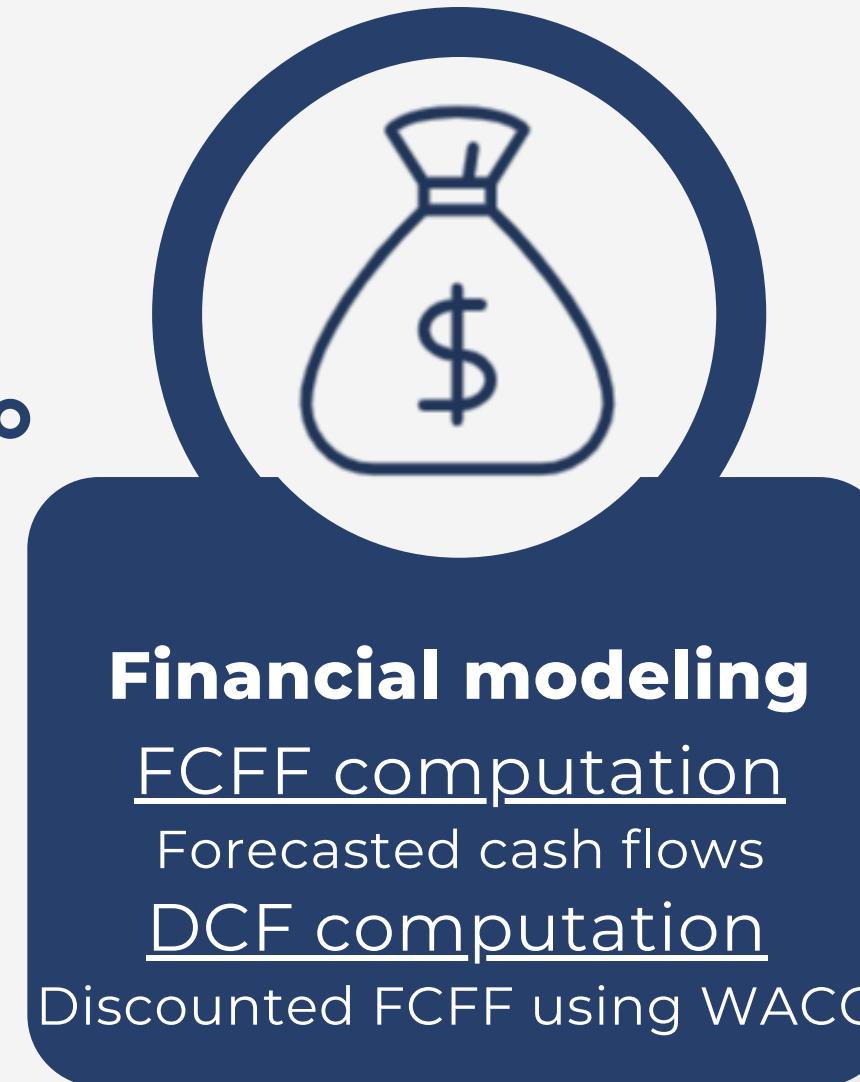
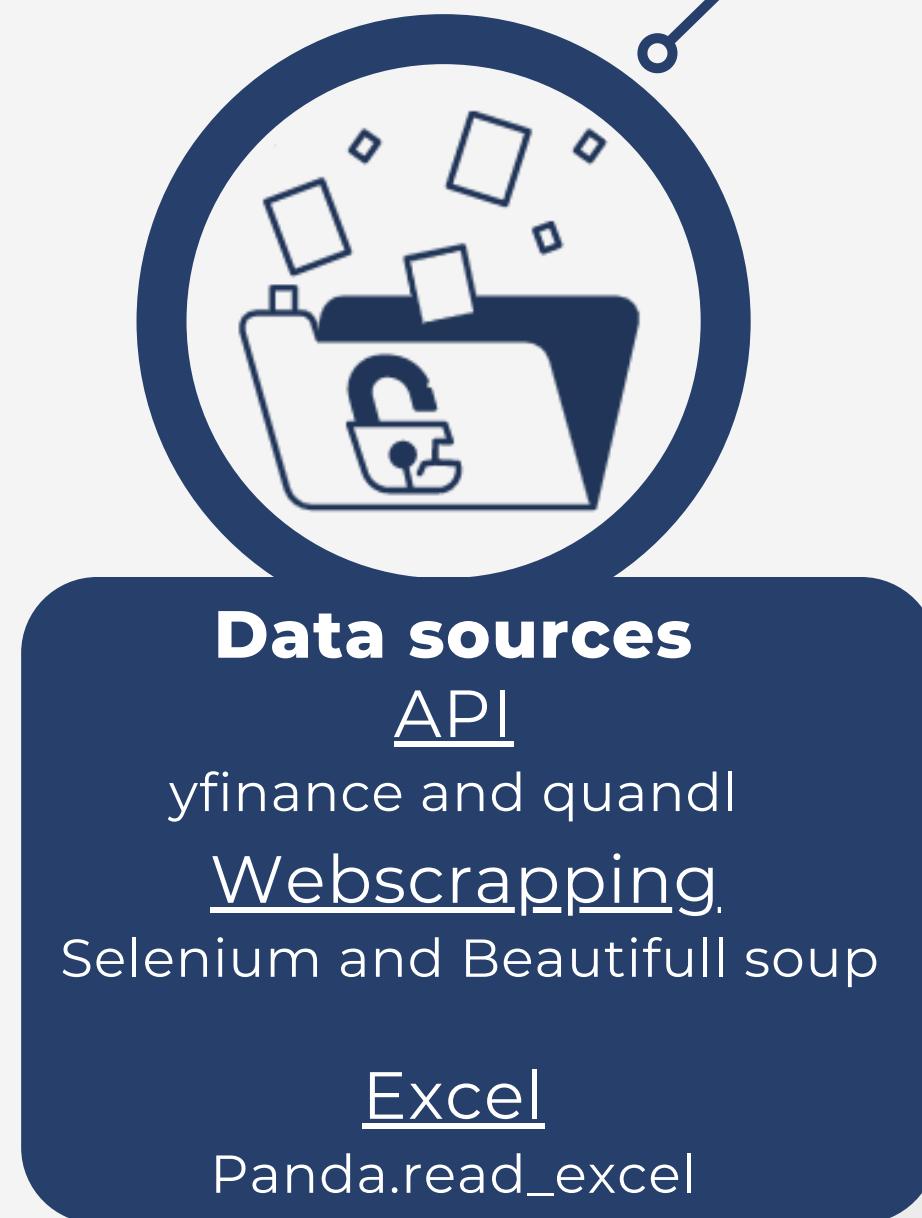
# **PYTHON-POWERED DCF ANALYSIS**

## **THE CASE OF MITHRA**

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SIBILLE PAUL & SINGH GURMINDER

# IS MITHRA'S STOCK A GOOD INVESTMENT ?



# DATA SOURCES

## API

Yfinance: shares outstanding + Mithra's returns  
Quandl : Financial Data retrieval (book and market value of equity) for a sample of company

## Excel

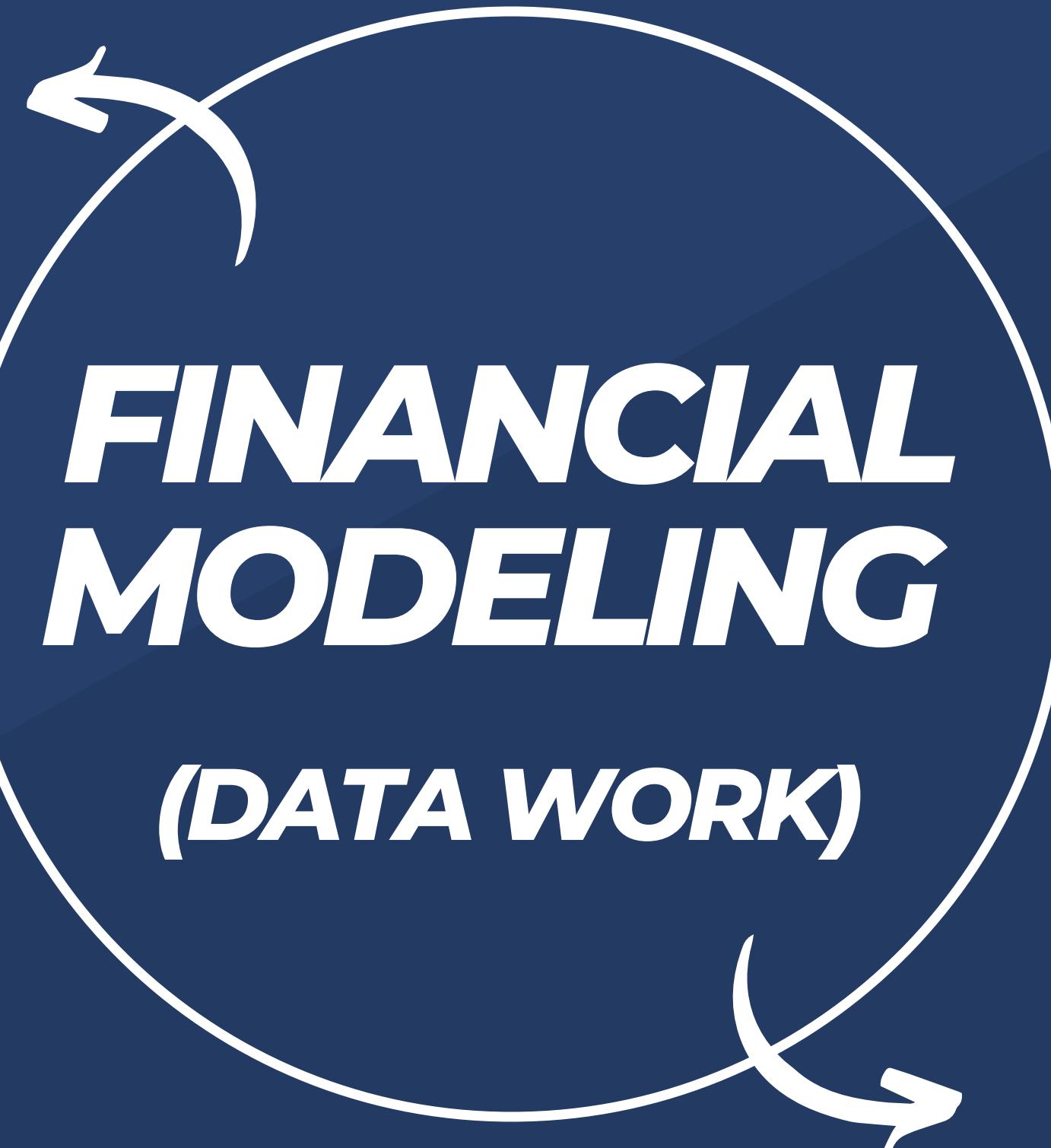
Balance Sheet: currents assets and liabilities  
Income statement: all labels from revenues to net income  
Cash-flow statement: all labels from cash of ops. and Capex

## Webscrapping

Selenium: Biggest and Smallest market cap of S&P500  
Beautiful Soup: Spread, risk free rate and market risk premium retrieval on Damodaran's website

## **FCFF Computation**

Forecasting of all labels  
in order to estimate  
FCFF up to 2028



## **WACC and DCF Computation**

Weighting of cost of  
Debt and cost of  
Equity + Computation  
of the market share



# FINANCIAL MODELING

## FCFF Estimation

"A financial metric used to assess the cash flows available to all providers of capital in a company, including both equity and debt holders"

	2023	2024	2025	2026	2027	2028
Revenue	70,99	87,29	165,48	120,56	180,57	246,72
COGS	20,402526	23,236598	30,349032	25,112648	29,378739	31,802208
Gross_profit	50,587474	64,053402	135,130968	95,447352	151,191261	214,917792
SG&A	20,85512743	23,89786915	41,99478066	28,18398223	38,60145395	47,80830764
R&D	41,47122618	50,12052631	93,3611777	66,81242987	98,26331512	131,7938905
Other Operating Expense	-7,916784601	-9,734555963	-18,45428251	-13,4448169	-20,13711502	-27,5141442
D&A	12,93594499	15,90616478	30,1541087	21,96869317	32,90383979	44,95782994
Opex	54,40956901	64,2838395	116,9016758	81,55159521	116,727654	152,0880539
EBIT	-3,822095012	-0,230437499	18,22929216	13,89575679	34,46360696	62,8297381
Income tax expenses	-0,858979896	-0,05178866	4,096861911	3,122940607	7,745371429	14,12039253
NOPAT	-19,77642964	-19,84804377	-18,960781	-13,19896898	-6,117801735	7,381739245
D&A	12,93594499	15,90616478	30,1541087	21,96869317	32,90383979	44,95782994
Stock Based Compensation	11,29640819	13,89017426	26,33229507	19,18432133	28,73351777	39,25975248
Other Operating Activities	36,40102064	44,75905187	84,8519636	61,81866529	92,58955202	126,5088014
(Gain) Loss On Sale Of Invest	0	0	0	0	0	0
Asset Writedown Restructuring Costs	0	0	0	0	0	0
Change nwc	38,06842701	22,56855295	110,9047947	-63,24523504	85,6048778	95,29357855
CFO	2,788517174	32,13879419	11,47279171	153,0179458	62,50423005	122,8145445
Capital Expenditure	-17,8469162	-21,94474313	-41,60174239	-30,30883528	-45,39537481	-62,02551295
FCFF	-15,05839902	10,19405106	-30,12895068	122,7091106	17,10885524	60,78903159



# FINANCIAL MODELING

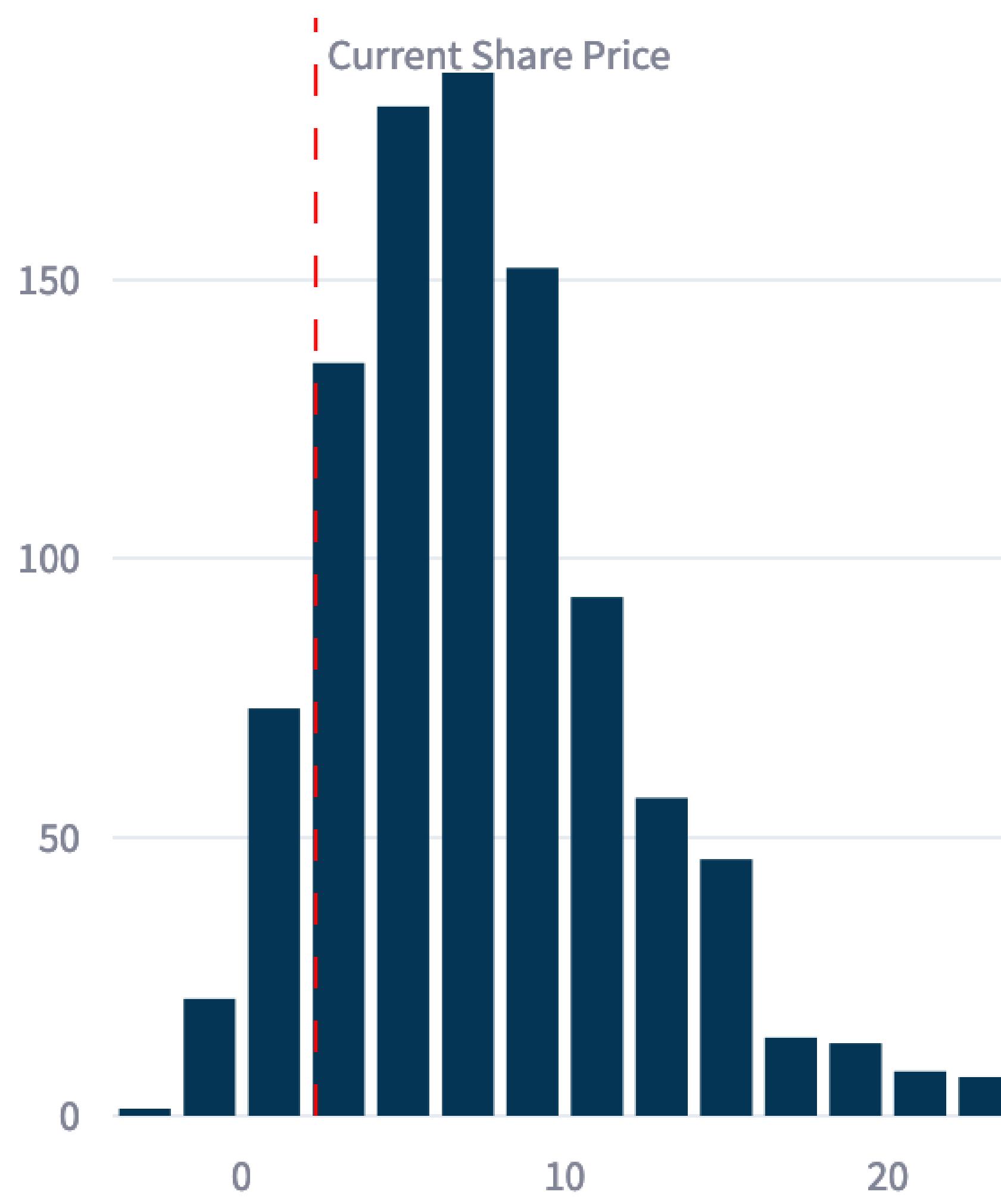
WACC and DCF

"The WACC discount the FCFF to yield the DCF, providing an estimate of the implied enterprise value and ultimately of the implied share price."

	DCF
Wacc	0,074146343
Sum Dicounted Cash Flows (without Terminal Value)	114224829,1
Discounted Terminal Value	745547881,1
Implied Enterprise Value	859772710,2
Market Value of Debt	368902953,5
Cash & Short Term Equivalents	28285000
Forecasted Market Capitalization	519154756,7
Forecasted Share Price	8,817136434
Current Share Price	2,299999952
Gap (in %)	383

	WACC
Cost of equity	0,07075856
Beta market	0,586349497
Market Risk Premium	0,0697
Beta SMB	-0,119862218
Size Risk Premium	-0,001130856
Beta HML	0
Value risk Premium	0,000124672
Market Value of Equity	135424457,2
Weight of Equity	0,26852488
Cost of debt	0,07539
Rf	0,02989
Spread	0,0455
Taxe rate	0,224740592
Market Value of Debt	368902953,5
Weight of Debt	0,73147512
WACC	0,074146343

Enormous growth ( $\pm 400\%$ )



# SENSITIVITY ANALYSIS

## Monte Carlo Simulation

- Study of share price fluctuations  
The goal is to examine the share price for a large set of stochastic iterations
- Simultaneous variation of variables  
8 variables that move simultaneously: the FCFF of each year, the long-term growth rate and the WACC.

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## **Export Excel**

All DataFrames are exported and classify into an excel file

# **SUPPORT PLATFORM**

## **Application**

Public website using Streamlit, where the analysis and the results are displayed



# STREAMLIT APP

*"Streamlit is a powerful framework used to create interactive and practical applications that can display results effectively."*

**COMPANY.PY THIS IS THE FILE YOU RUN**

**PAGES/**

**FREE CASH FLOW FIRM.PY**

**NET WORKING CAPITAL.PY**

**PRODUCT.PY**

**FUTUR FREE CASH FLOW FIRM.PY**

**COST OF DEBT.PY**

**COST OF EQUITY.PY**

**WEIGHTED AVERAGE COST OF CAPITAL.PY**

**THE DISCOUNTED CASH FLOW MODEL.PY**



# Valuation.py

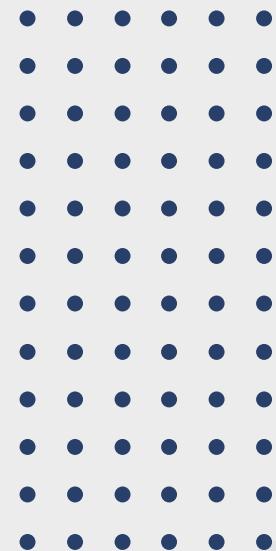
- CALCULATE ALL THE NECESSARY DATA
- DOESN'T WASTE ANY TIME LOADING
- DYNAMIC AND RESPONSIVE
- EFFICIENT USER EXPERIENCE

# App

## COMPANY.PY

### PAGES/

- FCFF.PY
- NWC.PY
- PRODUCT.PY
- FUTUR FCFF.PY
- COST OF DEBT.PY
- COST OF EQUITY.PY
- WACC.PY
- DCF.PY

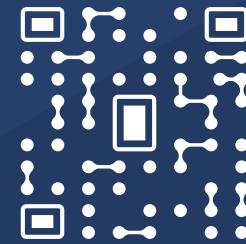




# THANK YOU

*Feel Free to ask your  
questions!*

## ***IMPORTANT LINK***



[https://github.com/Paulsibile/Project\\_SIBILLE-  
PAUL\\_SINGH-GURMINDER](https://github.com/Paulsibile/Project_SIBILLE-PAUL_SINGH-GURMINDER)



<https://mithra-valuation.streamlit.app/>

