



STEPHEN D. CUTLER
CENTER FOR INVESTMENTS
AND FINANCE

Equity Valuation using Bloomberg

Created by Alex Bowers ('25)

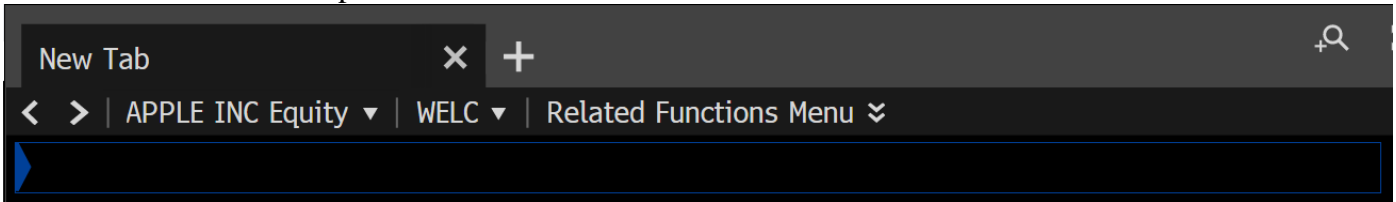
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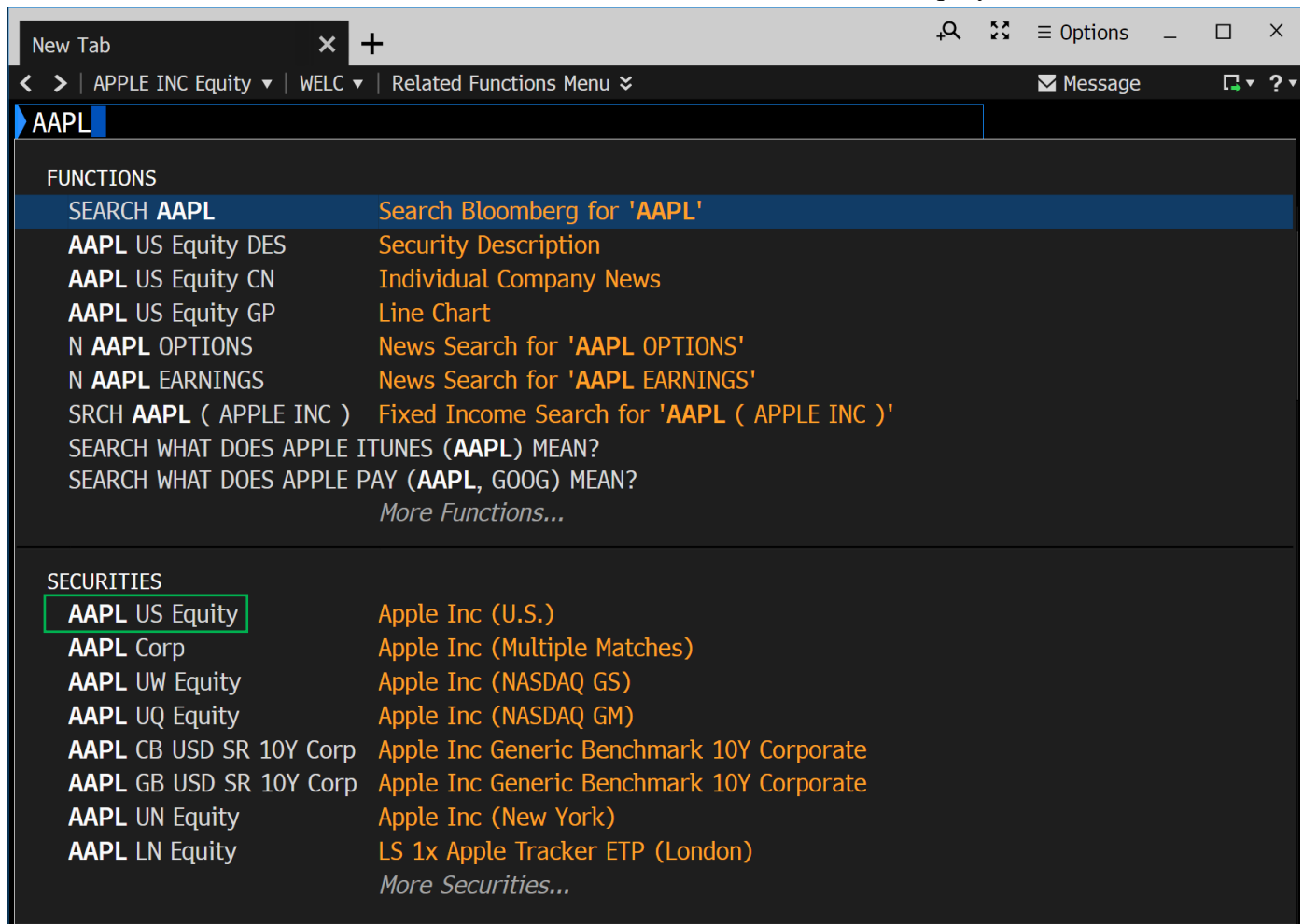
I. Company Information

a. Company Data

1. Login to Bloomberg
2. Click on the *New Tab* panel



3. Enter your ticker into the search bar (e.g. AAPL). The search dropdown will populate with related functions and securities. In this instance, we are interested in AAPL US Equity.



4. Now you will have the option to select functions related to your security. These functions can be used to provide you with almost all of the information you need to know about your company. For a high-level overview, click on the *Security Description* (DES).

APPLE INC Equity

AAPL US \$ C 151.03 +5.12 Q151.10 / 151.11M 1x10

On 03 Mar d Vol 70,732,300 O 148.045K H 151.11Q L 147.33G Val 10

Main Menu of Bloomberg Functions > Equities > Analyze APPLE INC Equity

- 1) Company Overview >
- 2) DES Security Description
- 3) MFID MiFID Descriptive Data
- 4) CN Individual Company News
- 5) Company Analysis >
- 6) FA Financial Analysis
- 7) OWN Ownership Summary
- 8) Research & Estimates >
- 9) MODL Company Financials
- 10) DS Document Search
- 11) BICO Bloomberg Intelligence Primer
- 12) Comparative Analytics >
- 13) EQRV Equity Relative Valuation
- 14) RV Relative Valuation
- 16) Charting & Reporting >
- 17) GP Line Chart
- 18) GF Graph Fundamentals
- 19) CMAP Company Map
- 20) Security Surveillance >
- 21) EVT Company Events
- 22) BQ Bloomberg Quote
- 23) Trade Analytics >
- 24) IOIA IOI & Advert Overview
- 25) MDM Market Depth Monitor
- 26) VWAP Price and Vol Dashboard
- 27) RANK Broker Rankings
- 28) VENU Venue Analytics
- 29) Derivatives >
- 30) OMON Option Monitor

5. Within DES you can find general information about the company such as the business description, price chart, estimates, and financial ratios.

AAPL US Equity Report Page 1/5 Security Description: Equity

Profile Issue Info Ratios Revenue & EPS ESG

APPLE INC FIGIBBG000B9XRY4

BI Research Primer | BICO » Classification Communications Equipment

Apple Inc. designs, manufactures, and markets smartphones, personal computers, tablets, wearables and accessories, and sells a variety of related accessories. The Company also offers payment, digital content, cloud and advertising services. Apple Inc.'s customers are primarily in consumer, small & mid-sized business, education, enterprise and ... More

Price Chart | GP »

Estimates | EE »

Corporate Info

www.apple.com
Cupertino, CA, US
Empls 164,000 (09/24/22)

Management | MGMT »

Timothy Donald Cook "Tim" Chief Executive Officer

Jeffrey E Williams "Jeff" Chief Operating Officer

Carol A Surface PhD Chief People Officer

12M Tot Ret -5.15%

Beta vs SPX 1.17

Depository Receipts

Active Receipts 9

Px/Chg 1D (USD) 153.83/+1.85%

52 Wk H (03/30/22) 179.61

52 Wk L (01/03/23) 124.17

YTD Change/% 23.90/18.39%

Mkt Cap (USD) 2,433.9B

Shrs Out/Float 15,822.0M/14,89...

SI/% of Float 104.3M/0.7%

Days to Cover 1.3

Date (E) 04/28/23

P/E 26.12

Est P/E 09/23 25.76

T12M EPS (USD) 5.89

Est EPS 5.97

Est PEG 2.53

Dividend | DVD »

Ind Gross Yield 0.60%

5Y Net Growth 7.87%

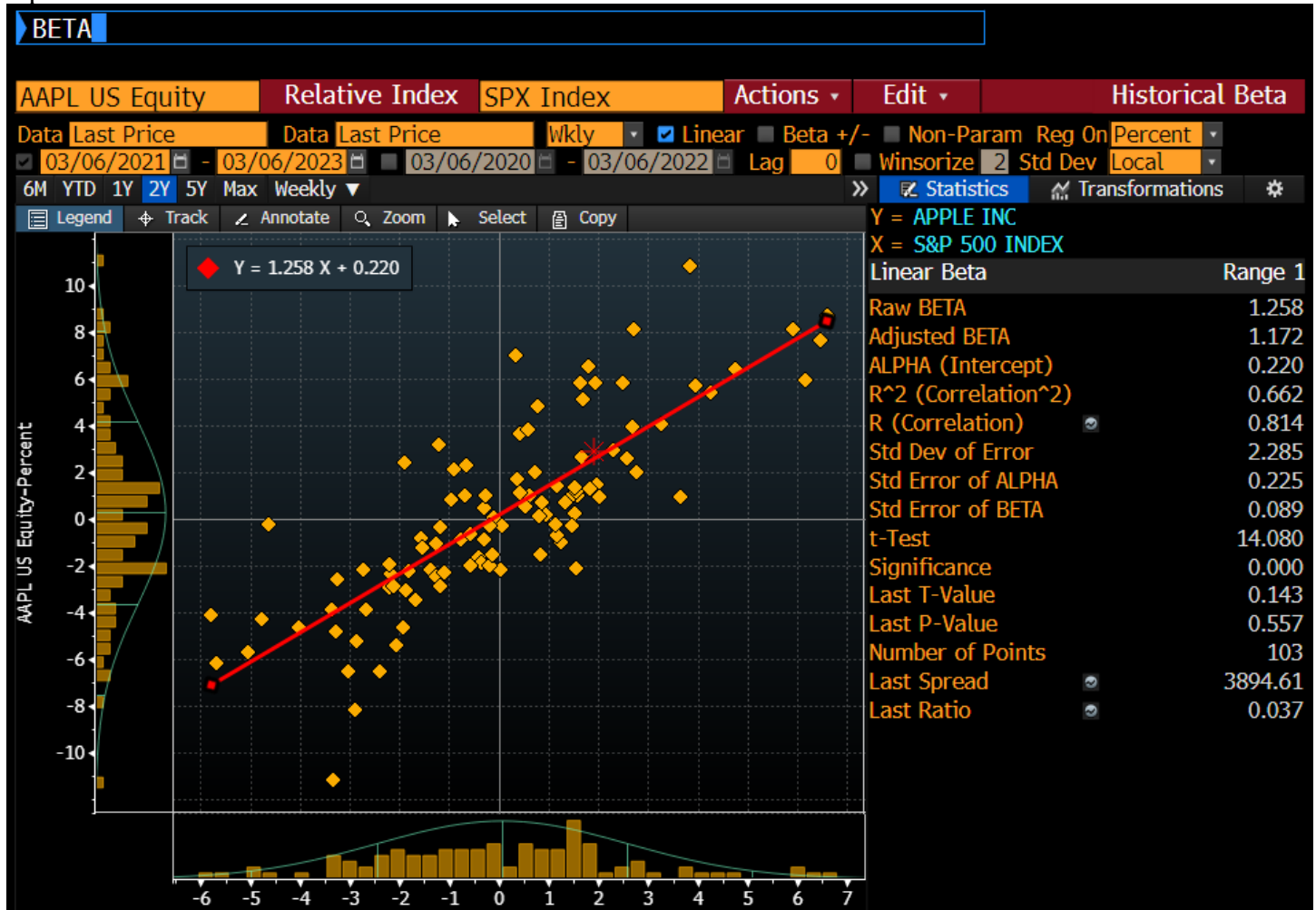
Cash 02/10/23 0.23

b. Beta

Under the *Profile* tab of DES, Bloomberg provides a 2-year unadjusted beta. This beta is calculated using regression analysis of the company’s weekly stock price returns against a market proxy (S&P 500).

Beta gives you information about the volatility of a stock compared to the overall market, therefore it is a measure of systematic risk. A beta higher than 1.0 indicates the stock is more volatile than the overall market, and a beta lower than 1.0 indicates the stock is less volatile than the overall market.

Additional beta measures and adjustments can be made by typing the BETA function into the search bar in the top left.



Any variable can be changed that is related to the regression analysis that produces the beta. Comparing beta measures over different time periods can provide you with insight on if the stock has become more or less volatile than the market over time. The beta input you choose should reflect your views about the future expected volatility of the company.

Adjusted beta is a forward-looking measure that uses the historical beta as an input. The formula for adjusted beta assumes that a security’s beta moves toward the market average (1.00) over time.

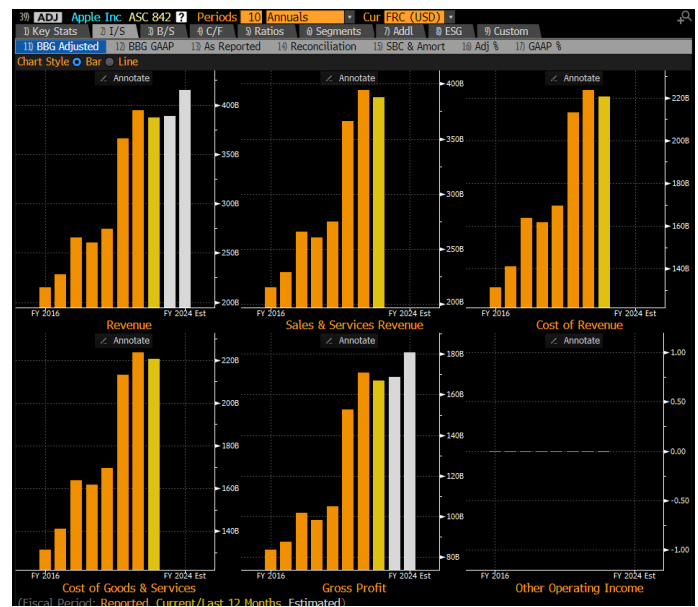
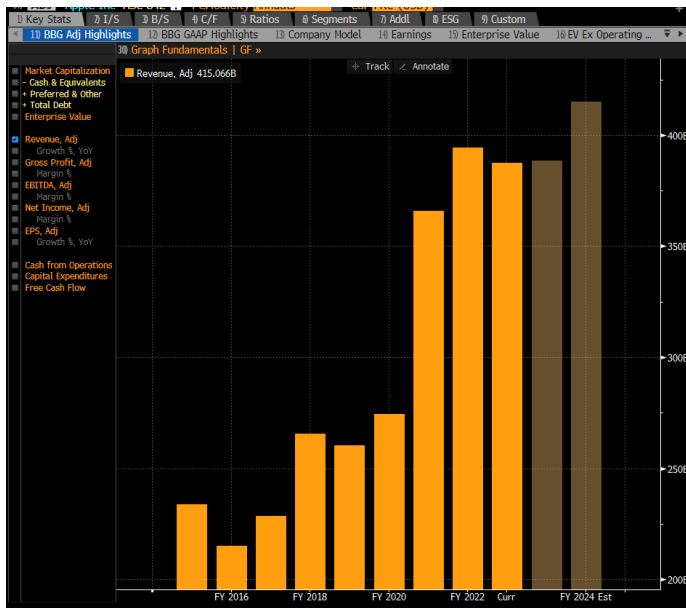
$$\text{Adjusted Beta} = \text{Raw Beta} * (0.67) + 1.00 * (0.33)$$

c. Financials

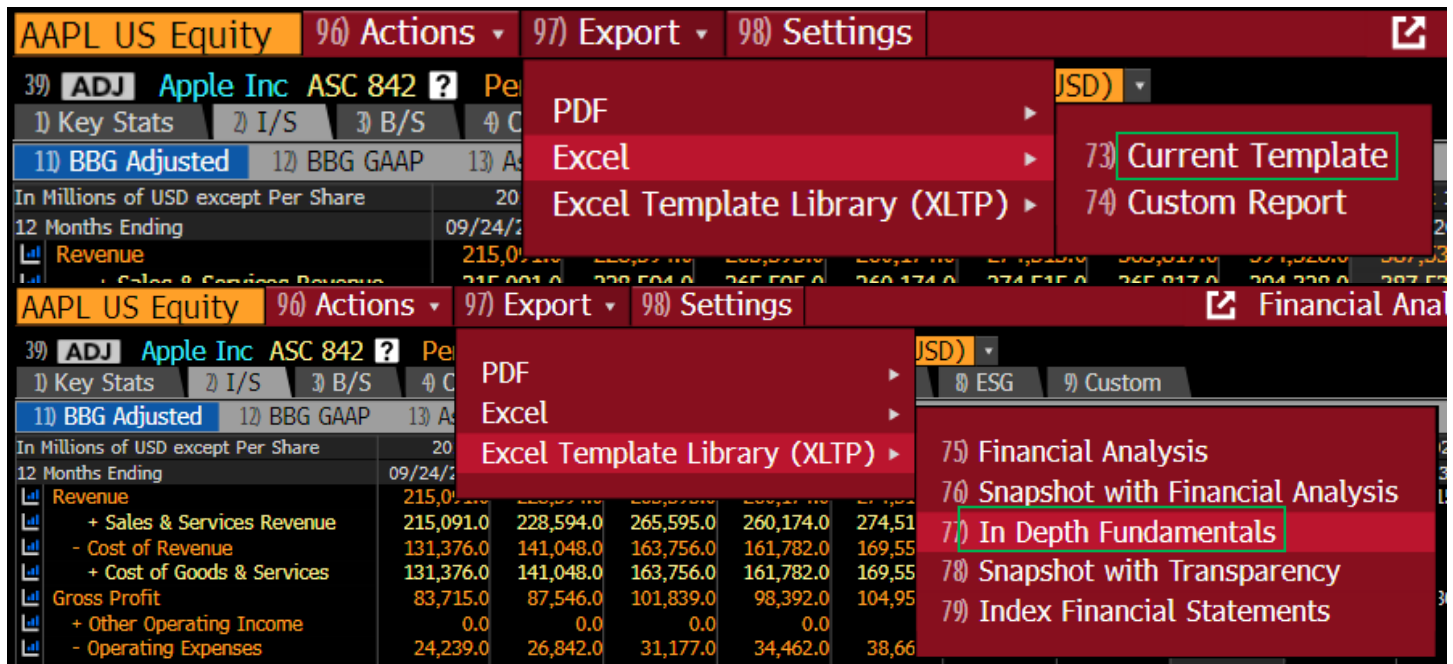
Next, you analyze the company’s historical financial statements by entering the *Financial Analysis (FA)* function.

AAPL US Equity		96) Actions	97) Export	98) Settings	Financial Analysis							
39) ADJ Apple Inc		41) Show Chart Grid			Cur FRC (USD)							
1) Key Stats		42) Set as Default Template			7) Addl		8) ESG		9) Custom			
11) BBG Adj Highligh		Fields Template			14) Earnings		15) Enterprise Value		16) EV Ex Operating ...			
In Millions of USD		2019 Y~	2020 Y	2021 Y	2022 Y	Current/LTM	2023 Y Est	2024 Y Est				
12 Months Ending		09/28/2019	09/26/2020	09/25/2021	09/24/2022	12/31/2022	09/30/2023	09/30/2024				
Market Capitalization		972,269.0	1,906,150.9	2,413,423.4	2,398,369.4	2,433,890.0						
- Cash & Equivalents		205,898.0	191,830.0	190,516.0	169,109.0	165,450.0						
+ Preferred & Other		0.0	0.0	0.0	0.0	0.0						
+ Total Debt		108,047.0	122,278.0	136,522.0	132,480.0	111,110.0						
Enterprise Value		874,418.0	1,836,598.9	2,359,429.4	2,361,740.4	2,379,550.0						
Revenue, Adj		233,715.0	215,091.0	228,594.0	265,595.0	260,174.0	274,515.0	365,817.0	394,328.0	387,537.0	388,608.3	415,066.2
Growth %, YoY		27.9	-8.0	6.3	16.2	-2.0	5.5	33.3	7.8	2.4	-1.5	6.8
Gross Profit, Adj		93,626.0	83,715.0	87,546.0	101,839.0	98,392.0	104,956.0	152,836.0	170,782.0	166,871.0	168,722.1	180,773.8
Margin %		40.1	38.9	38.3	38.3	37.8	38.2	41.8	43.3	43.1	43.4	43.6
EBITDA, Adj		82,487.0	69,981.0	70,861.0	81,565.0	76,477.0	78,844.0	121,933.0	132,441.0	125,288.0	125,061.0	133,705.0
Margin %		35.3	32.5	31.0	30.7	29.4	28.7	33.3	33.6	32.3	32.2	32.2
Net Income, Adj		53,453.2	45,387.4	47,870.7	59,337.7	55,280.5	57,346.2	94,455.6	99,803.0	95,171.0	94,095.9	101,255.9
Margin %		22.9	21.1	20.9	22.3	21.2	20.9	25.8	25.3	24.6	24.2	24.4
EPS, Adj		2.31	2.06	2.28	2.97	2.97	3.28	5.60	6.11	5.89	5.97	6.63
Growth %, YoY		42.6	-10.6	10.5	30.2	0.1	10.3	70.8	9.2	-2.4	-2.3	11.0
Cash from Operations		81,266.0	66,231.0	64,225.0	77,434.0	69,391.0	80,674.0	104,038.0	122,151.0	109,190.0		
Capital Expenditures		-11,247.0	-12,734.0	-12,451.0	-13,313.0	-10,495.0	-7,309.0	-11,085.0	-10,708.0	-11,692.0	-11,944.4	-12,254.0
Free Cash Flow		70,019.0	53,497.0	51,774.0	64,121.0	58,896.0	73,365.0	92,953.0	111,443.0	97,498.0	97,696.7	111,983.1

There are many settings within financial analysis, including being able to chart line items. You can either select the blue chart next to a line items to graph it or select “Show Chart Grid” under “Actions”. There is the option to change the graphs to line charts.



Additionally, you can download and export all of the financial statements by selecting “Export”. You can either export the current tab you are on to Excel or download an Excel template from the *Excel Template Library (XLTP)*, which will try to populate an entire pre-created spreadsheet with the financials of your company.



Also, FA contains a breakdown of revenue segments in the *Segments* tab. Apple reports its revenues based on product categories seen below.

	2017 Y	2018 Y	2019 Y	2020 Y	2021 Y	2022 Y
12 Months Ending	09/30/2017	09/29/2018	09/28/2019	09/26/2020	09/25/2021	09/24/2022
Revenue	229,234.0 100.0%	265,595.0 100.0%	260,174.0 100.0%	274,515.0 100.0%	365,817.0 100.0%	394,328.0 100.0%
Products	196,534.0 85.7%	225,847.0 85.0%	213,883.0 82.2%	220,747.0 80.4%	297,392.0 81.3%	316,199.0 80.2%
iPhone	139,337.0 60.8%	164,888.0 62.1%	142,381.0 54.7%	137,781.0 50.2%	191,973.0 52.5%	205,489.0 52.1%
Wearables, Home & Accessories	12,826.0 5.6%	17,381.0 6.5%	24,482.0 9.4%	30,620.0 11.2%	38,367.0 10.5%	41,241.0 10.5%
Mac	25,569.0 11.2%	25,198.0 9.5%	25,740.0 9.9%	28,622.0 10.4%	35,190.0 9.6%	40,177.0 10.2%
iPad	18,802.0 8.2%	18,380.0 6.9%	21,280.0 8.2%	23,724.0 8.6%	31,862.0 8.7%	29,292.0 7.4%
Services	32,700.0 14.3%	39,748.0 15.0%	46,291.0 17.8%	53,768.0 19.6%	68,425.0 18.7%	78,129.0 19.8%

This allows us to observe trends in Apple’s revenue composition. In this scenario, you would investigate how the Services segment has become a larger portion of total revenue. Next, you could think how segment trends may evolve in the future, and how shifting trends could impact the company’s profitability. For example, if a certain growing segment is more profitable than others, that implies a favorable improvement in margins. Companies do not always disclose segment margins, but if they do, these inputs are critical in the valuation process. If they do disclose specific percentages, or general trends, it would often be in earnings releases or earnings calls.

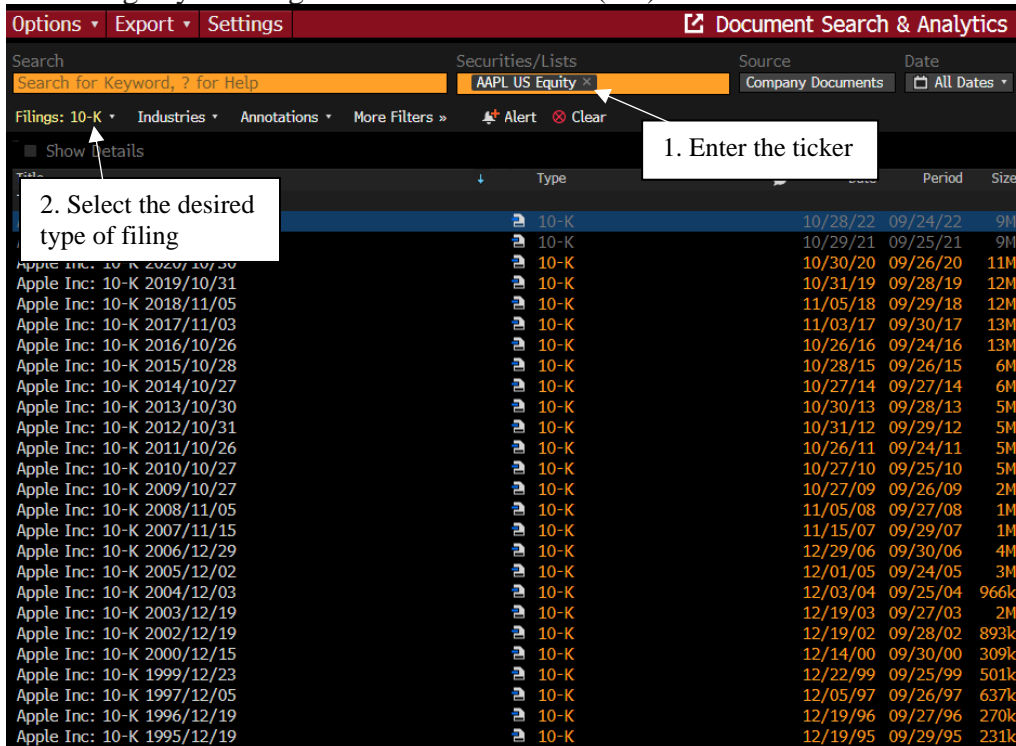
The *Ratios* tab gives a historical overview of profitability, growth, credit, operating, and leverage ratios. This information is useful when identifying how a company ranks on the above characteristics. For example, based on the profitability measures, we can observe a slight deterioration in Apple’s profit margins in 2016 and 2017, which was most likely caused by an increase in research and development spending coupled with slower revenue growth.

	2013 Y	2014 Y	2015 Y	2016 Y	2017 Y
Returns					
Return on Common Equity	30.64	33.61	46.25	36.90	36.87
Return on Assets	19.34	18.01	20.45	14.93	13.87
Return on Capital	28.71	27.70	32.64	23.45	21.55
Return on Invested Capital	30.34	29.55	30.78	20.08	17.99
Margins					
Gross Margin	37.62	38.59	40.06	39.08	38.47
EBITDA Margin	32.62	33.07	35.29	32.71	31.19
Operating Margin	28.67	28.72	30.48	27.84	26.76
Incremental Operating Margin	-	29.48	36.78	-61.99	9.71
Pretax Margin	29.35	29.26	31.03	28.46	27.96
Income before XO Margin	21.67	21.61	22.85	21.19	21.09
Net Income Margin	21.67	21.61	22.85	21.19	21.09

d. Filings

The following steps in your company analysis process involves parsing through the public filings to get a better understanding of the business. This helps you learn about the risks, trends, and opportunities associated with the company. The filings also contain financial information and accounting details in the footnotes.

You can access SEC filings by entering the *Document Search (DS)* function in the search bar.



Types of Filings:

- 10K – annual financial statements that follow a set structure of presentation; contains important information such as latest share count on the cover, financial statements, management discussion and analysis, and footnotes.
- 10Q – interim financial quarter performance and highlights; less detailed footnotes and analysis than 10Ks; 10Q forms are unaudited and filed within 40-45 days of quarter end.

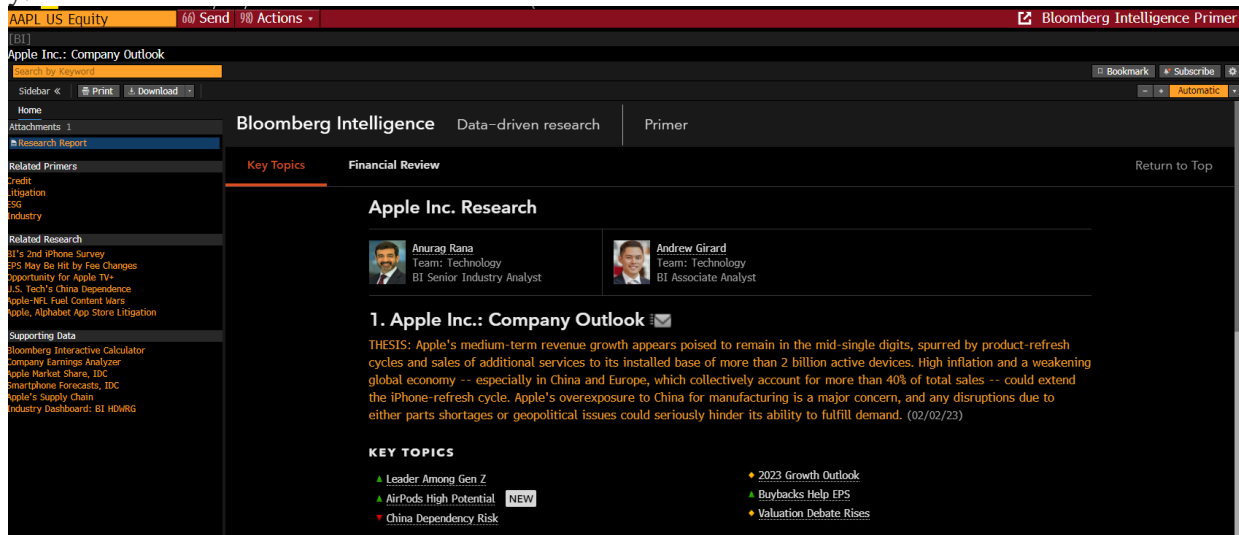
- 8K –required in the case of a materially significant event that affects a company’s financial position or share price; earnings press releases (PR) are often filed as 8K’s; such earnings releases usually become public before the official 10Q or 10K filing; the nature of PR may contain more information on GAAP to non-GAAP reconciliations and future guidance; 8K’s are also filed in the case of acquisitions, substantial asset sales or restructurings.
- Form 14A (Proxy) – represents a notification to shareholders about matters to be brought before meetings; usually contains latest share count (better source than 10Q’s or 10K’s when it’s a more recent filing); contains a great amount of detail around acquisitions as it solicits shareholder approval.

There are additional types of filings, but the above are some of the most used by analysts when performing company valuation.



You can also find initiation and research reports within this function. Initiation reports often contain more extensive analysis on a company’s business and financials, but they can also be outdated. Research reports are usually released after earnings as equity analysts update price targets according to how results compare to their assumptions in their models, which are supported by investment theses. Research reports should always tie the narrative to the numbers.

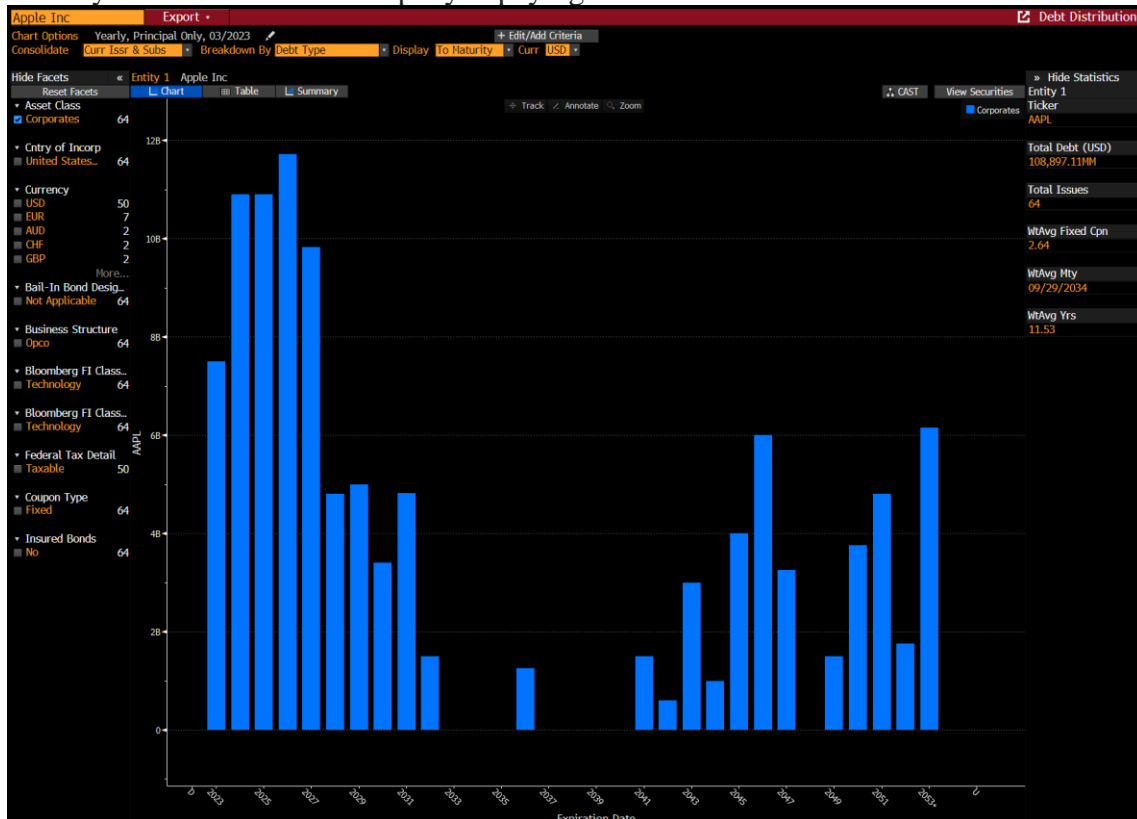
Outlook for certain companies can be gleaned using the *Bloomberg Intelligence* (BICO) function. These reports come from Bloomberg’s internal research team. This function can provide primers on key topics related to the company.



Another source of company information is the *Company News* (CN) function. This function shows individual company news, providing live insight on current events related to your company. News can be filtered by importance, which is determined by artificial intelligence, and is ordered by time.



Now we will discuss how to find debt information for your company. To get a visual of a company's debt, type the *Debt Distribution* (DDIS) function into the search bar. This gives an overview of the maturity dates of company debt and the magnitude of debt maturing each year. This is important because it's not wise to invest in a company with a ton of debt all maturing in the same year. The summary statistics on the right can also be used for WACC calculations. Inputs to use could include the total debt and the weighted average fixed coupon, which is essentially the interest rate a company is paying on its debt.



To perform some deeper liquidity risk analysis, you can check the company's credit rating using the *Credit Profile* (CRPR) function. Another place to analyze if a company is able to meet their liquidity requirements is in

Financial Analysis (FA) under the “Liquidity” tab. This tab contains historical liquidity ratios for your company, which can inform you of the underlying financial health of the company.

Apple Inc

1) Bloomberg Default Risk | DRSK »
 2) Issuer Default Risk IG1
 3) Bloomberg Market Implied PD | MIPD »
 5 Year Issuer PD 0.040016

Moody's
 5) Outlook STABLE
 6) Issuer Rating WR
 7) Long Term Rating Aaa
 8) LT Corp Family Rating WR
 9) Senior Unsecured Debt Aaa
 10) Subordinated Debt WR
 11) Short Term P-1

12) Standard & Poor's
 13) Outlook STABLE
 14) LT Foreign Issuer Credit AA+
 15) LT Local Issuer Credit AA+
 16) ST Foreign Issuer Credit A-1+
 17) ST Local Issuer Credit A-1+

18) Credit Benchmark Composites | CRDT »
 19) 6M Trend Unchanged
 20) Company Consensus* Not Subscrib...
 21) Company Band IG1
 22) Bank/Contributor Count 15
 23) Level of Agreement High
 24) Search Coverage Universe | CRSR »
 *Premium Field

39) **ADJ** Apple Inc ASC 842 ? Periods 10 Annuals Cur FRC (USD)

1) Key Stats 2) I/S 3) B/S 4) C/F 5) Ratios 6) Segments 7) Addl 8) ESG 9) Custom

11) Profitability 12) Growth 13) Credit 14) Credit Ex Operating Leases 15) **Liquidity** 16) Working Capital 17) Yield Analysis 18) DuPont

In Millions of USD except Per Share	2013 Y	2014 Y	2015 Y	2016 Y	2017 Y	2018 Y	2019 Y~	2020 Y	2021 Y	2022 Y
12 Months Ending	09/28/2013	09/27/2014	09/26/2015	09/24/2016	09/30/2017	09/29/2018	09/28/2019	09/26/2020	09/25/2021	09/24/2022
Cash Ratio	0.93	0.40	0.52	0.85	0.74	0.57	0.95	0.86	0.50	0.31
Current Ratio	1.68	1.08	1.11	1.35	1.28	1.13	1.54	1.36	1.07	0.88
Quick Ratio	1.23	0.67	0.73	1.05	0.91	0.77	1.17	1.02	0.71	0.50
CFO/Avg Current Liab	1.31	1.12	1.13	0.83	0.71	0.71	0.63	0.76	0.90	0.87
Common Equity/Total Assets	59.69	48.11	41.11	39.87	35.72	29.30	26.73	20.17	17.97	14.36
Long-Term Debt/Equity	13.73	25.99	44.68	58.81	72.52	87.48	101.46	163.84	189.22	216.50
Long-Term Debt/Capital	12.07	19.74	29.03	35.04	38.93	42.29	46.24	57.06	59.81	59.90
Long-Term Debt/Total Assets	8.19	12.50	18.37	23.45	25.90	25.63	27.12	33.05	34.01	31.10
Total Debt/Equity	13.73	31.64	53.90	67.86	86.30	106.85	119.40	187.14	216.39	261.45
Total Debt/Capital	12.07	24.04	35.02	40.43	46.32	51.66	54.42	65.17	68.39	72.33
Total Debt/Total Assets	8.19	15.22	22.16	27.05	30.82	31.30	31.92	37.75	38.89	37.56
CFO/Total Liabilities	64.31	49.64	47.53	34.24	26.62	29.95	27.98	31.20	36.14	40.44
CFO/CapEx	6.57	6.24	7.23	5.20	5.16	5.82	6.61	11.04	9.39	11.41
Altman's Z-Score	5.71	5.18	4.46	3.74	3.62	4.22	4.18	6.19	7.18	6.96
Total Commercial Paper Outstanding	0.0	6,308.0	8,499.0	8,105.0	11,977.0	11,964.0	5,980.0	4,996.0	6,000.0	9,982.0

Lastly, the *Security Ownership* (HDS) function can provide an entire overview of who own’s the stock you’re analyzing. This can be important to determine concentration risk in a small group of shareholders and whether management has invested in the business.

APPLE INC CUSIP 03783310

Current Historical Matrix Ownership Summary Insider Transactions Options Issuer Debt

Search Name Default - No Search Selected Save Search Delete Search Refine Search

Text Search Holder Group All Holders Investment Manager View

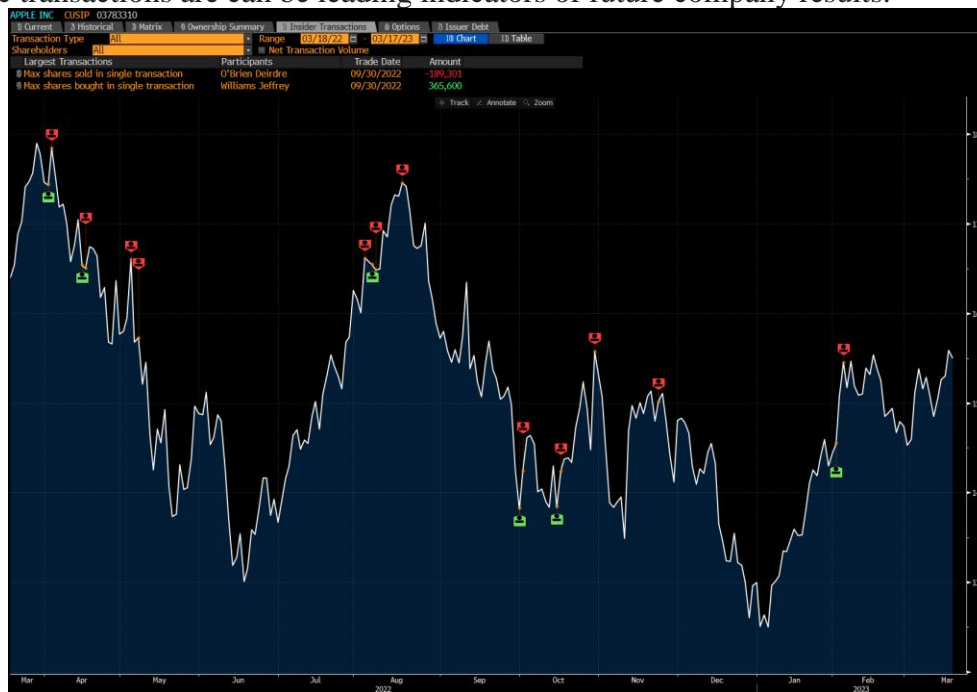
Color Legend Shrs Out 15,821.9M % Out 30.81 Float/Shrs Out 94.12 SI % Out 0.70

Holder Name	Portfolio Name	Source	Opt	Position	% Out	Latest Chg	File Dt
1. Vanguard Group Inc/The		13G		1,278,250,538	8.08	1,278,250,538	12/30/22
2. FMR LLC		ULT-AGG		321,547,173	2.03	-29,764,240	12/31/22
3. Northern Trust Corp	NORTHERN TRUST CORPORATION	13F		174,276,229	1.10	-1,808,633	12/31/22
4. Norges Bank	NORGES BANK	13F		167,374,278	1.06	25,297,875	12/31/22
5. BANK OF NEW YORK MELLON CORP/THE		ULT-AGG		133,488,971	0.84	-2,813,900	12/31/22
6. JPMorgan Chase & Co		ULT-AGG		128,268,377	0.81	4,643,920	12/31/22
7. Bank of America Corp	BANK OF AMERICA CORP	13F	Y	126,497,018	0.80	-15,763,573	12/31/22
8. Legal & General Group PLC	LEGAL & GENERAL GROUP PLC	13F		112,224,128	0.71	-6,160,832	12/31/22
9. Government Pension Investment Fund Japan	Multiple Portfolios	MF-AGG		99,297,286	0.63	-15,469,792	03/31/22
10. Capital Group Cos Inc/The	Multiple Portfolios	13F		82,516,395	0.52	-11,569,953	12/31/22
11. Charles Schwab Corp/The		ULT-AGG		82,094,186	0.52	1,505,055	12/31/22
12. State of California		ULT-AGG		70,311,443	0.44	8,156,486	12/31/22
13. Wells Fargo & Co		ULT-AGG		67,950,778	0.43	37,087	01/31/23
14. Schweizerische Nationalbank	SWISS NATIONAL BANK	13F		65,315,868	0.41	-4,826,740	12/31/22

The “Ownership Summary” tab includes data on institutional, geographic, investment vehicle, and insider ownership.

APPLE INC CUSIP 03783310							
Compare Current Stats Against 03/12/23							
Institutional - Based on Current Filings				Insider - Based on Last 6 Months			
Institutional	03/12/23	Curr	Change	Insider	03/12/23	Curr	Change
11) % of Shares Held	71.44	71.47	+0.03%	21) % of Shares Held	0.06	0.06	0.00%
12) % of Float Held	69.73	69.75	+0.02%	22) % Chg Insider Positions	+1.88	+1.88	0.00%
13) # of Institutions	6,214	6,214	0.00%	23) # of Insiders	14	14	0.00%
14) # of Buyers	2,135	2,124	-0.52%	24) # of Buyers Opn Mkt	0	0	0.00%
15) # of Sellers	3,019	3,042	+0.76%	25) # of Sellers Opn Mkt	4	4	0.00%
16) # of New Buyers	494	493	-0.20%	26) # of Shrs Bought Opn Mkt	0	0	0.00%
17) # of Selloffs	303	307	+1.32%	27) # of Shrs Sold Opn Mkt	561,990	561,990	0.00%
18) % Chg in Inst Positions	+40.79	+40.81	+0.02%	28) Avg Opn Mkt Buy Price	0	0	0.00%
				29) Avg Opn Mkt Sell Price	146.48	146.48	0.00%
Top Geographic Ownership (%)				Top Ownership Type (%)			
Geographic	03/12/23	Curr	Change	Ownership Type	03/12/23	Curr	Change
31) United States	84.35	84.36	+0.01%	41) Investment Advisor	70.92	70.93	+0.01%
32) United Kingdom	3.18	3.17	-0.01%	42) Holding Company	8.63	8.63	0.00%
33) Canada	1.78	1.78	0.00%	43) Bank	7.54	7.54	0.00%
34) Japan	1.75	1.75	0.00%	44) Pension Fund	2.92	2.92	0.00%
35) Norway	1.56	1.56	0.00%	45) Insurance Company	2.57	2.57	0.00%
36) Switzerland	1.54	1.53	-0.01%	46) Brokerage	2.2	2.2	0.00%
37) Germany	0.91	0.91	0.00%	47) Trust	1.99	1.99	0.00%
38) Ireland	0.85	0.85	0.00%	48) Hedge Fund Manager	1.06	1.06	0.00%
39) Sweden	0.65	0.65	0.00%	49) Sovereign Wealth Fund	1	1	0.00%

The “Insider Transactions” tab shows where key employees either purchased or sold shares. These can be routine, automatic transactions are can be leading indicators of future company results.



e. Earnings and Estimates

To find information about the next earnings date, earnings trends, future financial estimates, and past surprise history, enter the *Earnings & Estimates* (EE) function.

Apple Inc Periodicity **Quarters** Source **BEst Mean Consensus (Standard)** Cur **USD**

1) Earnings History | ERN » 2) Consensus Overview | EEO » 3) Analyst Coverage | ANR »
 Next Announcement (E) 04/28/23 Trailing 12M P/E 26.32 Buy/Hold/Sell 36/8/3
 Prior Announcement 02/02/23 Forward 12M P/E 25.03 Current Price 155.00
 Avg/Implied 1 Day Move 3.38% / 1.89% Est. LTG (EPS) 10.20% Target Price 168.44

4) Company Financials | MODL » 21) Current Period Overview (Q2/23) 22) Prior Period Analysis (Q1/23)

Measure	Q2/23 Est	4Wk Chg	YoY Gr Growth vs Peers	Past Surprise
11) EPS, Adj+	1.425	-0.47%		Beat 6 of 8
12) EPS, GAAP	1.425	-0.47%		Beat 7 of 8
13) Revenue	92.824B	-0.32%		Beat 6 of 8
14) Net Income, Adj+	22.616B	-0.39%		Beat 7 of 8
15) Operating Profit	27.039B	-0.53%	-- --	--
16) EBITDA	29.907B	-0.81%		Beat 6 of 8

5) Earnings Trends | EM » 6) Bloomberg Intelligence Review | BI » 7) Earnings Estimates Graph | EEG »

Q2s Only

Apple iPhone, FX Drag Could Ease Over the Year: Earnings Outlook
 Post-1Q Earnings Outlook: A worsening macro environment, iPhone supply-chain issues, and adverse FX (800 bps) were the main reasons Apple missed consensus sales for fiscal 1Q. Among these three factors, we expect supply-chain issues to have the most significant impact on FY23 earnings.

From this section, you can also navigate to *Earnings History* (ERN), *Earnings Estimates Graph* (EEG), *Earnings Trends* (EM), *Consensus Overview* (EEO), and *Analyst Coverage* (ANR). These functions can also be typed directly into the search bar.

Earnings History (ERN) displays the entire history of a company reported earnings compared to consensus estimates.

Apple Inc Periodicity **Quarters** Source **Standard** Cur **USD**

1) Surprise for more measures | MODL » 2) Earnings History & Price Reaction | EE SURP »

Measure **EPS, Adj+** Px Chg Window **One Day After** Chart Type **Comparable vs Estimate**

Earnings/Surprise Snapshot

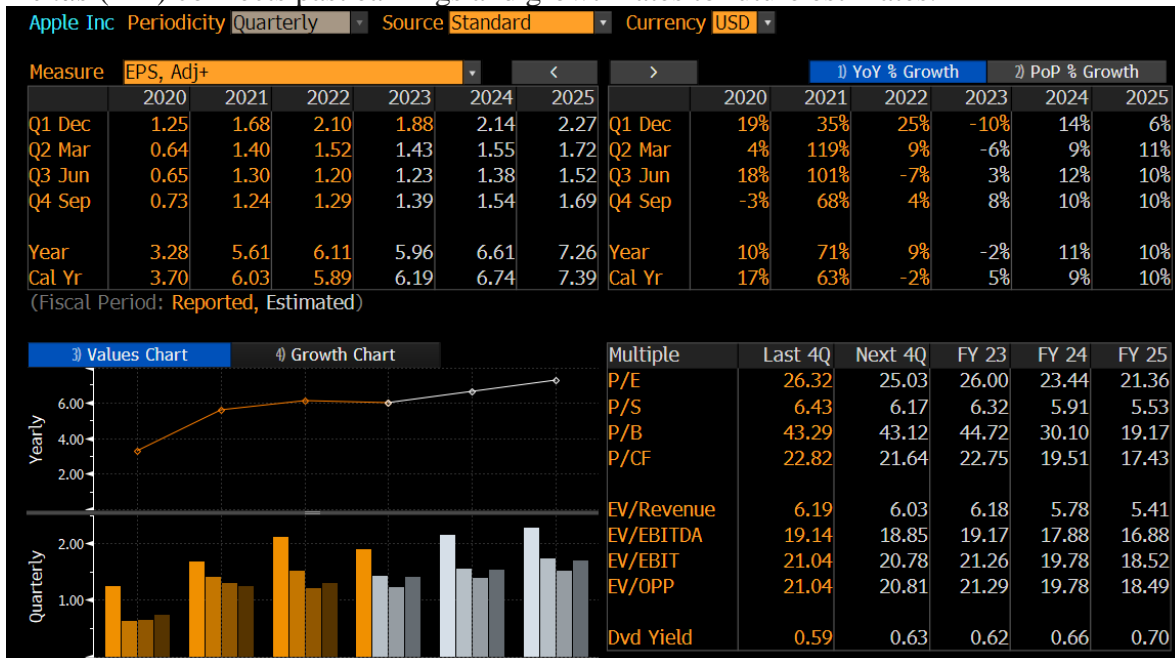
Industry	Technology Hardware	Exp. for Next Period	1.520
Next Announcement	(E) 04/28/2023	Average Surprise	6.62%
Prior Announcement	02/02/2023	Average Abs. Surp	7.55%
P/E Actual	26.32	Surp/Px Chg Corr.	0.27
5 Year Growth	19.08%	Average Abs. Px Chg	4.42%
Earnings Trend	-0.08	Implied 1 Day Move	1.89%

Ann Date Per	Per End	C	Reported	Comp	Estimate	%Surp	Guidance	%Guid Surp	%Px Chg	T12M	P/E
Average of Absolute Values						7.55%			4.42%		
11)	02/02/2024	Q1 24	12/23		2.142					6.19	25.04
12)	10/27/2023	Q4 23	09/23		1.394					5.93	26.14
13)	07/28/2023	Q3 23	06/23		1.232					5.83	26.59
14)	04/28/2023	Q2 23	03/23		1.425					5.80	26.72
15)	02/02/2023	Q1 23	12/22	1.880	1.880	1.941	-3.14%		2.44%	5.89	22.06
16)	10/27/2022	Q4 22	09/22	1.290	1.290	1.264	2.06%		7.56%	6.11	22.62
17)	07/28/2022	Q3 22	06/22	1.200	1.200	1.158	3.63%		3.28%	6.06	22.56
18)	04/28/2022	Q2 22	03/22	1.520	1.520	1.423	6.82%		-3.66%	6.16	28.35
19)	01/27/2022	Q1 22	12/21	2.100	2.100	1.900	10.53%		6.98%	6.04	29.40
20)	10/28/2021	Q4 21	09/21	1.240	1.235	1.236	-0.05%		-1.82%	5.61	25.22
21)	07/27/2021	Q3 21	06/21	1.300	1.296	1.013	27.91%		-1.22%	5.10	26.85
22)	04/28/2021	Q2 21	03/21	1.396	1.396	0.991	40.85%		-0.07%	4.44	27.51
23)	01/27/2021	Q1 21	12/20	1.675	1.680	1.417	18.58%		-3.50%	3.69	35.96
24)	10/29/2020	Q4 20	09/20	0.726	0.734	0.702	4.61%		-5.60%	3.26	35.52
25)	07/30/2020	Q3 20	06/20	0.644	0.646	0.518	24.71%		10.47%	3.29	27.72
26)	04/30/2020	Q2 20	03/20	0.642	0.638	0.564	13.20%		-1.61%	3.19	19.93

The *Earnings Estimates Graph* (EEG) shows how consensus estimates change over time. There are also other measures you can select to overlay the stock price chart.



Earnings Trends (EM) connects past earnings and growth rates to future estimates.



Consensus Overview (EEO) provides an aggregate estimate for all the important financial items from analysts covering the stock. It is important to understand consensus estimates and the underlying drivers of their estimates as an investor. It is then up to you whether or not to agree with estimates. If you disagree and have evidence to support your alternative stance, then you could have an attractive investment opportunity, given there is a large enough margin of safety to compensate you for risk, which could be different depending on your conviction in your narrative and your desired return.

Apple Inc		Periodicity Quarters		Source Standard		Cur USD					
More estimates are available MODL »				Broker -----		Guidance					
Company-Specific		Q1 2023 Act		Q2 2023 Est		Q3 2023 Est		Q4 2023 Est		Q1 2024 Est	
3 Months Ending		12/31/2022	03/31/2023	#	06/30/2023	#	09/30/2023	#	12/31/2023	#	
11) EPS, Adj+		1.880	1.425	32	1.232	32	1.394	33	2.142	25	
12) EPS, GAAP		1.880	1.425	32	1.232	32	1.394	33	2.142	25	
13) Revenue		117.154B	92.824B	31	84.853B	31	92.763B	31	127.129B	24	
14) Gross Margin %		42.962	44.035	29	43.742	29	43.043	29	43.078	19	
15) Operating Profit		36.016B	27.039B	30	23.312B	30	25.920B	30	38.946B	20	
16) EBIT		36.016B	27.099B	31	23.325B	31	25.990B	31	38.970B	21	
17) EBITDA		38.932B	29.907B	16	26.180B	16	29.356B	16	41.766B	11	
18) Pre-Tax Profit		35.623B	26.859B	26	23.184B	26	25.879B	26	38.181B	17	
19) Net Income Adj+		29.998B	22.616B	30	19.392B	30	21.627B	30	32.488B	21	
20) Net Income, GAAP		29.998B	22.616B	30	19.392B	30	21.627B	30	32.488B	21	
21) Net Debt		-54.340B	-13.988B ↑	8	-8.749B ↑	7	-8.203B ↑	7	-19.574B	5	
22) BPS		3.581	3.595	6	3.432	6	3.370	6	3.680	5	
23) CPS		2.140	1.626	5	1.496	5	1.704	5	2.337	3	
24) DPS		0.230	0.236	10	0.246	10	0.246	10	0.243	8	
25) Return on Equity %		147.943	131.715 ↑	6	101.458 ↑	6	110.328 ↑	6	149.510 ↓	4	
26) Return on Assets %		26.148	26.613	3	18.553	3	24.713	3	17.720	2	
27) Depreciation			2.941B	2	2.966B	2	2.991B	2	2.916B	1	
28) Free Cash Flow		30.218B	21.671B	14	18.694B ↓	14	25.144B	14	36.917B	11	
29) CAPEX		-3.787B	-2.890B	17	-2.641B	17	-3.121B	17	-3.751B	14	
30) Net Asset Value			58.149B	13	55.299B	13	53.422B	13	65.036B	11	

Analyst Coverage (ANR) is another function that can be used to gain a better understand of consensus. This function can provide information such as the consensus target price, the distribution of ratings. Another important element of the included information is that each rating is associated with a firm and an analyst. This is important because you may find over time that some analysts or firms are more credible than others because they are more accurate in their estimates. You can also use this information to reach out to analysts who cover the company who may either have come to the same conclusions as you are have a completely different opinion about the company. It is always important to understand the opposing perspective when evaluating companies.

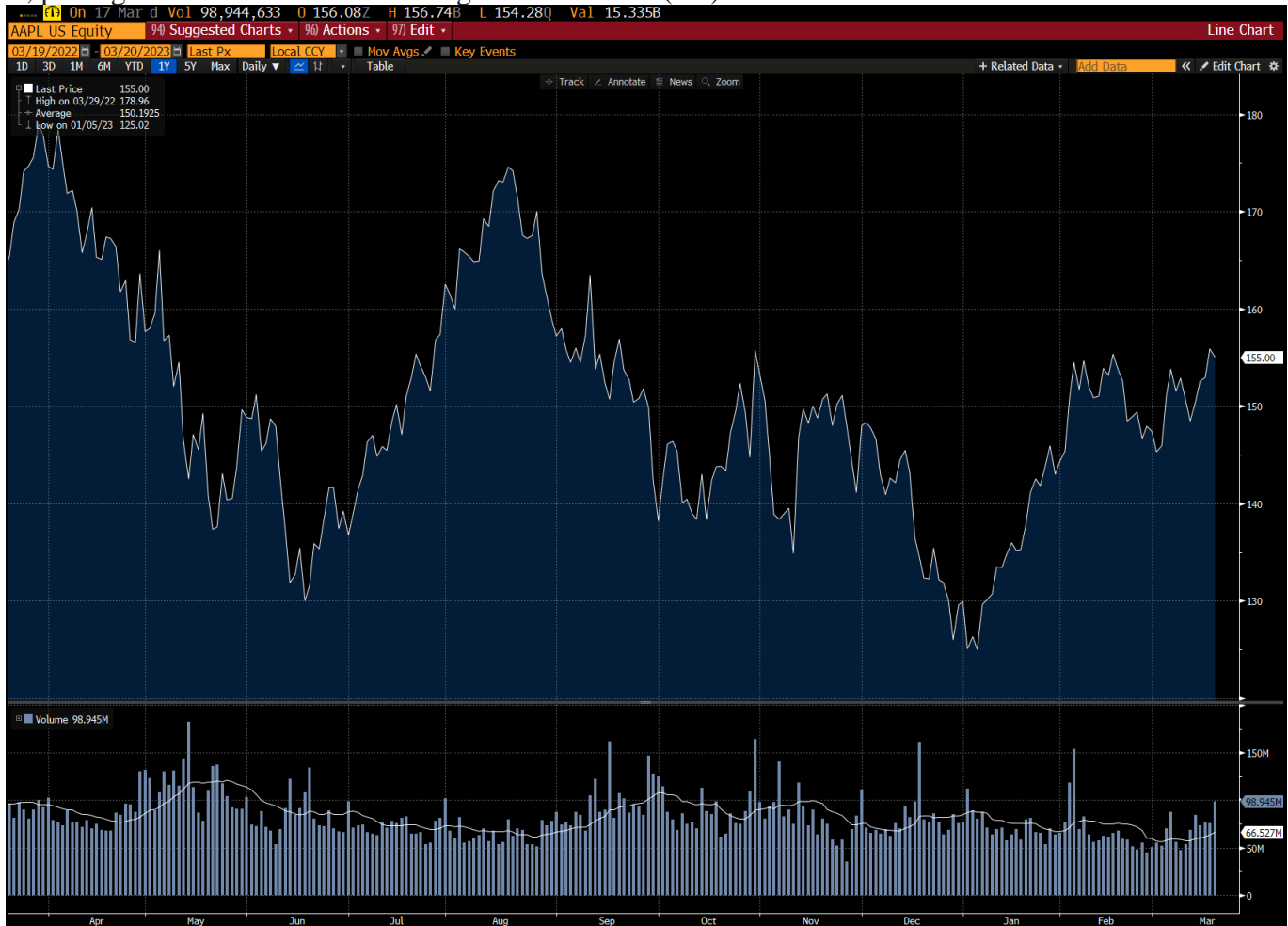


f. Pricing Data

Pricing data can be found in the *Historical Volatility Table (HVT)*.

AAPL US Equity											
Period	Daily: 6M	Range	09/19/22	-	03/19/23	Ann. Factor	260	Currency	LCL		
Hist Vol	10	30	50	100	Trade	Model	CLV	Normal	Y/P	Price	IVOL
Date	Hist Vol (10)	Hist Vol (30)	Hist Vol (50)	Hist Vol (100)	Price (L)	Implied Vol					
Fri 03/17/23	21.684	23.882	24.487	34.902	155.00	28.753					
Thu 03/16/23	23.165	24.862	24.629	34.966	155.85	26.912					
Wed 03/15/23	27.681	26.542	24.443	35.102	152.99	29.840					
Tue 03/14/23	27.646	26.605	26.309	35.106	152.59	28.417					
Mon 03/13/23	28.960	26.436	26.188	35.037	150.47	30.959					
Fri 03/10/23	28.298	26.986	26.712	35.006	148.50	30.085					
Thu 03/09/23	27.114	26.865	27.595	35.223	150.59	28.495					
Wed 03/08/23	27.833	26.635	27.559	35.551	152.87	25.922					
Tue 03/07/23	27.622	26.659	27.562	35.916	151.60	26.404					
Mon 03/06/23	25.744	26.241	27.968	35.838	153.83	25.851					
Fri 03/03/23	28.851	26.544	28.151	35.771	151.03	25.475					
Thu 03/02/23	19.239	25.220	27.147	35.343	145.91	27.329					
Wed 03/01/23	18.377	25.223	27.456	35.865	145.31	28.451					
Tue 02/28/23	20.970	24.807	27.467	35.805	147.41	28.081					
Mon 02/27/23	20.964	24.790	29.730	35.801	147.92	28.896					
Fri 02/24/23	23.580	24.831	29.910	36.010	146.71	28.988					
Thu 02/23/23	21.810	23.964	29.632	36.207	149.40	28.138					
Wed 02/22/23	21.836	24.498	29.843	36.557	148.91	29.835					
Tue 02/21/23	23.061	24.493	29.857	37.470	148.48	29.806					
Mon 02/20/23											

Also, pricing data can be visualized using the *Line Chart (GP)* function.



g. DCF Inputs

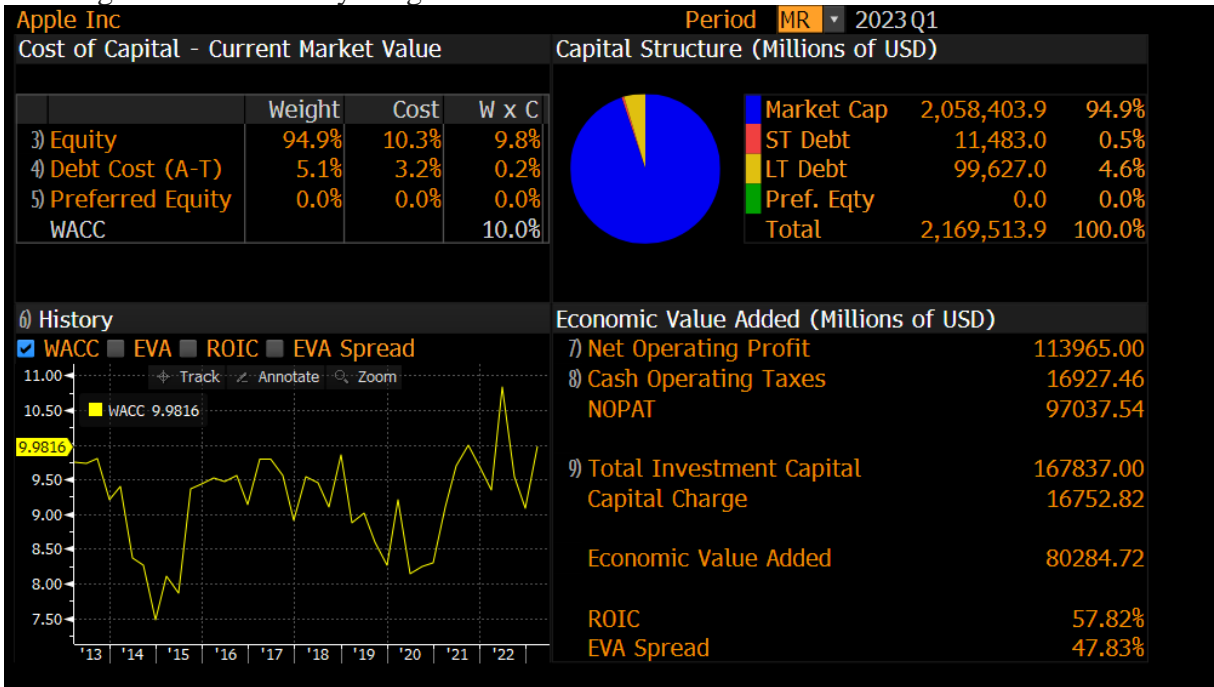
i. Risk Free Rate

A proxy for the risk-free rate is the 10Y US Treasury yield. This information can be found search for the US Generic Govt 10 Yr (USGG10YR) and entering the *Security Description* (DES) function.



ii. Weighted Average Cost of Capital

Bloomberg has a *Weighted Average Cost of Capital* (WACC) function that automatically calculates for you using Bloomberg's data for security weights and costs.



While this is incredibly helpful and probably good enough, it is best practice to calculate WACC using your own data if it does not entirely align with Bloomberg's. The following table represents all inputs needed to calculate a company's WACC, but this function does allow you to manually change inputs by selecting them.

Input	Formula / Where to find it?
Beta	BETA function; can also compute on your own by regressing the stock price against a market proxy.
Risk-Free Rate	USGG10YR → DES function
Weight of Debt	Calculate using input from the <i>Financial Analysis</i> (FA) function → Key Stats → LTM total debt or the most recent filing
Weight of Equity	Calculate using input from DES → Mkt Cap
Cost of Equity	$R_f + \text{Beta} \times \text{Equity Risk Premium}$
Cost of Debt (after-tax)	$K_d \times (1 - t)$; find tax rate from FA → Ratios → Profitability → Additional

$$\text{WACC} = W_e / (W_e + W_d) * K_e + W_d / (W_e + W_d) * K_d * (1-t)$$

iii. Equity Risk Premium

The equity risk premium is the expected return on stocks, net of the risk-free rate in an economy. This excess return compensates investors for taking on the relatively higher risk of equity investments compared to risk-free securities. Consequently, riskier securities demand a higher premium.

We can consider the concept of equity risk premium in two directions:

- Historical equity risk premium
- Implied equity risk premium

The historical equity risk premium is a backward-looking measure and can be estimated by observing stock market and government bond performance over a defined period. The time frame and method of calculation will affect the estimates.

We can calculate the ERP using the formula:

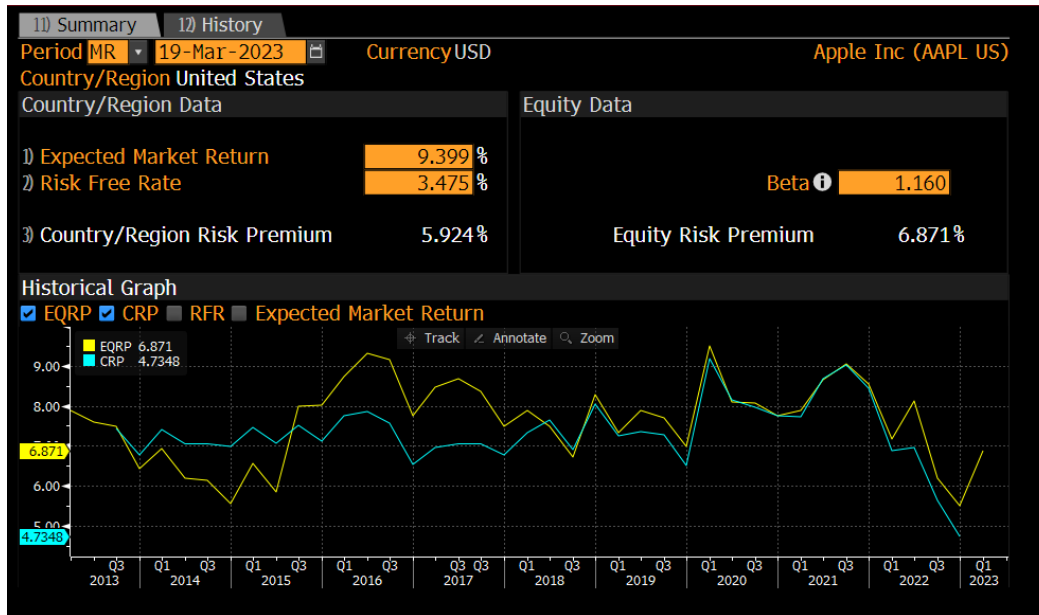
$$\text{ERP} = \beta_a (R_m - R_f),$$

Where:

- β_a is the asset beta
- R_m is the return of the overall market
- R_f is the risk-free rate

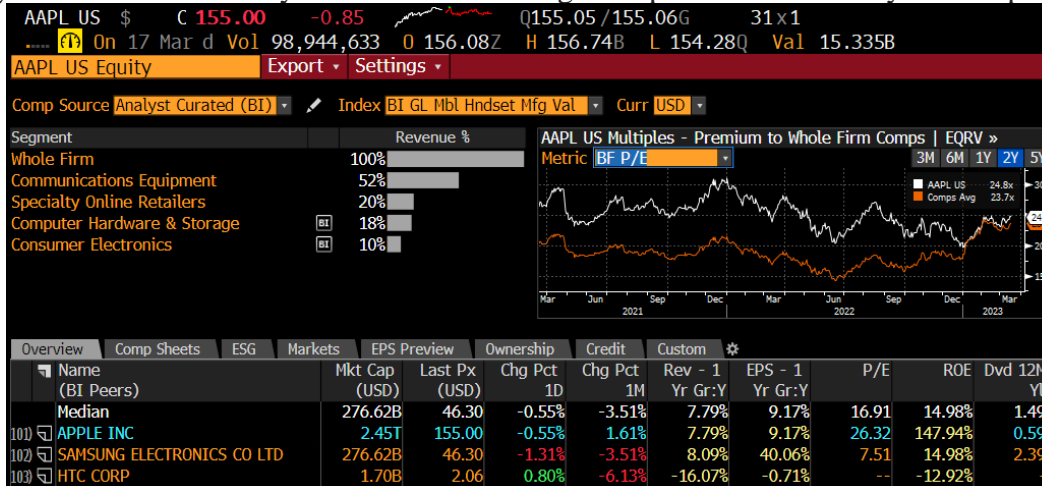
The implied equity risk premium is a forward-looking measure and can change depending on your period of analysis. We can estimate it using a discounted cash flow approach and current stock index levels to calculate the future risk premium implied by the current stock price levels. This approach assumes that the current valuation levels are correct, or put in other words, markets are efficient.

The *Equity Risk Premium* (EQRP) function can be used to calculate this measure within Bloomberg.

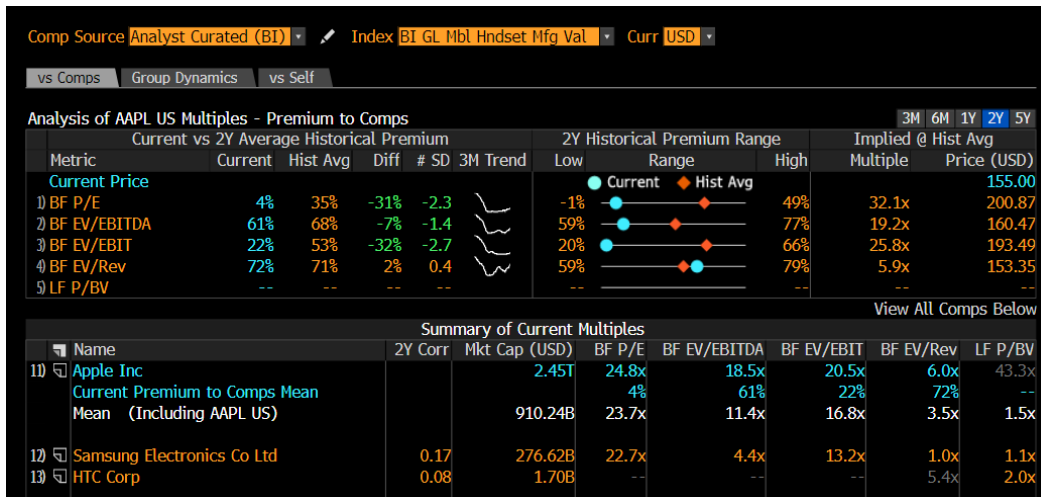


II. Comparable Companies

Comparable company analysis is a way to determine how much a company is worth by comparing it to other companies of similar size in similar industries. The *Relative Valuation* (RV) function displays how your company compares to its peers. This information can be valuable when determining if your company is being mispriced relative to its competitors. However, it is important to remember that your company could be trading at a premium or a discount for a reason, and should not always deserve to be trading at the median. It is up to you as an analyst to determine what you believe the trading multiples should be for your company.

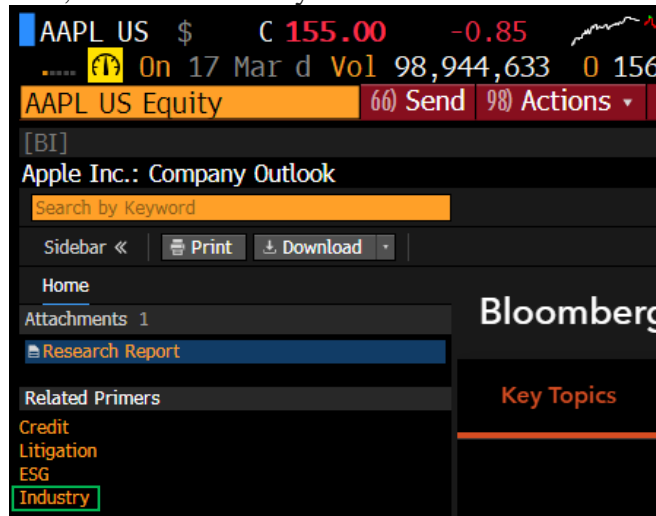


The *Equity Relative Valuation* (EQRV) function also shows a summary of current multiples, but also shows the current multiples of the firm compared to its historical multiples.



III. Industry Information

To learn more about the industry that your company is in, enter the *Bloomberg Intelligence Primer (BICO)* function. Under “Related Primers”, click on “Industry”



This will bring you to *Bloomberg Intelligence (BI)*, which will contain a yearly outlook on the industry that your company is classified in. You can also type in the BI function directly and search for the industry that way.

AAPL US \$ C 155.00 -0.85 0155.05 / 155.06G 31x1
 On 17 Mar d Vol 98,944,633 0 156.08Z H 156.74B L 154.28Q Val 15.3358

2023 Outlook: Global Computer Hardware and Storage

Bloomberg Intelligence Data-driven research

Global Computer Hardware, Storage 2023 Outlook

Woo Jin Ho
 Team: Technology
 BI Senior Industry Analyst

1. 2023 Outlook: Global Computer Hardware and Storage

THESIS: A tepid spending environment for consumer and enterprise IT in 2023 could lead to sales and earnings contractions for most hardware vendors. Companies with consumer exposure -- such as Dell, HP Inc. and Seagate -- may experience the sharpest declines. Enterprise IT vendors aren't immune, and companies such as HP Enterprise, NetApp and Nutanix face spending softness. Enterprise infrastructure spending is expected to grow 2% in 2023, according to IDC, vs. the World Bank's 0.5% GDP forecast for mature economies.

The sector's forward EPS has dropped 23% so far this year and returned to 1Q21 levels, and a sharp reset of expectations may reflect the impact of a possible recession. While the group's return to historical valuations implies further cuts may be limited, low 2H sales visibility could keep valuation from expanding. (12/06/22)

KEY TOPICS

- Performance & Valuation
- Navigating Tough 2023
- PC Rebound Delayed
- Server Market Poised for Double-Digit Growth
- 2023 Smartphone Outlook

Featured Research

- Declining Mortgage Credit Access Could Curb MBS Supply
- Card Issuers' Deposit Flight Risk Low
- Software Demand: Recession Scenario as Banks Cut Back?
- Factor Friday: Rate Crash Doesn't Spell Value's Demise
- J&J May Benefit More From Spinoff Than Shareholders
- Euro-Dollar Can't Ignore Risk Context Now

Best of BI | All Regions | All Coverages | All Sectors

Key Data | More >

- China Corn Imports Rises 38% to 3,090 MoM 03/18
- China Natural Gas Import (via Pipelines): Monthly Data Update 03/18
- China Cement and Clinker Export Volume: Monthly Data Update 03/18
- China Cement and Clinker Export Value: Monthly Data Update 03/18
- China Corn Imports Rises 157% to 2,240 MoM 03/18

Best of BI Research | More >

- Asian Banks' Vitals Show Resilience to US, Europe Peers' Tumult 21:32
- Macquarie's Unmoved CDS Point to Much More Stable Balance Sheet 20:18
- Singapore Mall Occupancy, Rents to Rise in 2023 Despite GST Hike 20:03
- AT Mercy of Commodity Prices Given Growth Gap 20:03
- 中国？潜在风险指标分析 19:36
- 加和电池生产放缓而在2025年触底 18:30
- 解决绿色革命1,600亿美元的补贴欠款问题 18:30
- 创业企业的银行发生动荡时或可起到对冲作用 18:30
- 沙特SNB拒绝向瑞信增资恐损害双方利益 18:30
- 中国生物科技公司推动90亿美元双抗药物市场 18:24
- 联想、小米的债券恐继续受到产品需求的影响 18:21
- 中国内地第一季度零售销售增长有望超预期；线上销售增速放缓 18:21
- 美联储需警惕通胀和金融稳定目标 18:21
- Novelis' Ebitda to Rise on Recovering Shipments and New Projects 18:15
- China Could Top Global IPO Shares Again During US Bank Turmoil 18:06
- Cotal Presence to Lead MGM China's 2023 Ebitda to 93% of 2019's 18:03
- Credit Suisse Crisis Shortens Path to Commodities' Hard Landing 18:03
- NetEase's Glory Gaming Days Are Behind It; Industry Is Ex-Growth 18:03
- リスク削減の取り組みが奏功、日本の保険会社はSVB破綻の嵐を回避 16:57
- アジアのデリバティブ取引量増加、クレディスイスやSVB巡る懸念で 16:57
- フォード・クレジットの23年は金融危機時よりも悪化か 16:57
- Western Australia to Keep Lead Amid Country's Lending Struggles 16:03
- EM 360: SVB Shortens Path to Inflection, Easing Fed's Grip on EM 08:24
- UAE Bank Liquidity Gap Robust, But DIB, SIB and CBD Need ALM Fix 01:03
- AI's Power as a Disruptor Theme; ESG Predictions (Podcast) 03/17
- Fed Discount-Window Borrowing Is Likely Losing Its Stigma Now 03/17
- Card Issuers' Deposits Are Less Stable, But Flight Risk Is Low 03/17
- Card Issuers' Deposits Are Less Stable, But Flight Risk Is Low 03/17
- Uber Freight Disposal Yet Another Potential Upgrade Catalyst 03/17
- Mortgage Lending May Face Added Hurdles as Credit Tightens 03/17

IV. Macroeconomic Information

Lastly, Bloomberg has an expansive list of Economic Data & Analysis functions. The *World Economic Statistics* (ECST) function lists all of the key indicators for the country being browsed.

Text	Ticker	Feb	Jan	Dec	Q1 2023
National Accounts					
110 Real GDP (qoq % saar)	LEGDP CQOQ In				2.7
110 Real GDP (yoy %)	LEGDP CYOY In				0.9
113 Personal Consumption (qoq % saar)	LEGDPCTOY In				1.4
114 Private Investment (qoq % saar)	LEGDPITOC In				3.7
119 Gov't Spending (qoq % saar)	LEGDPSTOC In				3.6
118 Change in Inventories (USD bn)	LEGDPICPI In				136.3
117 Nominal GDP (USD bn)	LEGDP CURS In			26144.96	
118 Nominal GDP (yoy %)	LEGDP CURY In				7.4
118 GDP Price Deflator (qoq % saar)	LEGDP PIQO In				3.9
118 Core PCE Deflator (qoq % saar)	LEGDPDPCR In				4.3
Consumer Prices					
110 Consumer Price Index (yoy %)	LECPI YOY In	6.0	6.4	6.5	
112 CPI ex-Food & Energy (yoy %)	LECPI XYOY In	5.5	5.6	5.7	
113 PCE Price Index (yoy %)	LEPCE DEFY In	--	5.4	5.3	
114 Core PCE Index (yoy %)	LEPCE CYOY In	--	4.706820	4.604260	4.7
119 Consumer Price Index (mom %)	LECPI CHNG In	0.4	0.5	0.1	
118 CPI ex-Food & Energy (mom %)	LECPUPXCHG In	0.5	0.4	0.4	
Producer Prices					
117 PPI Final Demand (mom % sa)	LEFDIUFOMO In	-0.1	0.3	-0.2	
118 PPI Final Demand ex Foods & Energy (mom % sa)	LEFDISGHO In	-0.0	0.1	0.3	
118 PPI Final Demand (yoy %)	LEFDIUFYO In	4.6	5.7	6.5	
118 PPI Final Demand ex Foods & Energy (yoy %)	LEFDISGYO In	4.4	5.0	5.8	

Next, the *Bloomberg Economic News and Analysis* (BE) shows economic-related news corresponding to the country being browsed.

News Item	Source	Time
1) Fed and Global Central Banks Move to Boost Dollar Funding	BN	23:01
2) Case for Fed Pause Builds Following Crisis-Echoing Move on Swaps	BN	21:56
3) China's Surprise RRR Cut Puts Focus on Bank Lending Rates	BN	21:36
4) Taiwan Chip Exports to China Sputter on Tensions, Falling Demand	BN	20:43
5) BOE Rate Decision Set to Cap Tumultuous Week for UK and Sunak	BN	20:01
6) China's LPRs Steady But Easing Bias Spells Cuts Ahead: Economics	BI	21:41
United States of America Economic News		
7) Fed and Global Central Banks Move to Boost Dollar Funding (3)	BN	23:01
8) Stock Futures Rise, Dollar Swings; US Yields Climb; Markets Wrap	BN	22:49
9) Case for Fed Pause Builds Following Crisis-Echoing Move on Swaps	BN	21:56
10) Commodities Show Cautious Return to Risk on Credit Suisse Rescue	BN	22:16
11) Markets Eye Volatile Week With Credit Suisse, Fed as Catalysts	BN	13:28
12) Global Banking Crisis Fear Could Be Expressed via Won FX Crosses	BI	18:00
United States of America Economics Commentary & Analysis		
13) You Can't Be a Hawk in a Bank Run - How SVB and CS Shift Outlook	BI	18:56
14) Who's Afraid of the Asian Market Opening?: Daniel Moss	BBO	18:30
15) Past Fed Banking Crises Hold Warning for Powell: Niall Ferguson	BBO	08:00
16) Why Fed Rate Increases Are Hitting All At Once: Paul J. Davies	BBO	08:06
17) Banking Crisis, Fed Ahead, ECB Hike, China Slowdown: Eco Best	BI	03/18
18) Peter Coy: The Fed's Balance Sheet Looks Like Silicon Valley Bank's	NYT	03/18

Lastly, the *Economic Calendars* (ECO) function shows upcoming economic releases.

Date	Time	Event	Period	Surv(M)	Actual	Prior	Revised
21	03/21 08:30	Philadelphia Fed Non-Manufacturing Activity	Mar	--	--	3.2	--
22	03/21 10:00	Existing Home Sales	Feb	4.20m	--	4.00m	--
23	03/21 10:00	Existing Home Sales MoM	Feb	5.0%	--	-0.7%	--
24	03/22 07:00	MBA Mortgage Applications	Mar 17	--	--	6.5%	--
25	03/22 14:00	FOMC Rate Decision (Upper Bound)	Mar 22	5.00%	--	4.75%	--
26	03/22 14:00	FOMC Rate Decision (Lower Bound)	Mar 22	4.75%	--	4.50%	--
27	03/22 14:00	Interest on Reserve Balances Rate	Mar 23	4.90%	--	4.65%	--
28	03/23 08:30	Current Account Balance	4Q	-\$214.0b	--	-\$217.1b	--
29	03/23 08:30	Initial Jobless Claims	Mar 18	200k	--	192k	--
30	03/23 08:30	Chicago Fed Nat Activity Index	Feb	0.10	--	0.23	--
31	03/23 08:30	Continuing Claims	Mar 11	1690k	--	1684k	--
32	03/23 10:00	New Home Sales	Feb	650k	--	670k	--
33	03/23 10:00	New Home Sales MoM	Feb	-3.0%	--	7.2%	--
34	03/23 11:00	Kansas City Fed Manf. Activity	Mar	-2	--	0	--
35	03/24 08:30	Durable Goods Orders	Feb P	1.0%	--	-4.5%	--
36	03/24 08:30	Durables Ex Transportation	Feb P	0.2%	--	0.8%	--
37	03/24 08:30	Cap Goods Orders Nondef Ex Air	Feb P	-0.2%	--	0.8%	--
38	03/24 08:30	Cap Goods Ship Nondef Ex Air	Feb P	--	--	1.1%	--
39	03/24 09:45	S&P Global US Manufacturing PMI	Mar P	47.0	--	47.3	--
40	03/24 09:45	S&P Global US Services PMI	Mar P	50.3	--	50.6	--
41	03/24 09:45	S&P Global US Composite PMI	Mar P	--	--	50.1	--
42	03/24 10:00	Revisions: Wholesale Inventories					
43	03/24 11:00	Kansas City Fed Services Activity	Mar	--	--	1	--