

# YFinance\_Tutorial

September 29, 2021

```
[2]: import yfinance as yf
```

```
[4]: aapl = yf.Ticker('AAPL')
```

```
[5]: aapl.info
```

```
[5]: {'52WeekChange': 0.93288934,  
      'SandP52WeekChange': 0.14598012,  
      'address1': 'One Apple Park Way',  
      'algorithm': None,  
      'annualHoldingsTurnover': None,  
      'annualReportExpenseRatio': None,  
      'ask': 116.39,  
      'askSize': 2200,  
      'averageDailyVolume10Day': 160888014,  
      'averageVolume': 174072926,  
      'averageVolume10days': 160888014,  
      'beta': 1.314396,  
      'beta3Year': None,  
      'bid': 116.35,  
      'bidSize': 800,  
      'bookValue': 4.218,  
      'category': None,  
      'circulatingSupply': None,  
      'city': 'Cupertino',  
      'companyOfficers': [],  
      'country': 'United States',  
      'currency': 'USD',  
      'dateShortInterest': 1601424000,  
      'dayHigh': 118.705,  
      'dayLow': 116.45,  
      'dividendRate': 0.82,  
      'dividendYield': 0.0069999998,  
      'earningsQuarterlyGrowth': 0.12,  
      'enterpriseToEbitda': 25.917,  
      'enterpriseToRevenue': 7.445,  
      'enterpriseValue': 2038880010240,
```

'exDividendDate': 1596758400,  
 'exchange': 'NMS',  
 'exchangeTimezoneName': 'America/New\_York',  
 'exchangeTimezoneShortName': 'EDT',  
 'expireDate': None,  
 'fiftyDayAverage': 116.11514,  
 'fiftyTwoWeekHigh': 137.98,  
 'fiftyTwoWeekLow': 53.1525,  
 'fiveYearAverageReturn': None,  
 'fiveYearAvgDividendYield': 1.52,  
 'floatShares': 17085262439,  
 'forwardEps': 3.87,  
 'forwardPE': 30.198969,  
 'fromCurrency': None,  
 'fullTimeEmployees': 137000,  
 'fundFamily': None,  
 'fundInceptionDate': None,  
 'gmtOffsetMilliseconds': '-14400000',  
 'heldPercentInsiders': 0.00066,  
 'heldPercentInstitutions': 0.62115,  
 'industry': 'Consumer Electronics',  
 'isEsgPopulated': False,  
 'lastCapGain': None,  
 'lastDividendDate': 1596758400,  
 'lastDividendValue': 0.205,  
 'lastFiscalYearEnd': 1569628800,  
 'lastMarket': None,  
 'lastSplitDate': 1598832000,  
 'lastSplitFactor': '4:1',  
 'legalType': None,  
 'logo\_url': 'https://logo.clearbit.com/apple.com',  
 'longBusinessSummary': 'Apple Inc. designs, manufactures, and markets smartphones, personal computers, tablets, wearables, and accessories worldwide. It also sells various related services. The company offers iPhone, a line of smartphones; Mac, a line of personal computers; iPad, a line of multi-purpose tablets; and wearables, home, and accessories comprising AirPods, Apple TV, Apple Watch, Beats products, HomePod, iPod touch, and other Apple-branded and third-party accessories. It also provides digital content stores and streaming services; AppleCare support services; and iCloud, a cloud service, which stores music, photos, contacts, calendars, mail, documents, and others. In addition, the company offers various service, such as Apple Arcade, a game subscription service; Apple Card, a co-branded credit card; Apple News+, a subscription news and magazine service; and Apple Pay, a cashless payment service, as well as licenses its intellectual property, and provides other related services. The company serves consumers, and small and mid-sized businesses; and the education, enterprise, and government markets. It sells and delivers third-party applications for its products through the App Store, Mac App Store, and Watch

App Store. The company also sells its products through its retail and online stores, and direct sales force; and third-party cellular network carriers, wholesalers, retailers, and resellers. Apple Inc. has a collaboration with Google to develop COVID-19 tracking system for Android and iOS devices. Apple Inc. was founded in 1977 and is headquartered in Cupertino, California.',

```
'longName': 'Apple Inc.',
'market': 'us_market',
'marketCap': 1998769225728,
'maxAge': 1,
'maxSupply': None,
'messageBoardId': 'finmb_24937',
'morningStarOverallRating': None,
'morningStarRiskRating': None,
'mostRecentQuarter': 1593216000,
'navPrice': None,
'netIncomeToCommon': 58424000512,
'nextFiscalYearEnd': 1632787200,
'open': 116.67,
'openInterest': None,
'payoutRatio': 0.2373,
'pegRatio': 2.97,
'phone': '408-996-1010',
'previousClose': 117.51,
'priceHint': 2,
'priceToBook': 27.707445,
'priceToSalesTrailing12Months': 7.2985873,
'profitMargins': 0.21334,
'quoteType': 'EQUITY',
'regularMarketDayHigh': 118.705,
'regularMarketDayLow': 116.45,
'regularMarketOpen': 116.67,
'regularMarketPreviousClose': 117.51,
'regularMarketPrice': 116.67,
'regularMarketVolume': 86609126,
'revenueQuarterlyGrowth': None,
'sector': 'Technology',
'sharesOutstanding': 17102499840,
'sharesPercentSharesOut': 0.0052,
'sharesShort': 88087882,
'sharesShortPreviousMonthDate': 1598832000,
'sharesShortPriorMonth': 79684337,
'shortName': 'Apple Inc.',
'shortPercentOfFloat': 0.0052,
'shortRatio': 0.47,
'startDate': None,
'state': 'CA',
'strikePrice': None,
```

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'symbol': 'AAPL',
'threeYearAverageReturn': None,
'toCurrency': None,
'totalAssets': None,
'tradeable': False,
'trailingAnnualDividendRate': 0.782,
'trailingAnnualDividendYield': 0.006654753,
'trailingEps': 3.296,
'trailingPE': 35.458134,
'twoHundredDayAverage': 96.593185,
'volume': 86609126,
'volume24Hr': None,
'volumeAllCurrencies': None,
'website': 'http://www.apple.com',
'yield': None,
'ytdReturn': None,
'zip': '95014'}

```

```
[6]: df = aapl.history(start="2010-01-01", end="2020-10-01")
```

```
[7]: df.head()
```

```
[7]:
```

	Open	High	Low	Close	Volume	Dividends	Stock Splits
Date							
2010-01-04	6.59	6.62	6.55	6.60	493729600	0.0	0.0
2010-01-05	6.62	6.65	6.58	6.62	601904800	0.0	0.0
2010-01-06	6.62	6.64	6.50	6.51	552160000	0.0	0.0
2010-01-07	6.54	6.54	6.45	6.50	477131200	0.0	0.0
2010-01-08	6.49	6.54	6.45	6.54	447610800	0.0	0.0

```
[8]: df.tail()
```

```
[8]:
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	Open	High	Low	Close	Volume	Dividends	Stock Splits
Date							
2020-09-24	105.17	110.25	105.00	108.22	167743300	0.0	0.0
2020-09-25	108.43	112.44	107.67	112.28	149981400	0.0	0.0
2020-09-28	115.01	115.32	112.78	114.96	137672400	0.0	0.0
2020-09-29	114.55	115.31	113.57	114.09	99382200	0.0	0.0
2020-09-30	113.79	117.26	113.62	115.81	142675200	0.0	0.0

```
[10]: aapl.actions
```

```
[10]:
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	Dividends	Stock Splits
Date		
2012-08-09	0.09464	0.0
2012-11-07	0.09464	0.0
2013-02-07	0.09464	0.0

2013-05-09	0.10893	0.0
2013-08-08	0.10893	0.0
2013-11-06	0.10893	0.0
2014-02-06	0.10893	0.0
2014-05-08	0.11750	0.0
2014-06-09	0.00000	7.0
2014-08-07	0.11750	0.0
2014-11-06	0.11750	0.0
2015-02-05	0.11750	0.0
2015-05-07	0.13000	0.0
2015-08-06	0.13000	0.0
2015-11-05	0.13000	0.0
2016-02-04	0.13000	0.0
2016-05-05	0.14250	0.0
2016-08-04	0.14250	0.0
2016-11-03	0.14250	0.0
2017-02-09	0.14250	0.0
2017-05-11	0.15750	0.0
2017-08-10	0.15750	0.0
2017-11-10	0.15750	0.0
2018-02-09	0.15750	0.0
2018-05-11	0.18250	0.0
2018-08-10	0.18250	0.0
2018-11-08	0.18250	0.0
2019-02-08	0.18250	0.0
2019-05-10	0.19250	0.0
2019-08-09	0.19250	0.0
2019-11-07	0.19250	0.0
2020-02-07	0.19250	0.0
2020-05-08	0.20500	0.0
2020-08-07	0.20500	0.0
2020-08-31	0.00000	4.0

```
[11]: aapl.dividends
```

```
[11]: Date
      2012-08-09    0.09464
      2012-11-07    0.09464
      2013-02-07    0.09464
      2013-05-09    0.10893
      2013-08-08    0.10893
      2013-11-06    0.10893
      2014-02-06    0.10893
      2014-05-08    0.11750
      2014-08-07    0.11750
      2014-11-06    0.11750
      2015-02-05    0.11750
```

2015-05-07	0.13000
2015-08-06	0.13000
2015-11-05	0.13000
2016-02-04	0.13000
2016-05-05	0.14250
2016-08-04	0.14250
2016-11-03	0.14250
2017-02-09	0.14250
2017-05-11	0.15750
2017-08-10	0.15750
2017-11-10	0.15750
2018-02-09	0.15750
2018-05-11	0.18250
2018-08-10	0.18250
2018-11-08	0.18250
2019-02-08	0.18250
2019-05-10	0.19250
2019-08-09	0.19250
2019-11-07	0.19250
2020-02-07	0.19250
2020-05-08	0.20500
2020-08-07	0.20500

Name: Dividends, dtype: float64

```
[12]: aapl.splits
```

```
[12]: Date
2014-06-09    7.0
2020-08-31    4.0
Name: Stock Splits, dtype: float64
```

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[13]: aapl.sustainability
```

```
[13]:
```

	Value
2020-10	
adult	False
alcoholic	False
animalTesting	False
catholic	False
coal	False
controversialWeapons	False
environmentPercentile	None
environmentScore	0.49
esgPerformance	AVG_PERF
furLeather	False
gambling	False
gmo	False

governancePercentile	None
governanceScore	10.18
highestControversy	3
militaryContract	False
nuclear	False
palmOil	False
peerCount	55
peerGroup	Technology Hardware
percentile	33.05
pesticides	False
smallArms	False
socialPercentile	None
socialScore	12.98
tobacco	False
totalEsg	23.65

[15]: aapl.recommendations

[15]:	Date	Firm	To Grade \
	2012-02-09 08:17:00	Canaccord Genuity	Buy
	2012-03-08 07:33:00	FBN Securities	Outperform
	2012-03-13 06:08:00	Jefferies	Buy
	2012-03-14 06:13:00	Morgan Stanley	Overweight
	2012-03-14 08:21:00	Canaccord Genuity	Buy
	2012-03-14 15:25:00	Oxen Group	Buy
	2012-03-15 07:53:00	PiperJaffray	Overweight
	2012-03-16 06:53:00	Oppenheimer	Outperform
	2012-03-16 13:53:00	UBS	Buy
	2012-03-19 07:24:00	Wedbush	Outperform
	2012-03-19 09:53:00	FBN Securities	Outperform
	2012-03-19 14:25:00	Goldman Sachs	Buy
	2012-03-19 14:59:00	Morgan Keegan	Outperform
	2012-03-20 06:10:00	Sterne Agee	Buy
	2012-03-20 06:53:00	Citigroup	Buy
	2012-03-21 08:43:00	Scotiabank	Sector Perform
	2012-03-21 14:31:00	Hilliard Lyons	Buy
	2012-03-21 14:33:00	Crowell, Weedon & Co.	Buy
	2012-03-30 07:16:00	BMO Capital	Outperform
	2012-04-03 07:01:00	PiperJaffray	Overweight
	2012-04-03 07:06:00	JP Morgan	Overweight
	2012-04-05 06:25:00	Jefferies	Buy
	2012-04-09 07:00:00	BTIG Research	Neutral
	2012-04-11 06:42:00	Sterne Agee	Buy
	2012-04-12 06:00:00	Credit Suisse	Outperform
	2012-04-13 06:49:00	Bank of America	Buy
	2012-04-18 06:23:00	Goldman Sachs	Buy

2012-04-19 06:15:00	Canaccord Genuity	Buy
2012-04-25 06:04:00	Deutsche Bank	Buy
2012-04-25 06:42:00	Goldman Sachs	Buy
...	...	...
2020-09-23 09:17:15	Sterne Agee	Buy
2020-09-23 09:17:34	ABG Sundal Collier	Sell
2020-09-23 09:18:02	Global Equities Research	Overweight
2020-09-23 09:18:11	Piper Jaffray	Overweight
2020-09-23 09:18:24	Janney Capital	Buy
2020-09-23 09:18:52	Stifel	Buy
2020-09-23 09:19:04	Longbow Research	Buy
2020-09-23 09:19:23	Oracle Investment Research	Strong Buy
2020-09-23 09:19:38	BGC Financial	Hold
2020-09-23 09:19:56	Citi	Buy
2020-09-23 09:20:05	ISI Group	Buy
2020-09-23 09:20:34	Evercore Partners	Overweight
2020-09-23 09:20:45	BMO Capital	Market Perform
2020-09-23 09:21:26	Berenberg	Buy
2020-09-23 09:21:41	Argus	Buy
2020-09-23 09:22:00	Cantor Fitzgerald	Buy
2020-09-23 09:22:18	Susquehanna	Positive
2020-09-23 09:22:24	KeyBanc	Sector Weight
2020-09-23 09:23:31	Societe Generale	Buy
2020-09-23 09:25:37	Mizuho	Neutral
2020-09-23 09:26:42	BTIG Research	Buy
2020-09-23 09:27:52	CLSA	Buy
2020-09-23 09:28:49	FBN Securities	Outperform
2020-09-23 09:30:06	FBR Capital	Outperform
2020-09-23 09:31:25	JMP Securities	Outperform
2020-09-23 09:32:35	Pacific Crest	Sector Weight
2020-09-24 00:10:26	Wedbush	Outperform
2020-10-12 11:23:23	RBC Capital	Outperform
2020-10-14 12:07:26	Morgan Stanley	Overweight
2020-10-14 12:54:46	Credit Suisse	Neutral

#### From Grade Action

Date	
2012-02-09 08:17:00	main
2012-03-08 07:33:00	main
2012-03-13 06:08:00	main
2012-03-14 06:13:00	main
2012-03-14 08:21:00	main
2012-03-14 15:25:00	init
2012-03-15 07:53:00	main
2012-03-16 06:53:00	main
2012-03-16 13:53:00	main
2012-03-19 07:24:00	main



2012-03-19 09:53:00		main
2012-03-19 14:25:00		main
2012-03-19 14:59:00		main
2012-03-20 06:10:00		main
2012-03-20 06:53:00		main
2012-03-21 08:43:00		main
2012-03-21 14:31:00		main
2012-03-21 14:33:00		main
2012-03-30 07:16:00		main
2012-04-03 07:01:00		main
2012-04-03 07:06:00		main
2012-04-05 06:25:00		main
2012-04-09 07:00:00		down
2012-04-11 06:42:00		main
2012-04-12 06:00:00		main
2012-04-13 06:49:00		main
2012-04-18 06:23:00		main
2012-04-19 06:15:00		main
2012-04-25 06:04:00		main
2012-04-25 06:42:00		main

...	...	...
2020-09-23 09:17:15		main
2020-09-23 09:17:34	Hold	down
2020-09-23 09:18:02		main
2020-09-23 09:18:11		main
2020-09-23 09:18:24		main
2020-09-23 09:18:52		main
2020-09-23 09:19:04	Neutral	up
2020-09-23 09:19:23		main
2020-09-23 09:19:38	Buy	down
2020-09-23 09:19:56		main
2020-09-23 09:20:05	Strong Buy	down
2020-09-23 09:20:34		main
2020-09-23 09:20:45	Market Perform	main
2020-09-23 09:21:26		main
2020-09-23 09:21:41	Buy	main
2020-09-23 09:22:00		main
2020-09-23 09:22:18		main
2020-09-23 09:22:24	Overweight	down
2020-09-23 09:23:31	Hold	up
2020-09-23 09:25:37	Buy	down
2020-09-23 09:26:42	Buy	main
2020-09-23 09:27:52		main
2020-09-23 09:28:49		main
2020-09-23 09:30:06		main
2020-09-23 09:31:25		main
2020-09-23 09:32:35	Overweight	down

```
2020-09-24 00:10:26      main
2020-10-12 11:23:23      main
2020-10-14 12:07:26      main
2020-10-14 12:54:46      main
```

```
[809 rows x 4 columns]
```

```
[16]: aapl.calendar
```

```
[16]:
```

	Value
Earnings Average	0.71
Earnings Date	2020-10-29 00:00:00
Earnings High	0.86
Earnings Low	0.54
Revenue Average	64159800000
Revenue High	70547000000
Revenue Low	52545000000

```
[19]: aapl.options
```

```
[19]: ('2021-03-18',
      '2020-12-17',
      '2020-10-22',
      '2021-04-15',
      '2022-01-20',
      '2020-11-19',
      '2020-11-05',
      '2020-11-12',
      '2020-11-26',
      '2022-09-15',
      '2023-01-19',
      '2021-06-17',
      '2021-01-14',
      '2020-10-29',
      '2022-06-16',
      '2021-09-16')
```