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# Stock Report

S&P 500


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A REPORT BY AP CAPITAL RESEARCH ON:

S&P 500

# S&P 500 Overview

**What is the S&P 500?**
The Standard and Poor 500 (S&P 500) is an index of the 500 largest publicly traded companies within the United States on the New York Stock Exchange (NYSE) or the National Association of Securities Dealers Automated Quotations (NASDAQ). The index was introduced in 1957. There are 505 listings on the S&P 500 and this is due to multiple share classes. For example, Facebook and Alphabet (Google) both have Class A shares and Class B shares listed on the S&P 500. These shares will differ as one class may have more voting rights than the other.

The top ten companies within the index account for 27.7% of the index. Although the index only contains companies within the United States, they only obtain approximately 70% of their revenue from the US. In contrast, 30% of their revenue is made from overseas operations in other countries. The S&P 500 comprises 11 sectors in the US economy with the Information Technology sector currently leading the index at 27.9%. Other sectors included in the index is Energy, Materials, Industrials, Consumer Discretionary, Consumer Staples, Health Care, Financials, Information Technology, Communication Services, Real Estate, and Utilities

The S&P 500 represents more than 83% of the total domestic U.S. equity market capitalization. The S&P 500 is often used as a gauge to determine how the US economy is performing and is included in the Conference Board Leading Economic Index.
When the economy is in a trough or at a low, the S&P 500 will often also take a dip.

Investors typically use the S&P 500 as a benchmark to their own portfolio, to compare how well their stock picks are in comparison to the overall US market. As the index 500 large cap companies in various sectors, typically if the market is doing well for the trading day, then the investor's portfolio will tend to do well.

**Requirements to be a company in the S&P 500.**
To be listed on the S&P 500, there are certain requirements a company must reach.

- As the S&P 500 is an American index, companies must be American companies from the US.
- At least a year has passed since its initial public offering (IPO).
- At least 250,000 shares trade in each of the previous six months.
- They must have a market capitalization of a minimum of $13.1 billion. Only large capitalization stocks are allowed in the S&P 500; this is where a company has a market cap of over $10 billion.
- The value of its market cap must be traded annually.
- The companies must be highly liquid. This is where they must have enough liquid assets to be able to pay off their current liabilities and meet their financial obligations.
- There must be a minimum public float of 10%. This means there should be at least 10% of the issued shares outstanding available to the public to trade.The other 90% of shares may be held by insiders such as directors or stockholders who have controlling interests.
- Its most recent earnings and the cumulative of the previous four consecutive quarter earnings must be positive.

**83%**
S&P 500 representation of US equity market cap

**27.7%**
Accounts for 10 top companies in the index

**$13.1B**
Market cap requirement of the company

# How the S&P 500 was formed and is calculated

**How the S&P 500 was formed.**

In 1906 Standard Statistics Bureau was founded
In 1923 this company, now called Standard Statistics Company, created its first market index, which was calculated weekly and included 233 stocks.
In 1926 it developed a smaller index that included 90 stocks and calculated it daily.
In 1941 Poor's Publishing (founded in 1860) merged with Standard Statistics Company to form Standard & Poor's.
In 1957 the index consisted of 500 companies and was named the S&P 500 Stock Composite Index.
In 1962, Ultronic Systems compiled many of the S&P indices which included, S&P 500 Stock Composite Index, 425 Stock Industrial Index, the 50 Stock Utility Index, 25 Stock Rail Index. It is possible to conclude that each index represented a different industry within the economy.
In 1976, The Vanguard Group (Founded 1975) offered the first mutual fund which tracked the index.
In 1982/83 Futures and options began trading for this index.
In 2005 the index became a public float-adjusted capitalization weighting.

**How the S&P 500 is calculated**

One would expect each of the companies stock prices to be summed, which is how they calculate the Dow, a price weighted measurement instrument for the top 30 companies within the US. However, the S&P 500 is done differently. The S&P 500 uses the companies' 'float adjusted market capitalisation to calculate their index price.' The float adjusted market capitalisation is the publicly available shares traded on the exchange and this excludes any private shares such as shares held by management, the government or other companies. They sum the float adjusted market cap of all 505 listed shares and divide the total market cap by a divisor calculated by S&P global. The reason for this divisor is to scale the index to a more manageable and reportable level. The divisor will constantly change depending on the actions of companies within its index. For example, if a company's share price were to increase, its market cap would increase therefore the divisor is adjusted to account for this change.

*S&P500 Calculation = Price x (Quantity of shares x Float)*

*Float adjustment = Quantity x Float*

*Market Capitalisation = Price x Quantity*

**1941**
Standard and Poor's merge to form company

**1962**
Different industry indexes formed

**1976**
Vanguard offers the first fund tracking the index

# History of the S&P 500

## Price History of the S&P 500

October 1987 - Black Monday - where the index saw its greatest fall in one day. A fall of 20%.
Black Monday is the name of the stock market crash associated with the stock market crash. Eight markets fell between 20-29%. Malaysia, Mexico and New Zealand fell between 30-39%. Hong Kong, Australia, and Singapore fell by more than 40%. Worldwide losses are calculated to be approximately USD 1.71 trillion.

- March 2000 - Peak of the dot-com bubble, the index reaches 2000.
- October 2002 - The index fell by 50% from its previous highs during the 'internet bubble bursting' or also known as the 'stock market crash.'
- It took until 2007 to reach that high again, a 5-year climb of the index.
- October 13th 2008, was the best single-day percentage increase for the index, since its start in 1957. With an increase of 11.6%.
- At the end of 2008, the index closed at 903. A yearly loss of 38.5%.
- In April 2010 the index closed for the first time above 1,200 since the financial crisis of 2007.
- In March 2013, the index passed 1565, recovering all of its losses since the Great Recession (2007-2009).
- In 2017 the index rose 19.4%, its best year since 2013.

During February 2020 the index fell 10% over 6 trading days, its fastest drop from a new peak. This was thought to be due to concerns over the Covid-19 Pandemic.

After the 2020 stock market crash due to the pandemic, the index had fallen 34% from its peak.
2020 was a volatile year for the index, falling 20% in its first quarter, to only rise again 20% in its second quarter. Its biggest quarterly gain since 1998. It took 6 months for the index to recover from the pandemic and has now reached multiple new highs.

| Title | Start — End Date | Duration (Trading Days) | % Drop |
|---|---|---|---|
| Black Tuesday / Great Crash* | Sep 16, 1929 — Sept 22, 1954 | 300 months (7,256 days) | -86% |
| Nixon Shock / OPEC Oil Embargo | Jan 11, 1973 — Jul 17, 1980 | 90 months (1,899 days) | -48% |
| Black Monday** | Oct 13, 1987 — May 15, 1989 | 19 months (402 days) | -29% |
| Dot Com Bubble | Mar 24, 2000 — May 30, 2007 | 86 months (1,808 days) | -49% |
| Global Financial Crisis | Oct 9, 2007 — Mar 28, 2013 | 65 months (1,379 days) | -57% |
| COVID-19 Crash*** | Feb 19, 2020 — Ongoing | 5 months+ (117+ days) | -34% |

**38.5%**
2008 Yearly Loss

**$1.71T**
Worldwide losses of 1987 crash

**50%**
2002 'Stock Market Crash'

# History of the S&P 500

## How the S&P 500 reacts to financial difficulties in the economy

The chart below includes all the major stock market crashes which have taken place, and the greatest drop during that crash period the S&P 500 took.

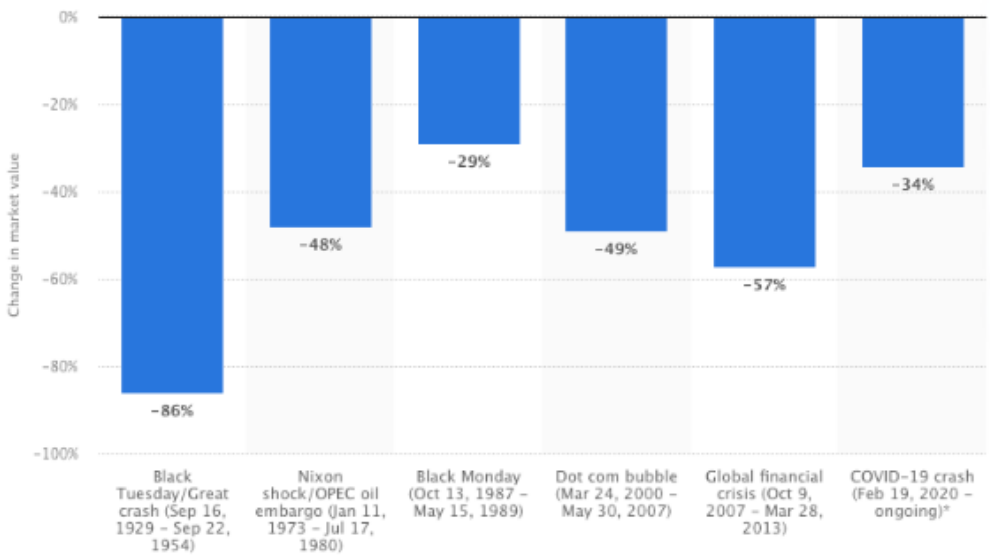
Visually, it is the first market crash which is called 'Black Tuesday' which caused the greatest drop of the market, falling in value by 86%. Black Tuesday was the beginning of the fall in the market, however, it was due to the economic conditions that the duration was so long. The Federal Reserve Board increased the lending rate to 6%, which resulted in fewer people borrowing due to the increase in costs. This is what led to the Great Depression as consumers and businesses saved more instead of consuming and investing within the economy.

The **Nixon shock** was a result in response to high inflation. This high inflation decreased the real returns which people observed on stocks. At the same time, OPEC countries prevented oil exports to the US and its allies, causing a dramatic increase in its price.

Computerized trading systems and overvalued markets are what have been blamed for the **Black Monday** market crash. In an attempt to reduce the impact of the crash, the Federal Reserve chairman decreased interest rates.

The **Dot Com Bubble** burst as a result of overpriced US tech stocks. The Federal Reserve also increased the interest rates five times in eight months, which did not affect the market positively. Some companies managed to survive and are still around to this day, however, most saw a decrease of value by almost 80%.

The **2007 Global Financial Crash** occurred as a result of loose credit restrictions and policies, credit default swaps, and commercial mortgage-backed securities. In an attempt to make a profit, banks created high-risk loan packages and sold them.
The Federal Reserve acted similarly to the Black Monday crash, decreasing interest rates, and increasing the amount of government spending in an attempt to bail out essential banks and businesses. The cost of these bailouts amounted to $498 billion.




**-86%**
Greatest decline in the S&P 500

**$498B**
Cost of bank bailouts during the 2007 Crash

**6**
Number of 'major crashes' of the S&P 500

# The U.S. Economy and the S&P 500

The S&P 500 encapsulates approximately 82% of the US economy. Economic events and policy changes can impact the US economy and affect some, or all industries. These events and changes will affect the benchmark index causing a rise or fall depending on the event. Furthermore, a change in the value of the index will affect each industry and their weighting.

## The U.S. Dollar and the S&P 500

One factor affected is the correlation between the US dollar and the S&P 500. There is a correlation coefficient of 0.35-0.40 between the US dollar and the S&P 500. This correlation shows that around 35%-40% of the dollar index's movement is associated with a positive movement in the stock market index. This positive association may be from foreign investment as US stocks can only be purchased in US dollars. This will result in a rise in foreign investors in the US equity market, leading to an increased demand for the currency and therefore an appreciation in the dollar.

A fluctuating value of the dollar will affect companies directly. It is possible that earning expectations could miss the projected earnings, negatively affecting a companies share price.

Changes in the exchange rate can have an impact on both multinational companies and domestic companies. Multinational companies will be affected through the sale of their products, labour costs and capital expenditure. This may affect the multinational's cash flow because the period between the time of sale and the receipt of sale will differ due to changes in the value of the dollar. Labour costs could vary as the multinational will have to pay employees in their home currency. However, these variables may be insignificant in comparison to a business whose model is based around importing and exporting supplies.
Domestic firms can be affected through the changes in their raw material costs and demand for their products. If the firm is importing its supplies from overseas, it will be at risk of increasing its raw costs.

**A strong dollar**
A strong dollar, in the long run, can make US companies less competitive because exports become more expensive to foreign consumers. Domestic firms will be able to source their supplies from overseas as importing goods will be cheaper, resulting in a decrease of costs of revenue which enables larger profit margins. However, demand from foreign consumers will decrease because exports become expensive with a strong dollar. This means consumers will look at alternative countries who manufacture the same good to find less-expensive products
In the short term, a strong dollar can lead to job loss in the US and in the long run, manufacturing companies may relocate their plants to a foreign country.

**82%**
S&P 500 sum of the US economy

**0.35 - 0.40**
Correlation coefficient between US Dollar and the S&P 500

**$1 = £0.73**
Value of the $ in £

# The U.S. Economy and the S&P 500

**A weak dollar**

A weak dollar impacts firms who require raw materials to be imported. For example, if the manufacturing firm is importing raw materials from overseas markets, a weak dollar will give them less purchasing power. Due to the fact these firms will have to increase their spending to purchase the same volume of raw materials, this increased cost will put pressure on the firm's profit margins. However, a weak dollar would stimulate domestic demand as domestic consumers alternative goods from foreign markets become more expensive as a result. As a result of this it means consumers will look for domestic products to purchase as imported goods are now expensive due to the weak dollar.

The weak dollar will make the US more competitive in the global markets and can provide further growth in the economy from increased sales. This increased demand will help in job creation to meet the increase in global demand.

**How currency fluctuations impact investors**

Currency fluctuations affect investors who invest in overseas markets. For the UK investor wanting to buy Apple shares, they would need to convert their GBP into US dollars before purchasing the Apple shares. When it comes to the UK investor wanting to sell their Apple shares, they would need to convert the US dollar back into GBP. This is done automatically by the broker however the investor is subject to transaction risk. The period between the time the investor bought the share and when they sold their shares, the cable would have changed in value. Here's a diagram that depicts this risk

## Monetary Policy, Fiscal Policy, and the Stock Market

**Monetary Policy**

The federal reserve can influence the markets through manipulating short term interest rates, conduct in open market operations or adjusting the reserve requirement. Changes in the money supply through the central bank is also a form of monetary policy.

Lowering interest rates can spur economic activity because the cost of borrowing becomes cheaper. This disincentives consumers and corporations to save because the interest they earned will diminish. So, the overall effect is fewer savings, increased borrowing due to less interest paid on the loans and therefore increasing the money supply which will lead to more spending in the economy. If the economy is growing, then the firm's sales will increase and therefore their share price will rise from increased earnings. The limitation to lowering interest rates is the risk of inflation rising.

**89.7**

The US dollar Index (DXY) reached the same lows as the 2018 bear market

**-$70.1B**

Trade Deficit in July 2021

**11.9%**

The US dollar lost 11.9% in value over 1 year

# The U.S. Economy and the S&P 500

Open Market Operations (OMO) directly affects the total money supply and indirectly affects interest rates. The Fed will buy or sell bonds in the open market to increase/decrease the money supply. If the Fed purchases bonds in the economy, they will exchange these bonds for cash to the public, which increases the money supply.

If the Fed did not engage in artificially manipulating short term yields, bond prices would fall due to a lack of demand. There will be an excess supply of bonds on the market, so the market will rationalise the price to an equilibrium an investor would be incentivised to purchase.

Adjusting the reserve ratio will affect the requirement banks must keep liquid assets in reserve. So if the Fed decreases the reserve requirement, the banks can loan more money to households and firms, therefore, increasing the money supply in the economy. For example, the reserve ratio has decreased from 6% to 5% and a deposit of $500 has been made. At 6%, the bank must keep $30 in reserve and can loan $470 out. However, at 5%, the bank must keep $25 in reserve and can loan $475 out.

Currently, the federal reserve is engaging in the open market as a result of the pandemic. They are purchasing $120 billion of treasury bills and mortgage-backed securities on the open market to keep interest rates low, to stimulate investment and growth in the economy. Bonds are considered a safer asset to stocks. As the yield rates remain low, investors will be disincentives to purchase bonds and look for alternative assets with a greater return.

**Fiscal Policy**
Fiscal policy can impact the financial markets by influencing the level of spending within the economy. Expansionary fiscal policy can promote higher spending in the economy which will increase aggregate demand. Governments are able to change the tax rate (income or corporate) to increase the consumer's disposable income or reduce the tax paid by firms which will increase their cash on their balance sheet, allowing them to reinvest it.

If aggregate demand is increasing, this will signal to firms to hire more workers to meet up with the increased demand as sales are increasing. The rise in sales and earnings from corporations will translate to the appreciation of their share price.

An example of this is the stimulus check issued by the President under a new bill called the CARES act. American citizens were issued a one-time payment of $1200 to promote spending in the economy in a time of distress. Many people used this stimulus check to invest in the stock market. The retail investors created a stock market frenzy with their stimulus and invested in meme stocks such as Gamestop and AMC creating a short squeeze.

**$120B**
The total amount the Fed is buying in the Open Market

**$5T**
Total stimulus issued by the government

**2.6%**
Net GDP Growth of Q2 2020 and Q3 2020

# The U.S. Economy and the S&P 500

## Inflation and the S&P 500

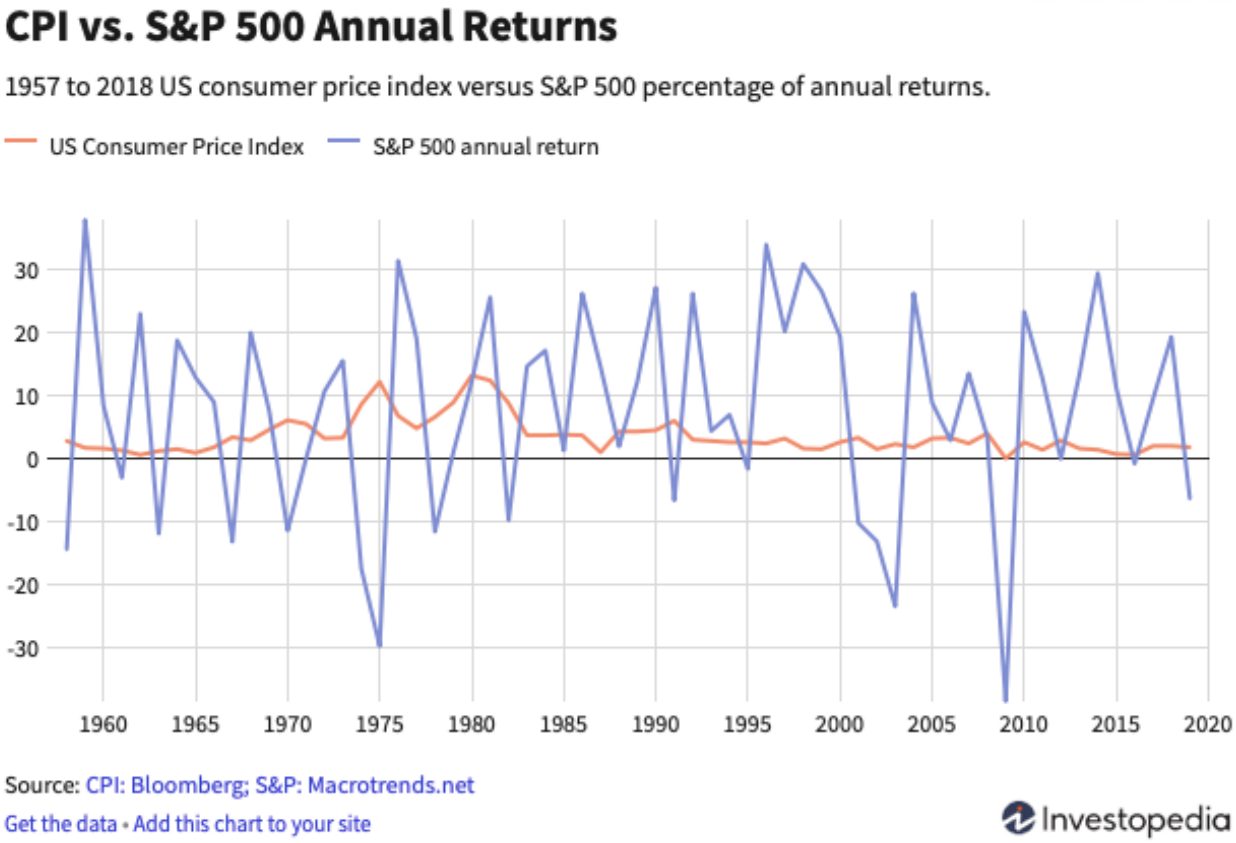
The main goal in growing your wealth is to invest in appreciating assets. Factors such as inflation can reduce your purchasing power in the future, so investing in assets that will either maintain your wealth or appreciate it is key.

The graph below details the history of the Consumer Price Index (CPI) and the annual returns of the S&P 500 from 1957 to 2018. The CPI is a measurement that analyses the prices of weighted goods within a 'basket.' A change in these goods can be used to measure the level of inflation and the economic situation.

After analysis of the graph, the inflation rate since 1985 has remained stable at approximately 3%. Whereas, the S&P 500 annual returns have fluctuated significantly, ranging from 34% growth in 1995 to a loss of 38% in 2008. Comparing the annual returns with the CPI can dictate the real annual return because the inflation rate will affect the annual nominal return.

Investors, in the short term, should look to calculate the real rate of return to determine how much their investment has grown. The nominal value will be affected by the inflation rate so for a desired real rate of return, the investor will have to achieve a higher nominal return if the inflation rate is increasing.

Historically, the average rate of return annually adjusted for inflation is roughly 7%.




**34%**
1995 Growth in the S&P 500

**7%**
Real annual return

**14.6%**
CPI figure in 1980

# S&P 500 Management Team

**Douglas L. Peterson - President and Chief Executive Officer**
Served on S&P Global's Board of directors since 2013, after originally joining the company as the president of their rating services in 2011. Peterson achieved an undergraduate degree from Claremont McKenna College and obtained an MBA from Wharton School at the University of Pennsylvania in 1985.
Previous roles include CEO of Citigroup Japan, Chief Auditor, Country Manager, and Chief Operating Officer all within Citigroup.

**Ewout Steenbergen - Executive Vice President, Chief Financial Officer**
As CFO Steenbergen focuses on growth and sustaining shareholder value while being in charge of Strategy and Corporate Development. Steenbergen received this role in 2016, before this he was the CFO of Voya Financial. While at Voya Financial he helped to improve their balance sheet, de-risk some of its investment products and in 2013 completed an initial public offering (IPO). Alongside his current roles, he also acts on the Board of Directors for UNICEF USA as Co-Chair.

**Steve Kemps - Executive Vice President, General Counsel**
As General Counsel, it is Kemp's job to oversee all legal operations within the company, including staying up to date on newly changed laws. In 1986, Kemps obtained a Bachelor of Business Administration degree in Accounting from the University of Wisconsin School of Business. He also received a Juris Doctorate from the Law School in 1991 and currently holds a Certified Public Accountant (CPA) certificate.

**Nancy Luquette - Executive Vice President, Chief Risk Officer**
Since 2013 Luquette pioneered the Internal Audit function, and currently still oversees this role alongside being responsible for the global Risk Management, Corporate Division Compliance, and Information Security functions. She obtained a Bachelor of Business Administration degree from Wesleyan University, Texas.

**7,082**
Instagram followers

**878**
Twitter

**196,927**
LinkedIn followers

# How to invest in the S&P 500

You may be wondering, how do I invest into the S&P 500 index fund? Well, you cannot directly invest into the index fund but rather invest in the brokers who mirror the S&P 500 index. The following brokers own all 500 companies in the S&P 500 and each broker varies in their allocation of shares in different sectors. According to the S&P website, there is $13.5 trillion invested in index funds that are tracking the S&P 500 index.

Below are examples of brokers who allow you to invest in their diversified portolio which aims to mirror the S&P 500:

**Fidelity**
Total Asset: $364,995.30M
Expense Ratio: 0.015%
Ticker Symbol: FXAIX

**Charles Schwab**
Total Asset: $65,783.12M
Expense Ratio: 0.02%
Ticker Symbol: SWPPX

**Vanguard**
Total Asset: $31,400.00M
Expense Ratio: 0.07%
Ticker Symbol: VUSA (EU compliant)

**State street global advisors**
Total Asset: $6,416.86M
Expense Ratio: 0.09%
Ticker Symbol: SPY5 or SPX5

**BlackRock**
Total Asset:$53,089.11M
Expense Ratio: 0.07%
Ticker Symbol: CSPX

**$364,995M**
Highest Total Asset Value

**0.015%**
Lowest Expense Ratio

**$13.1T**
Value invested in Index Funds tracking the S&P 500

# Top 10 Stock by Index Weight

**1 - Apple Inc. (AAPL) - 6.2%**
Apple is a consumer goods company producing hardware and software products. The company is most famous for its 'i' brand selling iPhones, and iPads. It also sells Mac laptops and desktops. Apple has recently broadened their product portfolio and new have Apple Music and Apple TV.

**2 - Microsoft Corp. (MSFT) - 5.8%**
Microsoft is similar to Apple selling hardware and software products. Microsoft is most famous for its Windows operating system which allows access to Microsoft Office programs. They also produce Xbox consoles. A new industry that they have entered and may witness much growth in its cloud computing services. Their cloud platform is named Azure.

**3 - Amazon Inc. (AMZN) - 3.8%**
Amazon is an online retailer which began by selling books. It has now diversified its products and has even broadened out of retail. Similarly to MSFT, Amazon has begun developing cloud computing software, which they call the Amazon Web Services (AWS). Amazon doesn't only sell online but also run grocery stores.

**4 - Facebook Inc. (FB) - 2.3%**
Facebook is the largest social networking platform in the world. FB has a large product portfolio of networking platforms including Instagram and WhatsApp. Facebook has also begun producing virtual reality (VR) equipment which they brand as Oculus.

**5 - Alphabet Inc. Class A (GOOGL) - 2.2%**
**6 - Alphabet Inc. Class C (GOOGL) 2.1%**
Many investors know Google, but it is Alphabet which is Google's 'parent company.' Google is a search engine platform. However, Alphabet also owns other businesses which they have acquired, a famous one being YouTube. Class A shares are very similar to Class C shares however there is some difference. Class A shares trade higher than Class C shares, as Class A shares hold voting rights, and Class C shares are non-voting. There are also Class B shares, but these are held by insiders and aren't traded on the open market.

**6.2%**
Largest Index Holding (APPLE)

**TSLA**
The newest add to the Top 10 list

**CLASS A/B**
Different rights when voting within the company

# Top 10 Stock by Index Weight

**7 - Tesla (TSLA) - 1.4%**
Tesla is the futuristic creator of electric cars, created by Elon Musk. 90% of its profits are generated from electric car sales, however, it also sells solar panels and batteries. Tesla only joined the S&P 500 in December 2020, as the index requires a company to achieve four consecutive quarters of profit. Something which Tesla had only recently accomplished.

8 - Berkshire Hathaway (BRK.B) - 1.4%
Berkshire Hathaway is a holding company for the famous investor and CEO of the company Warren Buffet. This company holds a large number of equities which makes it susceptible to times of struggle when the market hits lows.
Berkshire Hathaway's company has acquired a large number of companies and holds a large amount of stake in other companies. Some famous holdings include Kraft Heinz Company (27%), American Express (19%), Coca-Cola (9%), Bank of America (12%) and Apple (6%).

9 - Nvidia Corp. (NVDA) - 1.3%
Nvidia is a chip developing and manufacturing company. The chips they create are called Graphics Processing Units (GPUs), which are used for creating computer graphics, visual design and computer gaming. GPUs have recently been used within other industries which have increased the demand for them. These other industries include cryptocurrency mining and artificial intelligence (AI) for machine learning.

10 - JPMorgan Chase & Co (JPM) - 1.2%
This company is the largest US bank, providing a range of services to its clients. It provides commercial and investment banking services which include mortgage lending, providing business loans, bond underwriting, and asset and wealth management services.

| Top Ten Holdings | Sector | BlackRock | SPDR | Fidelity | Vanguard | S&P 500 |
|---|---|---|---|---|---|---|
| APPLE INC | Information Technology | 6.23% | 6.27% | 6.14% | 6.13% | 6.20% |
| MICROSOFT CORP | Information Technology | 5.92% | 5.90% | 5.75% | 5.74% | 5.90% |
| AMAZON COM INC | Consumer Discretionary | 3.88% | 3.86% | 3.83% | 3.82% | 3.90% |
| FACEBOOK CLASS A INC | Communication | 2.38% | 2.34% | 2.29% | 2.29% | 2.40% |
| ALPHABET INC CLASS A | Communication | 2.28% | 2.24% | 2.17% | 2.17% | 2.30% |
| ALPHABET INC CLASS C | Communication | 2.16% | 2.13% | 2.07% | 2.06% | 2.20% |
| TESLA INC | Consumer Discretionary | 1.47% | 1.46% | 1.42% | 1.42% | 1.50% |
| NVIDIA CORP | Information Technology | 1.46% | 1.45% | 1.41% | 1.41% | 1.50% |
| BERKSHIRE HATHAWAY INC CLASS B | Financials | 1.41% | 1.41% | 1.30% | 1.30% | 1.40% |
| JPMORGAN CHASE & CO | Financials | 1.26% | 1.27% | 1.23% | 1.23% | 1.30% |

**90%**
Of Tesla's profits generated from car sales

**27.7%**
Value top 10 companies account for in the index

**25%**
1Yr Target Est of S&P 500 by Goldman Sachs

# Investing VS Saving

Below depicts and calculates the differences between investing in the stock market, opposed to saving with commercial banks. After analysis, the report recommends investing within stock markets.

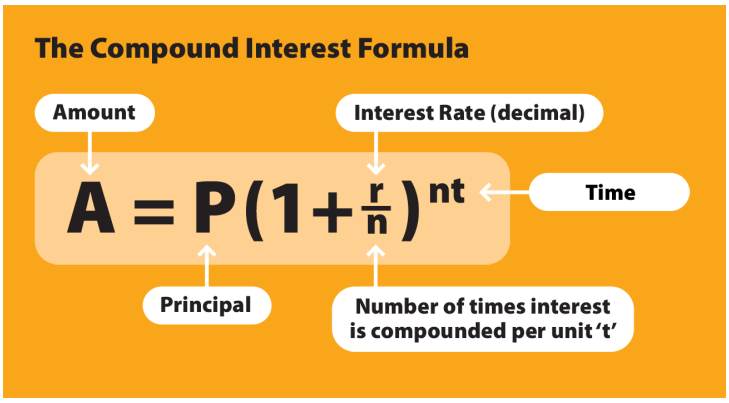
A person named Adam invests his excess capital in the financial markets. The other person is called Lucy and she puts her earnings in an Individual Savings Account (ISA). They both invest $1000 a year into either their investment account or savings account over 30 years.

**Adam the investor**

Adam puts $1000 a year into one of the ETF brokers who invest in the S&P 500.
The S&P 500 has had an average annual return of 10% over the past 90 years. For the year, he would have invested $1,000 into the S&P 500 ETF. His overall unrealised gains after the end of the year will be $1100 (10% gain). If Adam maintained the yearly investments, his future return would be $180,943.43 with total deposits being $30,000. The total interest he has earned from leaving his money invested is $150,943.42. This is due to a key concept called compound interest

**What is Compound Interest?**

Compound interest is the accumulated interest earned on the investment over a period of time. The beauty of compound interest is the growth rate of your wealth. The wealth you will accrue from your investment will grow exponentially, the longer you leave your money invested




**Lucy the Saver**

In comparison, in an ISA account, the return rate is dependent on the rate set by the Monetary Policy Committee (MPC). Over the past five years, interest rates set by the MPC have sat around 0.5% with the current base rate at 0.1%. Savings interest rates have varied from 1.4% in 2015 to 0.64% in 2020.
Lucy decides to put her savings in an ISA with the intent for her money to grow with compound interest. The only issue here is Lucy doesn't realise inflation is eroding the value of her savings. In thirty years, the money she has saved will be worth less than what she will anticipate it to have. The reason for this is due to the costs of goods and services rising over time as the economy grows, which results in a loss of buying power. In the UK, the government sets an inflation target of 2%. If the inflation target is 2% and you are only earning 1% on your savings, you are effectively losing money in the long run.

If Lucy invested $100 in her savings account that paid her 1% interest per annum. After one year, she'd have $101. But if the rate of inflation is currently 2%, she will need $102 to have the same purchasing power that she started with.

**$9,772**
Current value of $10,000 invested 10 years ago

**$85,000**
Amount in an ISA protected per person per financial insitution

**0.25**
Lowest (and current) federal funds target

# Disclaimer

S&P 500

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