

[Top Stories](#) Inflation Just Ticked Up Again—Protect Your Savings Fast [Are You Ready for the Fed's Next Move?](#)

On-Balance Volume (OBV): How It Works and How to Use It

By [ADAM HAYES](#) Updated August 10, 2025

Reviewed by [GORDON SCOTT](#)

Fact checked by [PETE RATHBURN](#)



Credit: Investopedia / Dennis Madamba

What Is On-Balance Volume (OBV)?

On-balance volume (OBV), developed by Joseph Granville, is a technical trading indicator that looks at price and volume movements. Granville proposed that OBV would signal significant price shifts. His OBV methodology suggests that price moves will occur based on changes in volume. For example, if volume rises sharply without a corresponding price move, a significant price movement is likely to follow. This is known as a 'spring being wound tightly' effect.



TRADE

Top Stories Inflation Just Ticked Up Again—Protect Your Savings Fast Are You Ready for the Fed

Indicator that uses trading volume to anticipate changes in stock

prices. It signals potential price movements based on volume shifts, as volume typically precedes price action.

- Smart Money vs. Retail Investors: OBV helps distinguish between institutional investors—often referred to as "smart money"—and retail investors. When large institutions begin buying, OBV rises even if prices are flat; eventually, prices tend to follow the volume.
- Cumulative Volume Calculation: The OBV is calculated by adding the volume to the previous OBV if a stock's closing price is higher than the previous day, subtracting the volume if it's lower, and keeping it unchanged if the price is identical.
- Limitations and Considerations: As a leading indicator, OBV can produce false signals and may require confirmation from lagging indicators. Sudden volume spikes, due to events like earnings reports, can distort OBV readings.
- OBV vs. Other Indicators: While OBV focuses on volume relative to the direction of price changes, other indicators like Volume-Price Trend (VPT) factor in the magnitude of price changes, offering different insights into market dynamics.

TRADE

Top Stories Inflation Just Ticked Up Again—Protect Your Savings Fast Are You Ready for the Fed's Next Move?



 Investopedia

Credit: Image by Sabrina Jiang © Investopedia 2021

Understanding the On-Balance Volume (OBV) Formula

$$\text{OBV} = \text{OBV}_{prev} + \begin{cases} \text{volume}, & \text{if } \text{close} > \text{close}_{prev} \\ 0, & \text{if } \text{close} = \text{close}_{prev} \\ -\text{volume}, & \text{if } \text{close} < \text{close}_{prev} \end{cases}$$

where:

OBV = Current on-balance volume level

OBV_{prev} = Previous on-balance volume level

volume = Latest trading volume amount

How to Calculate On-Balance Volume

On-balance volume provides a running total of volume based on price. It indicates whether this volume is positive or negative relative to the previous day's closing price. The OBV is a cumulative total of daily OBVs. There are three rules implemented when calculating OBV:

1. If today's closing price is higher than yesterday's closing price, add today's volume to the OBV.

$\text{OBV} = \text{Previous OBV} + \text{today's volume}$

Top Stories Inflation Just Ticked Up Again—Protect Your Savings Fast Are You Ready for the Fed's Next Move?

2. If today's closing price is lower than yesterday's closing price, then: Current OBV = Previous OBV - today's volume

3. If today's closing price equals yesterday's closing price, then: Current OBV = Previous OBV

Insights Provided by On-Balance Volume (OBV)

The theory behind OBV is based on the distinction between [smart money](#)—namely, institutional investors—and less sophisticated retail investors. As mutual funds and pension funds begin to buy into an issue that retail investors are selling, volume may increase even as the price remains relatively level. Eventually, volume drives the price upward. At that point, larger investors begin to sell, and smaller investors begin buying.

Although plotted on a [price chart](#), the specific numerical value of OBV isn't important. The indicator itself is cumulative, while the time interval remains fixed by a dedicated starting point, meaning the real number value of OBV arbitrarily depends on the start date. Instead, traders focus on OBV movements over time; the slope of the OBV line indicates whether the market is trending up or down.

Analysts use OBV volumes to track price movements and identify divergences between volume and price. OBV also interacts with regular investors, as it can indicate when institutions are buying or selling. For example, institutions often buy stocks before they sell after other investors jump on the bandwagon.

Practical Application: Using OBV in Trading

[Top Stories](#) Inflation Just Ticked Up Again—Protect Your Savings Fast Are You Ready for the Fed's Next Move?

1. Day one: closing price equals \$10, volume equals 25,200 shares
2. Day two: closing price equals \$10.15, volume equals 30,000 shares
3. Day three: closing price equals \$10.17, volume equals 25,600 shares
4. Day four: closing price equals \$10.13, volume equals 32,000 shares
5. Day five: closing price equals \$10.11, volume equals 23,000 shares
6. Day six: closing price equals \$10.15, volume equals 40,000 shares
7. Day seven: closing price equals \$10.20, volume equals 36,000 shares
8. Day eight: closing price equals \$10.20, volume equals 20,500 shares
9. Day nine: closing price equals \$10.22, volume equals 23,000 shares
10. Day 10: closing price equals \$10.21, volume equals 27,500 shares

As can be seen, days two, three, six, seven and nine are up days, so these trading volumes are added to the OBV. Days four, five and 10 are down days, so these trading volumes are subtracted from the OBV. On day eight, no changes are made to the OBV since the closing price did not change. Given the days, the OBV for each of the 10 days is:

1. Day one OBV = 0
2. Day two OBV = 0 + 30,000 = 30,000
3. Day three OBV = 30,000 + 25,600 = 55,600
4. Day four OBV = 55,600 - 32,000 = 23,600
5. Day five OBV = 23,600 - 23,000 = 600
6. Day six OBV = 600 + 40,000 = 40,600
7. Day seven OBV = 40,600 + 36,000 = 76,600
8. Day eight OBV = 76,600
9. Day nine OBV = 76,600 + 23,000 = 99,600
10. Day 10 OBV = 99,600 - 27,500 = 72,100

Comparing OBV and Accumulation

On-balance volume and the [accumulation](#) indicator are similar in that they are both momentum indicators that use volume to predict the movement of a security.

Top Stories Inflation Just Ticked Up Again—Protect Your Savings Fast Are You Ready for the Fed's Next Move?

The formula used to create the accumulation/distribution (Acc/Dist) line is quite different than the OBV shown above. The formula for the Acc/Dist, without getting too complicated, is that it uses the position of the current price relative to its recent trading range and multiplies it by that period's volume.

Challenges and Limitations of Using On-Balance Volume

One limitation of OBV is that it is a leading indicator, meaning that it may produce predictions, but there is little it can say about what has actually happened in terms of the signals it produces. Because of this, it is prone to produce false signals. It can therefore be balanced by lagging indicators. Add a moving average line to the OBV to look for OBV line breakouts; you can confirm a breakout in the price if the OBV indicator makes a concurrent breakout.

Another note of caution in using the OBV is that a large spike in volume on a single day can throw off the indicator for quite a while. For instance, a surprise earnings announcement, being added or removed from an index, or massive institutional block trades can cause the indicator to spike or plummet, but the spike in volume may not be indicative of a trend.

What Is Average Daily Trading Volume?

Average daily trading volume (ADTV) is the average amount of shares traded each day for a given stock. It can be a useful metric because high or low trading volume attracts different types of traders. Traders and investors can use ADTV to assess liquidity, analyze volatility, and manage risk. ADTV can be used alongside other metrics to gain a better understanding of the market's activity.

What's the Difference Between OBV and Volume-Price Trend?

Volume-Price Trend (VPT) is similar to OBV in that it tracks the cumulative volume and provides information about money flow. But whereas OBV looks at volume just according to whether the price moved up or down, VPT also takes into account the percentage change in price to determine the direction of the trend.

[Top Stories](#) Inflation Just Ticked Up Again—Protect Your Savings Fast Are You Ready for the Fed?

On-Balance Volume is a leading indicator: it produces predictions, but it doesn't provide specific information on exactly what happened or why. This can lead to wrong interpretations. OBV should be used alongside lagging indicators for better effectiveness.

The Bottom Line

On-balance volume (OBV) is a technical indicator that measures positive and negative volume flows and analyzes the trading direction. It appears as a single line that helps investors make trading decisions and identify buy or sell points. However, OBV doesn't provide specific information about the financial asset, which can lead to misinterpretations. Therefore, traders should balance OBV by using lagging indicators.

[READ MORE](#) [Trading](#) [Technical Analysis](#)

Partner Links

Related Articles