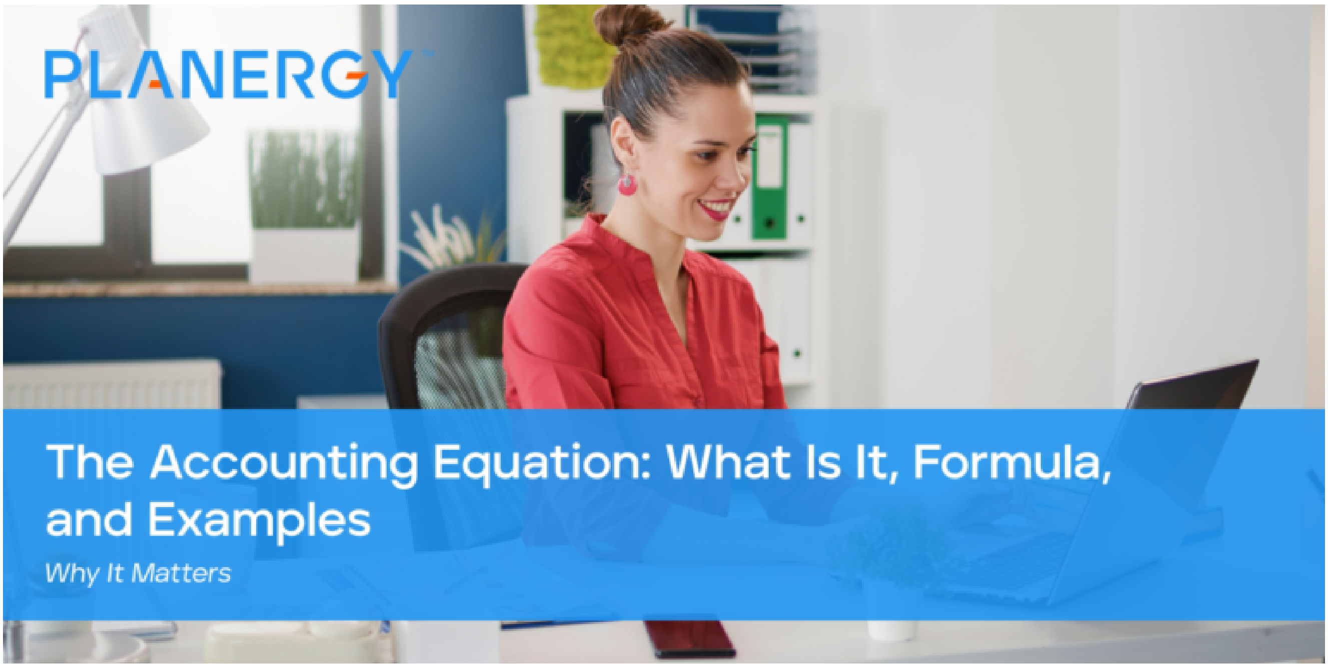
The Accounting Equation: What Is It, Formula, and Examples



IN THIS ARTICLE

If you're currently using a double-entry bookkeeping or accounting system in your business, you already understand debits and credits.

To determine whether your debits and credits balance, you would create a balance sheet, displaying your total assets, liabilities, and owner's equity.

The foundation of the double-entry accounting system and the balance sheet is the accounting equation.

What Is the Accounting Equation?

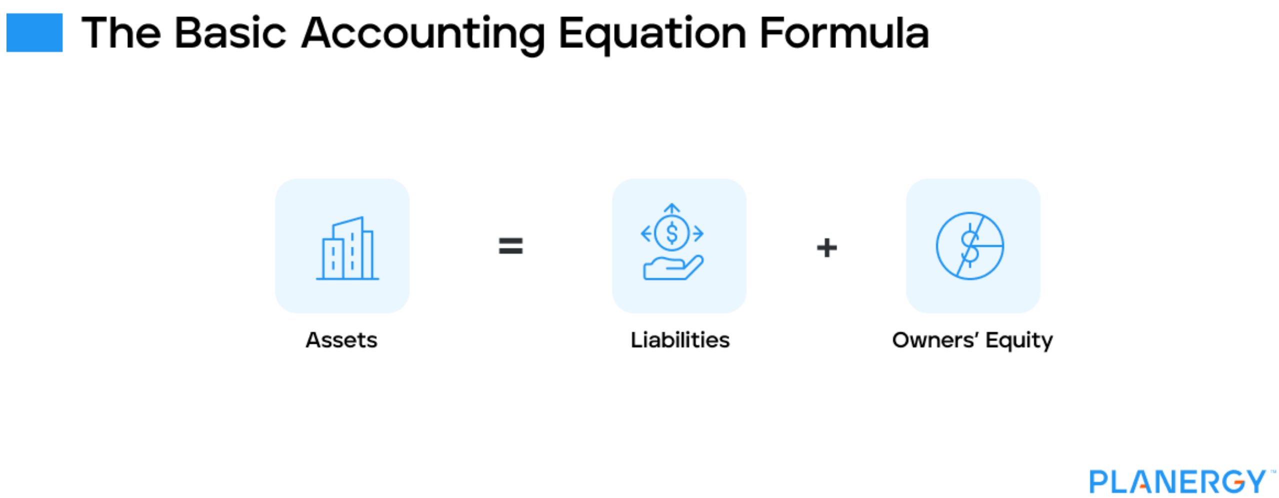
The accounting equation was created more than 500 years ago, but remains the guiding accounting principle for double-entry bookkeeping which is that for any entry made in a general ledger account, there needs to be a corresponding entry into another account.

For example, anytime you complete a debit entry you must also complete a credit entry as well. Abiding by this principle helps keep your balance sheet in balance at all times.

The accounting equation is used to prove that all of your company assets are equal to your company's liabilities and owner's equity.

Also known as the basic accounting equation or balance sheet equation, the accounting equation is used by any business currently using double-entry accounting as a way to keep their books balanced.

The basic accounting equation formula is:



Assets = Liabilities + Owners' Equity

What Are the Elements of the Accounting

Equation?

The accounting equation uses all three elements of the balance sheet; assets, liabilities, and owners' equity.

Neither revenue nor expenses, which are found on your income statement, are included in the basic accounting equation.

To better understand the accounting equation, we'll take a closer look at each section of the balance sheet.

- ## Assets

  Assets are anything of value that your business owns.

  Cash, cash equivalents, accounts receivable, and inventory are all considered current assets, which means that they can be converted to cash quickly.

  Long-term assets include buildings, vehicles, plants, property, and equipment. These assets represent things of value that cannot be quickly converted to cash.

  Other assets a company may have include intangible assets such as trademarks, patents, and goodwill, which are assets that have an implied value but are not physical.

- ## Liabilities

  Liabilities are things that your business owes.

  Accounts payable, wages payable, and short-term loans are all considered current liabilities, which means that they're due and payable within a year's time.

  Long-term liabilities are due in more than a year's time and include notes payable and other loans due to a bank such as a mortgage.

- ### Owners' Equity

  Owners' equity may be called a variety of things on a balance sheet, equity, owners' equity, stockholder's equity, or shareholder's equity, but it always represents the funds that are available to owners and shareholders.

  Another important part of owners' equity is retained earnings, which represents the amount of money available after dividends have been paid to company shareholders.

  If financial transactions are recorded properly, your accounting equation should always be balanced meaning total debits equal total credits.

  If it's not balancing, that's an indication that there's an error somewhere that needs to be corrected.

  The most common errors are data entry errors including very common transposition errors.

  An accounting equation that doesn't balance can also be caused by the failure to enter a transaction completely, such as entering the debit but not the credit or by entering two debit transactions.

  Once you locate the error and make the necessary corrections, your balance sheet totals and your accounting equation should balance.

How Does the Accounting Equation Relate to the Balance Sheet?

A balance sheet maintains detailed financial records for assets, liabilities, and owner's equity.

The information used for the accounting equation is derived from the numbers on a company's balance sheet.

ABC Company – Balance Sheet – December 31, 2024		
Current Assets		

Cash	$65,000	
Inventory	$170,000	
Accounts Receivable	$31,100	
Total Current Assets		**$266,100**
Non-Current Assets		
Equipment	$190,000	
Buildings	$175,000	
Total Non-Current Assets		**$365,000**
Total Assets		**$631,100**
Current Liabilities		
Accounts Payable	$85,100	
Notes Payable	$100,000	
Total Current Liabilities		$185,100
Non-Current Liabilities		
Building Loan	$170,000	
Total Non-Current Liabilities		**$170,000**
Total Liabilities		**$355,100**
Owners' Equity		
Capital	$121,000	
Retained Earnings	$155,000	
Total Owners' Equity		**$276,000**

Looking at the balance sheet, you can see that total assets are $631,100, total liabilities are $355,100, and total owners' equity is $276,000.

The accounting equation for this balance sheet would be:

$631,000 (Assets) = $355,100 (Liabilities) + $276,000 (Owners' Equity)

An Example of How To Use the Accounting

Equation

The accounting equation is used by businesses to ensure that their balance sheet remains in balance.

Debits are always posted on the left side of the account, while credits are posted to the right side of the account.

Remember when you debit an asset account, you're increasing the balance of the account.

Likewise, when you credit a liability or equity account, you're increasing the balance.

A credit to an asset account would decrease the balance, while a debit to a liability or equity account would decrease the balance.

Any transaction you post into your general ledger will directly impact your balance sheet in some fashion. For example, Robert recently opened a hardware store.

When preparing to open the business, Robert made the following transactions:

- Contributed cash of $50,000 to start the business
- Purchased bins and shelves for the store on credit totaling $2,000
- Purchased hardware items for the store on credit totaling $21,000
- Obtained a small business loan for $10,000

Each transaction that Robert made directly impacted his initial balance sheet and the accounting equation.

For his first transaction, Robert deposited $50,000 to initially fund the business.

This initial transaction impacted the cash account under assets and the owners' equity account.

To record the journal entry into the general ledger, Robert would debit or increase his cash account, which is an asset account, and credit or increase his owners' equity account, which is an equity account.

The impact on Robert's balance sheet would be:

$50,000 (assets) = $0 (liabilities) + $50,000 (owners' equity).

Robert then purchased $2,000 worth of bins and shelves for the store on credit.

This transaction impacted the furniture and fixtures account, which is a fixed asset, and his accounts payable account, which is a liability.

To record this transaction, Robert would debit or increase his furniture and fixtures account which is an asset account, and credit or increase his accounts payable account, which is a liability account.

The impact on Robert's balance sheet would be:

$2,000 (assets) = $2,000 (liabilities) + $0 (owners' equity)

Next, Robert purchased inventory for $21,000 to stock his store. He purchased the inventory on credit.

This transaction impacted his inventory account, which is an asset, and increased his accounts payable account, which is a liability.

To record this transaction, Robert would debit or increase his inventory account which is an asset account, and credit or increase his accounts payable account, which is a liability account.

The impact on the balance sheet is:

$21,000 (assets) = $21,000 (liabilities) + $0 (owners' equity)

Finally, Robert realized that he needed additional funds to open the store, so he obtained a business loan for $10,000, which would need to be paid off in six months.

To record the transaction, Robert would debit or increase his cash account which is an asset, and credit or increase his short-term loan account, which is a liability account.

The balance sheet equation would be reflected as follows:

$10,000 (assets)= $10,000 (liabilities) + $0 (owners' equity)

Assets	
Current Assets	
Cash	$60,000
Inventory	$21,000
Total Current Assets	$81,000
Fixed Assets	
Furniture and Fixtures	$2,000
Total Fixed Assets	**$2,000**
Total Assets	**$83,000**
Liabilities and Equity	
Current Liabilities	
Accounts Payable	$23,000
Short-Term Loan	$10,000
Total Current Liabilities	**$33,000**
Total Liabilities	**$33,000**
Equity	
Owners' Deposits	$50,000
Total Equity	**$50,000**
Total Liabilities and Equity	**$83,000**

After Robert has entered all of his initial business transactions into the general ledger, he runs a balance sheet which that all accounts are in balance.

$83,000 (Total Assets) = $33,000 (Total Liabilities) + $50,000 (Owners' Equity)

What will happen if the accounting equation is not balanced?

If Robert had posted any of the above transactions incorrectly, his balance sheet would not have been balanced.

For instance, if he had posted his $50,000 into his cash account but had not completed the transaction by posting the $50,000 in the owners' equity account, the balance sheet would not be in balance.

Posting only half of a transaction is more likely if you're using a spreadsheet application to record your accounting transactions.

If you're using an accounting software application, the program will send a warning if there is not a debit and credit included in the transaction.

However, even accounting software will not prevent other common issues such as posting transactions to the wrong account or for the wrong amount.

What Is the Most Popular Accounting Equation?

The accounting equation also known as the balance sheet equation is the equation used most frequently since it's the backbone of accrual accounting.

Using the accounting equation ensures that your debits and credits are in balance.

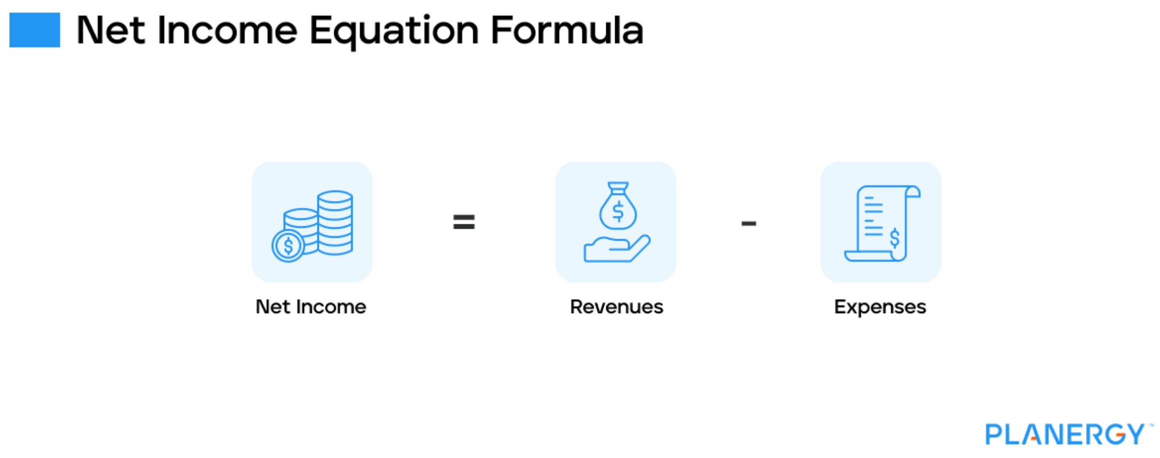
However, there are several other accounting equations that businesses can use to better manage business finances.

- ### Net Income Equation

  The net income equation can be used to view your company's overall profitability.

  Investors like the net income equation since it provides a better idea of company profitability than a financial statement alone.

  The net income equation is:



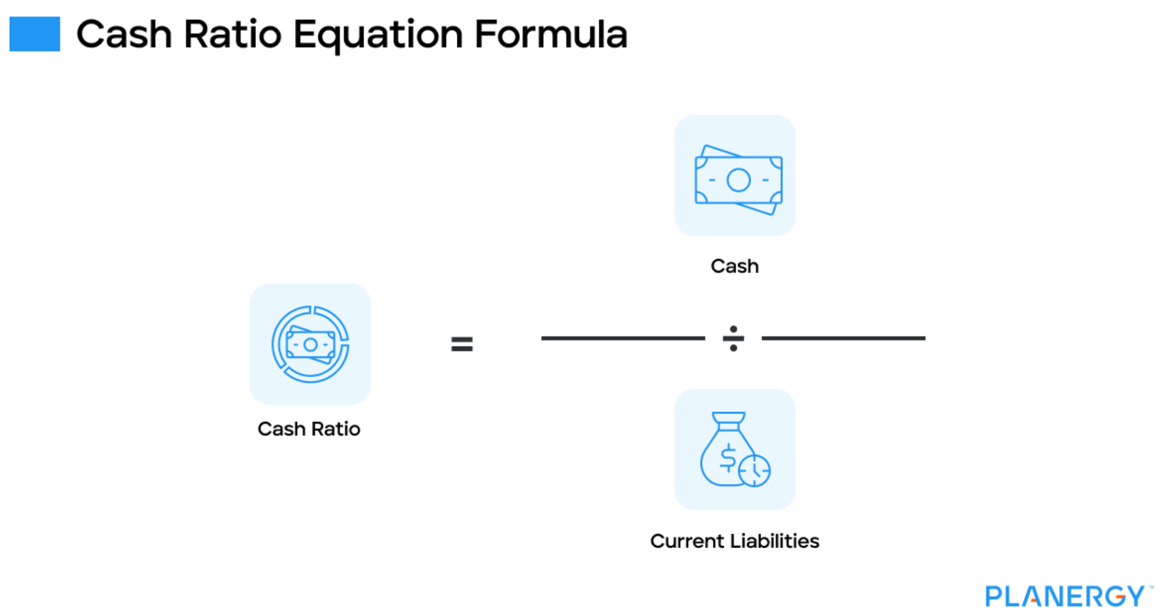
Net Income = Revenues – Expenses

Cash Ratio Equation

The cash ratio equation is used to measure the liquidity of your business.

For example, if you were required to pay off all of your liabilities immediately, do you have the available cash to do so?

The cash ratio equation will let you know. The formula for the cash ratio equation is:

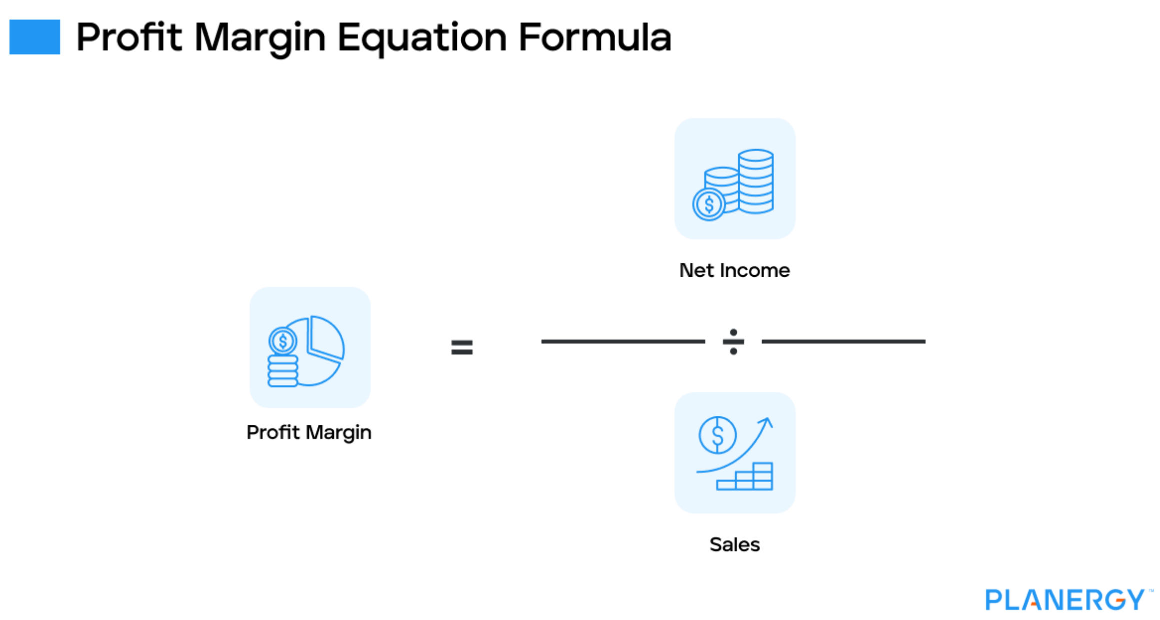


Cash Ratio = Cash / Current Liabilities

Profit Margin Equation

The profit margin equation measures the overall financial health of your business.

The results of this equation can help pinpoint areas that may need improvement. The formula for the profit margin equation is:



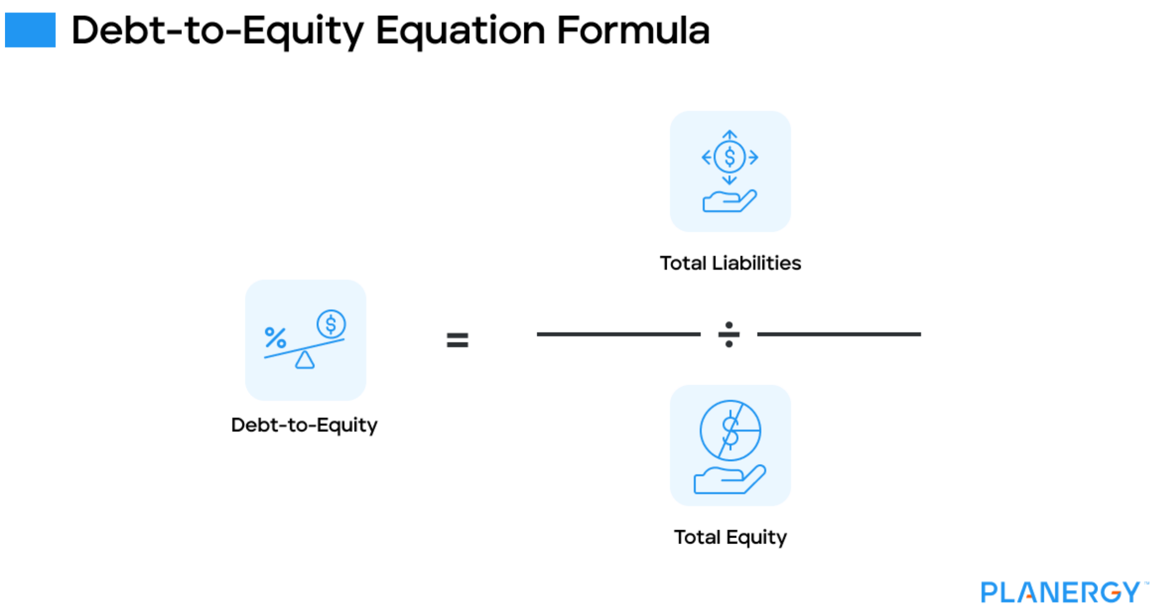
Profit Margin = Net Income / Sales

Debt-to-Equity Equation

The debt-to-equity ratio measures how much debt is used to finance business operations versus equity.

A high debt-to-equity ratio may make a business less appealing to investors, but a low ratio result may indicate that a business is not using debt effectively.

The debt-to-equity equation formula is:



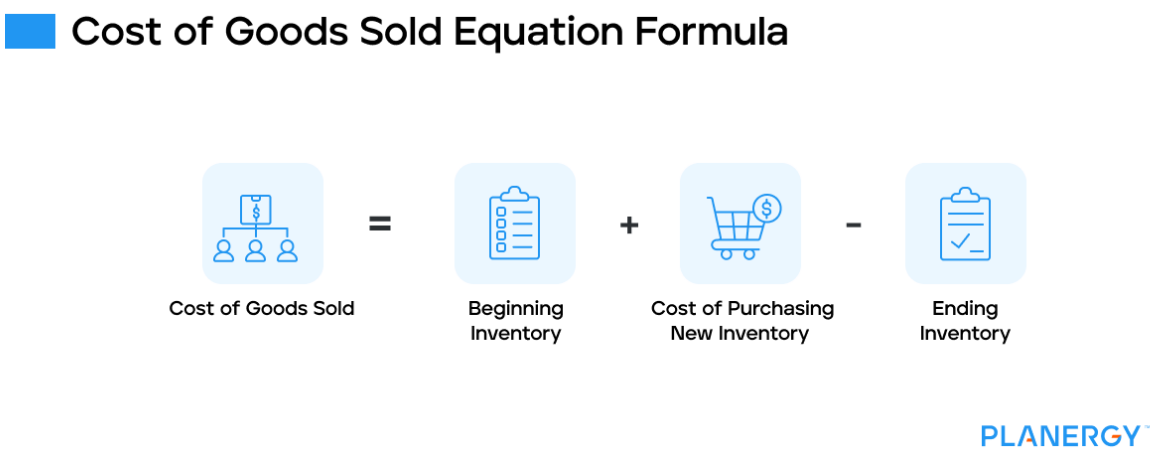
Debt-to-Equity Equation = Total Liabilities / Total Equity

- ## Cost of Goods Sold Equation

The cost of goods sold equation calculates how much it costs to produce the products and services your business sells.

Knowing the results of this equation is particularly helpful when setting prices.

The cost of goods sold equation formula is:



Cost of Goods Sold = Beginning Inventory + Cost of Purchasing New Inventory – Ending Inventory

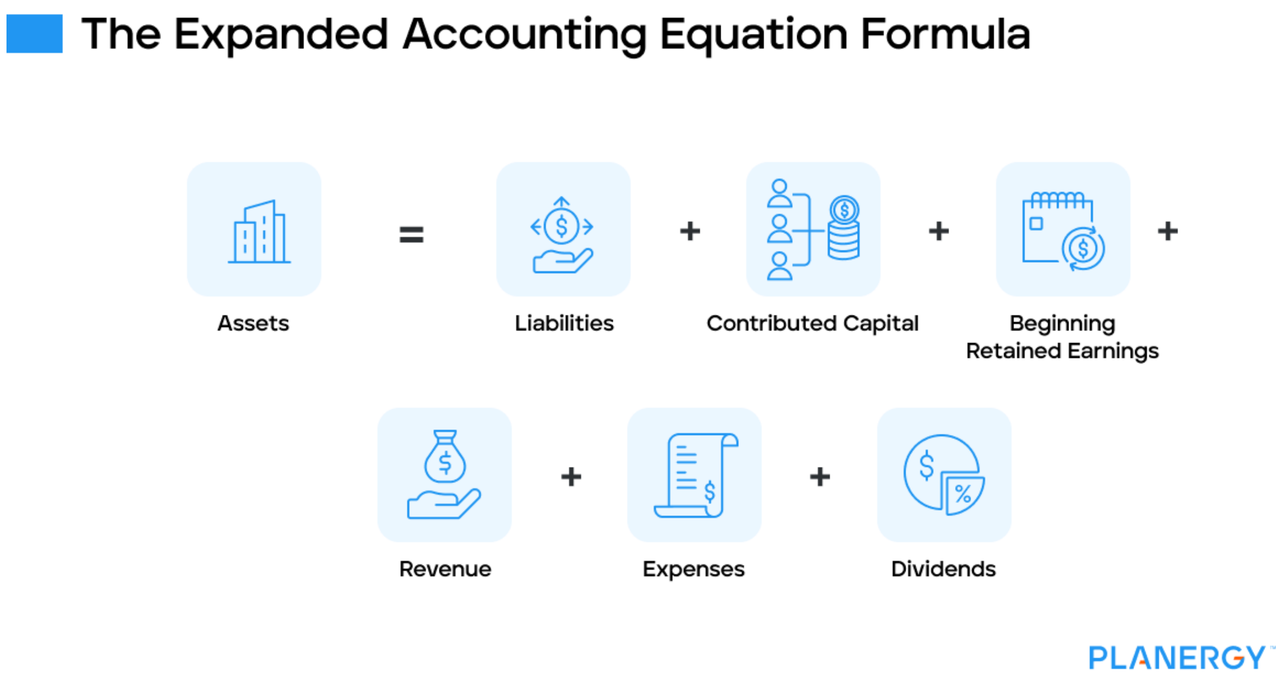
What Is the Expanded Accounting Equation?

The expanded accounting equation is used to provide additional details about stockholder equity.

Instead of using equity as one number, the expanded accounting equation details each separate component of the equity account, including:

- **Contributed capital (CC)** represents the amount of capital contributed by the original owners and investors.
- **Beginning retained earnings (BRE)** which is earnings not distributed to shareholders from the previous accounting period.
- **Revenue (R)** is the amount of revenue generated by regular business operations.
- **Expenses (E)** represents the costs incurred for regular business operations and will be subtracted from the equity account.
- **Dividends (D)** represents the earnings that are distributed to shareholders, with the total subtracted from the equity account.

The expanded accounting equation is:



Assets = Liabilities + Contributed Capital + Beginning Retained Earnings + Revenue + Expenses + Dividends.

The expanded accounting equation is usually calculated by investors and potential investors to view how equity is managed.

Why Is the Accounting Equation Important?

Accurate financial statements start with a balance sheet that balances.

That's why using the accounting equation is so important.

The accounting equation is the backbone of double-entry accounting, highlighting the relationship between assets, liabilities, and equity, and how a single financial transaction can impact the balance sheet.

Using the accounting equation to better understand your financial position and keep your books balanced is also a necessity for any business owner looking to expand, seek out investors, or even obtain a business loan.

It only takes a minute or less to use the accounting equation, but it's time well spent.

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