

6.2: What do ratios tell us about the liquidity of a company from its financial statements?

Learning Objectives

After completing this section, students will be able to:

- Calculate the current ratio and quick ratio from balance sheet information
- Explain how transactions may change the quick ratio and current ratio
- Explain how the ratios communicate a company's liquidity

Ratios are calculated comparisons between two or more dollar amounts on the financial statements that help us see and measure relationships

Question: What is shown by the current ratio?

Since the ability to meet obligations and pay bills when they are due is a key concept in maintaining liquidity for a business, it makes sense that one measure of that liquidity is to compare what is listed on a company's balance sheet for current assets with what is listed as current liabilities. The current assets are those resources available over the next year that the company controls and the current liabilities are those obligations that are due over the next year. Thus the formula for calculating the current ratio is:

CURRENT ASSETS / CURRENT LIABILITIES

A properly prepared balance sheet should have totals for both current assets and current liabilities making it fairly simple to calculate. The ratio is just that – a ratio. While it can be converted to a percentage it is generally not done that way. If current assets are 200 and current liabilities are 100, then the ratio would be 2.0 and the company could be described as having \$2 of current assets for every \$1 of current liabilities. That would give them the ability to meet their current obligations and have some extra assuming they are able to convert all of their current assets that are not cash into cash in a timely way to pay the bills. If current assets on the balance sheet are \$80 and current liabilities are \$100, the ratio would be calculated as .8. That could be described as having 80 cents of assets for every \$1 of current liabilities. This company would have little extra liquidity and must be careful to convert all assets into cash quickly as to be able to meet obligations. They are less liquid than the company with a current ratio of 2.0.

This kind of comparison can be done by comparing the liquidity of a single company over time (calculate the current ratio for 2023 and compare it to 2022) to see how it is changing. This is referred to as horizontal analysis – looking at a single company changes over time. Comparison are also made between two different companies by looking at one company's current ratio in comparison to another company's current ratio. This is usually most valuable when done with two companies that are in a similar industry or that have similar products or services.

Question: What is different with the quick ratio?

The quick ratio (also referred to as the acid test ratio) is also a measure of liquidity using the balance sheet of a company. The difference is what is included in the top number or assets side of the equation. The formula could be written out like this:

QUICK ASSETS / CURRENT LIABILITIES

When considering quick assets, remember that on a balance sheet, current assets are generally listed in order of liquidity with cash first. If you are looking at the current assets, quick assets are thought of as all those more liquid than inventory. So you may see quick assets defined as cash and cash equivalents, marketable securities or short-term investments and accounts receivable. You may also see quick assets defined as total current assets subtract inventory and any others listed afterwards.

So if a business' current assets were listed as follows

Cash	\$10
Cash Equivalents	5
Marketable Securities	20

Accounts Receivable	12
Inventory	15
Prepays	4
Total	\$66

Quick assets could be found by taking $10 + 5 + 20 + 12 = \$47$ or by taking $\$66 - 15 - 4 = \47 . Two ways to get the same result. Using either way, the quick assets would be divided by current liabilities to get the ratio. The quick ratio is referred to the same way as the current ratio – a ratio of 1.5 can be described as having \$1.50 of quick assets for each dollar of current liabilities. You might notice that no matter what the situation the quick assets must be equal to or less than total current assets. That means that the quick ratio must be equal to or less than the current ratio.

Question: How would a business or transactions change the business's liquidity as measured by the current and quick ratio?

Examining the formula will help us understand what would change the ratios. Because current assets or quick assets are the top or numerator in the ratio, any transaction that increased current/quick assets without changing current liabilities will increase the current/quick ratio. Any transaction that decreases the current or quick assets without changing the current liabilities will decrease the ratio. So a sale of inventory that cost \$60 for \$100 in cash from a customer will increase cash by \$100 and decrease inventory \$60 so total current assets increased by \$40. The other side of the accounting equation shows an increase in retained earnings by \$40 as well. Since there is no effect on current liabilities and an increase in current assets, there would be an increase in the current ratio. Because cash is included in the quick assets and they increase, there is also an increase in the quick ratio.

What about the collection of accounts receivable from a customer. As we discussed earlier, when collecting cash owed to us from a customer, there is an increase in cash and a decrease in accounts receivable for the same amount. As both cash and accounts receivable are current assets, the total current assets stay the same and so does the current ratio. Because cash and accounts receivable are both quick assets, the total quick assets stay the same and so does the quick ratio.

What if you bought inventory with cash. This would increase inventory and decrease cash. As both of these are current assets, the total current assets would not change and thus neither would the current ratio. However, cash is included in the quick assets and inventory is not. Thus the decrease in cash would decrease the quick assets and the increase in inventory would not affect quick assets. Thus as cash decreased the quick assets, it would also decrease the quick ratio.

Increases or decreases to current liabilities that do not change current assets or quick assets will have the opposite effect on the current and quick ratio. An increase in current liabilities will decrease both the current ratio and quick ratio if there is no change on the assets side. A decrease in current liabilities will increase the ratio if assets remain unchanged. A company with \$150 of current assets and \$50 of current liabilities will have a current ratio of 3 but if you increase the current liabilities to \$75 the current ratio decreases to $2 = \$150/\75 .

What takes extra care is when a transaction affects both the current assets and current liabilities by the same amount. The first thought is if both went up by the same amount then the ratio would stay the same. An example will illustrate that this is not usually the case. Company A has current assets of \$350 and current liabilities of \$175 for a current ratio of $2 = \$350/\175 . Company A uses cash of \$50 to pay off accounts payable. This reduces current assets (cash) and current liabilities (accounts payable) each by \$50. The new current ratio is $\$300 (350-50) / \$125 (175 - 50) = 2.4$. The current ratio went up with the transaction. It is best to work through the specific numbers when contemplating the effect on the current ratio of a transaction that affects current assets and current liabilities by the same amount. The same goes for quick assets in calculating the quick ratio.

Real World Example

□ [Harley current ratio.pdf](#)

Check Yourself

Hero Company currently has current assets of \$5,500 and current liabilities of \$2,100. Hero purchases \$100 of inventory on credit. What will happen to Hero's current ratio with the purchase?

A. Will increase

- B. Will decrease
- C. Stay the same

Hero's current ratio before the transaction was $\$5,500/\$2,100 = 2.62$ and the purchase made current assets go up by \$100 to \$5,600 and increased current liabilities by \$100 to \$2,200. So the new calculation is $\$5,600 / \$2,200 = 2.55$. The answer is B will decrease.

For the quick ratio, we do not have to recalculate the ratio. We know that inventory is not a quick asset so the purchase of inventory will not change quick assets but still increases the current liabilities. With the same quick assets and higher current liabilities the quick ratio will also decrease. To know exactly how much it will decrease would require the exact amounts of quick assets which was not provided.

Key Takeaways

An increase in current or quick assets that is more than the increase in current liabilities = increase in current/quick ratio		
A decrease in current or quick assets that is less than the decrease in current liabilities = decrease in current/quick ratio		
An increase in current liabilities that is greater than the increase in current or quick assets = decrease in current/quick ratio		
A decrease in current liabilities that is greater than the decrease in current or quick assets = increase in current/quick ratio		
No change to current/quick assets or current liabilities = no change in ratio		
Change to current/quick assets is the same amount and in the same direction as change in change in current liabilities means you will need to use an example to calculate.		

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