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Federal Income Tax Rates

by Sophia

WHAT'S COVERED

In this lesson, you will learn how to calculate marginal and effective tax rates on income and capital assets. Specifically, this lesson will cover:

WATCH

Calculating tax rates involves mathematics. If you find math challenging, consider using the strategy, *Eat the Frog*. It may sound strange, but this strategy is all about prioritizing your tasks to stay productive. Check out this video before moving on to section 1.

1. Federal Income Tax Brackets and Marginal Tax Rates

The U.S. tax system is based on a graduated system of **tax brackets**. These tax brackets and associated tax rates reflect the progressive nature of the federal income tax system.

1a. Income Tax Brackets

- A tax bracket is a predefined range of taxable income in which a single tax rate applies.

- These tax brackets build on one another to create a continuous scale of seven different tax rates, ranging from 10% to 37%, that are applied in a progressive manner to calculate a taxpayer's income tax.
- The table below shows the tax brackets for single taxpayers (in 2018). Each year's tax brackets are adjusted based on a modified measure of inflation. This means you can anticipate the numbers in the table to increase annually.

Table: Federal Tax Brackets and Associated Tax Rates for Single Filers

If your taxable income is over	but not over	your tax is
$0	$9,525	10% of your taxable income
$9,525	$38,700	$952.50 + 12% of the amount over $9,525
$38,700	$82,500	$4,453.50 + 22% of the amount over $38,700
$82,500	$157,500	$14,089.50 + 24% of the amount over $82,500
$157,500	$200,000	$32,089.50 + 32% of the amount over $157,500
$200,000	$500,000	$45,689.50 + 35% of the amount over $200,000
$500,000		$150,689.50 + 37% of the amount over $500,000

EXAMPLE Say that you have a taxable income of $95,000 and are single. Using the table, you can calculate the tax on your $95,000 as follows.

1. Looking at the first two columns, note that your taxable income of $95,000 falls within the row of being over $82,500 but less than $157,500.
2. Moving to column three, you can see that the tax on your income is going to be $14,089.50 + 24% of your income over $82,500: (24% × ($95,000 – $82,500)) is $3,000. Therefore, your total tax is $14,089.50 + $3,000, which equals $17,089.50.
   In this example, your highest **tax bracket tax rate** is 24%.

TRY IT

Using the Federal Tax Bracket Table above, try to answer the following questions.

How much tax should you pay if you are a single filer and your taxable income is $48,000? +

$6,499.50. The tax due is $4,453.50 plus 22% of the income between $38,700 and $48,000.

How much tax should you pay if you are a single filer and your taxable income is $16,500? +

$1,789.50. The tax due is $952.50 plus 12% of the income between $9,525 and $16,500.

TERMS TO KNOW

Tax Bracket

A predefined range of taxable income in which a single tax rate applies.

Tax Bracket Tax Rate

The predetermined rate at which income or property is taxed. In the United States, tax rates are broken into different brackets, which represent the level of taxation due on income within a bracket.

1b. Marginal Tax Rate

The **marginal tax rate** is the rate of change in tax resulting from a change in income or deduction.

- If a taxpayer received one more dollar of income, how would that affect his or her tax?
- Similarly, if the taxpayer were able to claim one more dollar of deductions, how much tax savings would result?

When engaging in tax planning, knowing your marginal tax rate is helpful. Here's an equation you can use to calculate your marginal tax rate.

FORMULA TO KNOW

Marginal Tax Rate

$$\text{Marginal Tax Rate} = \frac{\text{New Tax Liability} - \text{Old Tax Liability}}{\text{New Income} - \text{Old Income}}$$

To calculate the marginal tax rate, you will need to know:

- The new tax liability after the change in income
- The old tax liability before the change in income
- The change in income

EXAMPLE Assume that your income increased $2,000. If the difference between your new tax liability and old tax liability is $500, you would know that your marginal tax rate is 25% ($500 ÷ $2,000).

HINT

In practice, most people simply use their highest tax bracket tax rate from the previous table to identify their marginal tax rate. For example, if your taxable income is $95,000 and you earn one more dollar, the highest tax bracket rate that will apply to that dollar is 24%. Think of it this way: for every $1 more you make, 24 cents will go toward taxes. Similarly, for each extra $1 tax deduction, you will save 24 cents in taxes.

TRY IT

Using the Federal Tax Bracket Table above, try to answer the following questions.

You are a single filer with a taxable income of $67,000. What is your marginal tax rate? +

22%. This is the tax rate paid on your last dollar of income.

You are a single filer with a taxable income of $18,000. What is your marginal tax rate? +

12%. This is the tax rate paid on your last dollar of income.

What happens to the tax brackets if your filing status changes from single to married? The same tax rates apply, but the tax brackets are larger so that more of your household income is taxed at lower tax rates. The table below shows tax brackets for married taxpayers filing jointly (for 2018).

Table: Federal Tax Brackets and Associated Tax Rates for Married Filing Jointly

If your taxable income is over	but not over	your tax is
$0	$19,050	10% of your taxable income
$19,050	$77,400	$1,905 + 12% of the amount over $19,050
$77,400	$165,000	$8,907 + 22% of the amount over $77,400
$165,000	$315,000	$28,179 + 24% of the amount over $165,000
$315,000	$400,000	$64,179 + 32% of the amount over $315,000
$400,000	$600,000	$91,379 + 35% of the amount over $400,000
$600,000		$161,379 + 37% of the amount over $600,000

EXAMPLE

- Assume that you are married and both you and your spouse are employed. Together, your combined taxable income is $95,000 per year.
- Following the same steps as earlier, your tax in this case would be $8,907 + 22% of the amount over $77,400: (22% × ($95,000 – $77,400)) is $3,872. Therefore, your total tax is $8,907 + $3,872, which equals $12,779.

The tax for married filing jointly is the same even if only one spouse is employed.

BIG IDEA

As you can see, filing status has a big impact on the tax rates and ultimately the tax that a household pays. The following table presents a new example comparing married-filing-jointly and single taxpayers. This example incorporates the higher standard deductions that married-filing-jointly taxpayers receive.

Table: Comparison of Single and Married Taxpayers

	Married Filing Jointly	Single
Gross income	$75,000	$75,000

FOR AGI deductions	$0	$0
AGI	$75,000	$75,000
Standard deduction	$24,000	$12,000
Taxable income	$51,000	$63,000
Tax	$5,739	$9,799.50

TERM TO KNOW

Marginal Tax Rate

The rate of change in tax resulting from a change in income or deduction. In simpler terms, your marginal tax rate is the tax rate paid on your last dollar of income.

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2. Capital Assets and Tax Rates

The federal income tax rates that we have discussed thus far apply to **ordinary income**, or income derived from work, interest, self-employment, retirement plan distributions, rents, royalties, and other sources of earned income. Capital gain income is included in gross income, but a different tax rate applies to long-term capital gains and qualified dividends. Before we discuss the tax rates on capital gains, however, let's first discuss how capital gains are produced.

TERM TO KNOW

Ordinary Income

Income derived from work, interest, self-employment, retirement plan distributions, rents, royalties, and other sources of earned income.

2a. Capital Assets

Capital gains are produced by owning capital assets. Capital assets are things that you own for investment or personal use, either tangible or intangible, such as stocks, mutual funds, coin collections, other investments, personal belongings, cars, and real estate. Capital assets are defined by the IRS by what they are not.

- They are not used in your business (such as a tablet or a car).
- They are not a result of your normal business activities (like accounts receivable at a business).
- They are not associated with creative works (e.g., copyrights of songs and movies) of the people who created them.

If you sell an investment instead of a personal item for a loss (i.e., less than you purchased it for), you may be able to deduct some or all of the loss from your taxable income.

2b. Long-Term Capital Gains Tax Rates

Long-term capital gains are produced by selling assets (such as real estate or stock) that you have owned for more than 1 year for a profit. As the following table shows, these gains (in 2018) are most commonly taxed at 0%

or 15%, with an exception for higher-income households.

Table: Long-Term Capital Gains Tax Rates

Income by Filing Status			
Married Filing Jointly	**Head of Household**	**Single**	**Long-Term Capital Gain Tax Rate**
$0–$77,200	$0–$51,700	$0–$38,600	0%
$77,200–$479,000	$51,700–$452,400	$38,600–$425,800	15%
Over $479,000	Over $452,400	Over $425,800	20%

TERM TO KNOW

Long-Term Capital Gains

Produced by selling assets (such as real estate or stock) that you have owned for more than one year for a profit.

2c. Short-Term Capital Gains

Short-term capital gains result from selling a capital asset at a gain, but the asset is owned for one year or less. Short-term capital gains are taxed as ordinary income and do not receive any special tax treatment.

2d. Capital Losses

Unfortunately, you may not always sell investments for a gain. Hopefully, though, only on rare occasions will you sell an asset for less than you paid for it and create a capital loss. Capital losses first offset any similar capital gains that you have. After that, $3,000 of capital losses can be reported on your tax return, which can reduce your tax base.

3. Effective Tax Rates

In contrast to the tax bracket tax rate or the marginal tax rate discussed previously, the **effective tax rate** measures the average tax an individual pays on his or her entire income. The calculation for the effective tax rate is shown here.

FORMULA TO KNOW

Effective Tax Rate

$$\text{Effective Tax Rate} = \frac{\text{Total Federal Taxes}}{\text{Taxpayer's Total Income}} \times 100$$

TRY IT

Your total income is $53,000, your taxable income is $39,000, and your tax due is $4,519.50. What is your effective tax rate? +

8.53%. This represents the tax due on the taxable income ($4,519.50), divided by total income ($53,000), multiplied by 100.

Consider again the example in the following table in which both households have gross income of $75,000.

Table: Comparison of Single and Married Taxpayers

	Married Filing Jointly	Single
Gross income	$75,000	$75,000
FOR AGI deductions	$0	$0
AGI	$75,000	$75,000
Standard deduction	$24,000	$12,000
Taxable income	$51,000	$63,000
Tax	$5,739	$9,799.50

HINT

A taxpayer's effective tax rate will always be less than the taxpayer's marginal tax rate and tax bracket tax rate because of the progressive structure of the U.S. tax code.

- The married-filing-jointly taxpayer has tax of $5,739, resulting in an effective tax rate of 7.7% (($5,739 ÷ $75,000) × 100).
- The single taxpayer's tax is $9,799.50, resulting in an effective tax rate of 13.1% (($9,799.50 ÷ $75,000) × 100).

BIG IDEA

You can plan and structure your future income in ways that can lower your effective tax rate.

TERM TO KNOW

Effective Tax Rate

Measures the average tax an individual pays on his or her entire income.

SUMMARY

In this lesson, you learned about **federal income tax brackets and marginal tax rates**. Your tax rates change depending on your filing status (single, for example) and your taxable income. A marginal tax rate is the rate of change in tax resulting from a change in income or deductions. You also learned about the **sale of capital assets and associated tax rates**. A **long-term capital gain** is taxed on a rate basis, but sometimes those taxes are offset by any **capital losses** during the same period. **Short-term capital gains** (for assets held less than a year) are taxed as ordinary income. A person's **effective tax rate** measures the average tax an individual pays on his or her entire income.

TERMS TO KNOW

Effective Tax Rate
Measures the average tax an individual pays on his or her entire income.

Long-Term Capital Gains
Produced by selling assets (such as real estate or stock) that you have owned for more than one year for a profit.

Marginal Tax Rate
The rate of change in tax resulting from a change in income or deduction. In simpler terms, your marginal tax rate is the tax rate paid on your last dollar of income.

Ordinary Income
Income derived from work, interest, self-employment, retirement plan distributions, rents, royalties, and other sources of earned income.

Tax Bracket
A predefined range of taxable income in which a single tax rate applies.

Tax Bracket Tax Rate
The predetermined rate at which income or property is taxed. In the United States, tax rates are broken into different brackets, which represent the level of taxation due on income within a bracket.