

<p>Macroeconomics <span style="float: right;">Saving Equals Investment</span></p> <p style="text-align: center;"><b>Accounting Identity: Saving Equals Investment</b></p> <p>A fundamental macroeconomic accounting identity is that saving equals investment.</p> <p>By definition, saving is income minus spending.</p> <p>Investment refers to physical investment, not financial investment.</p> <p>That saving equals investment follows from the national income equals national product identity.</p> <p style="text-align: center;">1</p>	<p>Macroeconomics <span style="float: right;">Saving Equals Investment</span></p> <p style="text-align: center;"><b>No Government</b></p> <p>Consider first an economy without government. Saving is national income minus consumption,</p> $s = ni - c. \tag{1}$ <p>National income equals national product,</p> $ni = np. \tag{2}$ <p>National product is consumption plus investment,</p> $np = c + i. \tag{3}$ <p style="text-align: center;">2</p>
<p>Macroeconomics <span style="float: right;">Saving Equals Investment</span></p> <p>It follows that saving equals investment:</p> $\begin{aligned} s &= ni - c, \text{ by (1),} \\ &= np - c, \text{ by (2),} \\ &= (c + i) - c, \text{ by (3)} \\ &= i, \end{aligned}$ <p>as desired.</p> <p style="text-align: center;">3</p>	<p>Macroeconomics <span style="float: right;">Saving Equals Investment</span></p> <p style="text-align: center;"><b>Government</b></p> <p>With government, to show that saving equals investment is harder.</p> <p>Government expenditure refers to government purchases of goods and services.</p> <p>Taxes includes transfer payments and the interest on government debt as negative taxes.</p> <p style="text-align: center;">4</p>
<p>Macroeconomics <span style="float: right;">Saving Equals Investment</span></p> <p>By definition, government saving is taxes minus government expenditure,</p> $gs = t - g. \tag{4}$ <p>Disposable income is national income minus taxes. Private saving is disposable income minus consumption,</p> $ps = di - c = (ni - t) - c. \tag{5}$ <p style="text-align: center;">5</p>	<p>Macroeconomics <span style="float: right;">Saving Equals Investment</span></p> <p>National income equals national product,</p> $ni = np. \tag{6}$ <p>National product is consumption plus investment plus government expenditure,</p> $np = c + i + g. \tag{7}$ <p style="text-align: center;">6</p>

<p>Macroeconomics <span style="float: right;">Saving Equals Investment</span></p> <p>Total saving is private saving plus government saving:</p> $s = ps + gs$ $= (ni - t - c) + (t - g), \text{ by (4) and (5).}$ $= ni - c - g$ $= np - c - g, \text{ by (6)}$ $= (c + i + g) - c - g, \text{ by (7)}$ $= i,$ <p>as desired.</p> <p style="text-align: center;">7</p>	<p>Macroeconomics <span style="float: right;">Saving Equals Investment</span></p> <p style="text-align: center;"><b>Example</b></p> <p>Consider an initial economic state in which a student buys a football for \$1. Of course saving equals investment.</p> <p>Contrast this situation to an alternative economic state, in which the student does not buy the football. The sporting goods store still has the football, and the student has his dollar. Otherwise the alternative state is identical to the initial state.</p> <p>What has happened to saving and investment?</p> <p style="text-align: center;">8</p>
<p>Macroeconomics <span style="float: right;">Saving Equals Investment</span></p> <p>The saving of the student has increased \$1.</p> <p style="text-align: center;">9</p>	<p>Macroeconomics <span style="float: right;">Saving Equals Investment</span></p> <p>Investment has also increased by \$1. The store has extra inventory of \$1, and inventory accumulation counts as investment.</p> <p style="text-align: center;">10</p>
<p>Macroeconomics <span style="float: right;">Saving Equals Investment</span></p> <p style="text-align: center;"><b>Perishable Good</b></p> <p>Consider a second example, like the first, except that the good is perishable.</p> <p>In the initial state the student buys lettuce for \$1.</p> <p>In the alternative state, the student does not buy the lettuce, so the lettuce rots and is thrown out.</p> <p>What has happened to saving and investment?</p> <p style="text-align: center;">11</p>	<p>Macroeconomics <span style="float: right;">Saving Equals Investment</span></p> <p>As in the first example, the saving of the student has increased \$1.</p> <p style="text-align: center;">12</p>

