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## Government Spending and its Financing, Part 1

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## Agenda

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- Fiscal Policy and Budget Balances
  - Measuring Budget Change
    - Automatic versus Discretionary Changes
  - Designing Effective Short-run Fiscal Policy
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## Fiscal Policy and Budget Balances

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- Budget Arithmetic:
    - $G = G$
    - $T = tY$
    - $T - G = tY - G$ , where
      - $G$  is the autonomous budget, and
      - $tY$  is the induced budget.
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## Budget balance line

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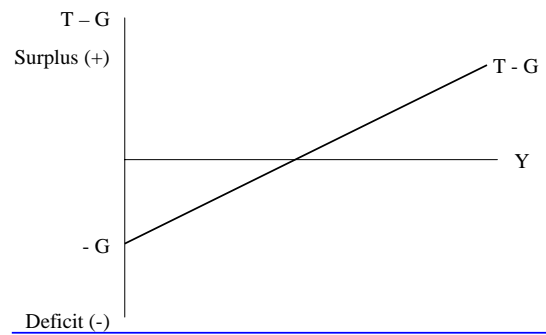
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## Fiscal Policy and Budget Balances

- $Y$  is determined in the IS – LM model.
- $T - G$  is determined by the BB line.

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## Actual budget balance



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## Fiscal Policy and Budget Balances

- Automatic Stabilizers:
  - **Automatic stabilizers** cause fiscal policy to be counter-cyclical by changing government spending and/or tax revenues automatically.
    - For example, during recessions, unemployment insurance payments rises because the number of unemployed people increases.
    - For example, during recessions, tax revenues fall because (taxable) income declines.

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## Fiscal Policy and Budget Balances

- Automatic Stabilizers:
  - Because of automatic stabilizers, the government budget balance will fall during recessions and rise during booms.

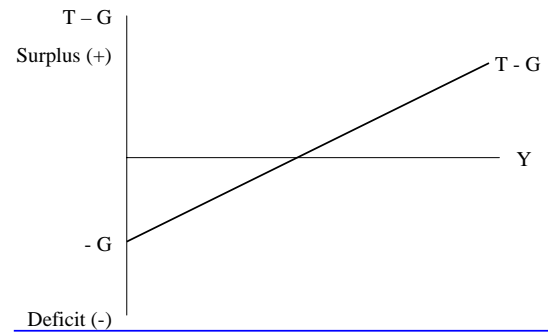
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## Fiscal Policy and Budget Balances

- Automatic Stabilizers:
  - Automatic changes in the budget balance result primarily from changes in induced taxes.
    - $BB = T - G = tY - G$
    - $\Delta T = t * \Delta Y$
    - $\Delta BB = \Delta(T - G) = t * \Delta Y - \Delta G$
  - Represented by movement along a given BB line.

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## Automatic stabilizers



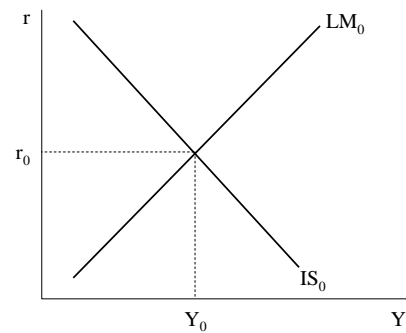
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## Fiscal Policy and Budget Balances

- Discretionary Fiscal Policy:
  - Deliberate changes in fiscal policy.
    - Changes in G.
    - Changes in t.
  - Represented by a change in the BB line.
    - Changes in G generate a parallel shift.
    - Changes in t generate a rotation.

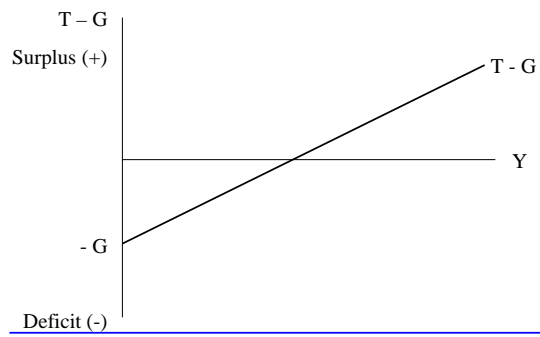
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## Increasing government purchases



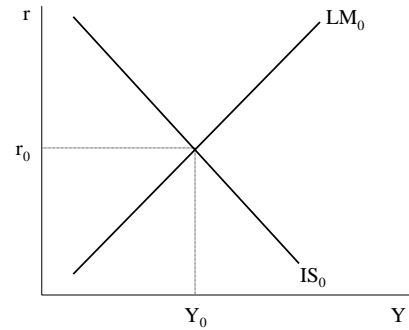
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### Increasing government purchases



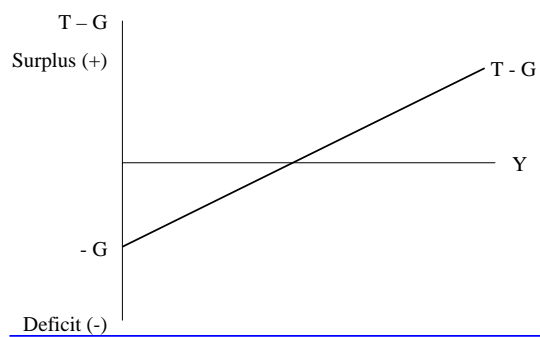
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### Decreasing tax rates



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### Decreasing tax rates



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### Measuring Budget Change

- How do we compare:
  - A change in  $G$  (measured in dollars) with
  - A change in  $t$  (measured in %)?
- Alternatively, how do we compare:
  - A parallel shift in the  $BB$  line with
  - A rotation of the  $BB$  line?

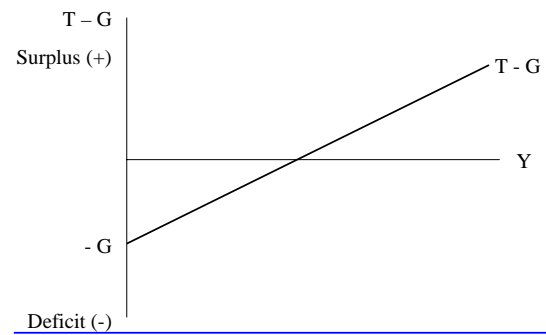
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## Measuring Budget Change

- Automatic versus Discretionary Changes:
  - Select a given  $Y$ .
    - Full-employment output,  $Y^*$ .
  - The budget balance at full-employment output is call the **Structural Budget Balance**, SBB.
    - Also, the standardized, natural employment, or full employment budget.
    - If  $T - G = tY - G$ .
    - Then  $SBB = tY^* - G$ .

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## Structural budget balance



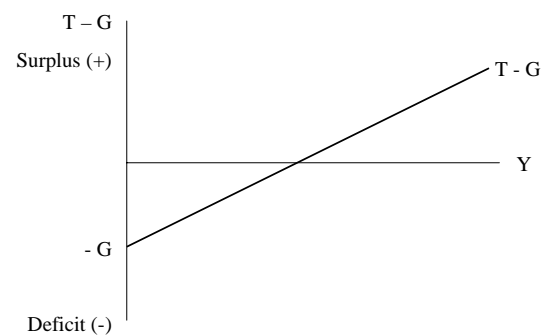
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## Measuring Budget Change

- Automatic versus Discretionary Changes:
  - The full-employment budget balance is a measure of what the government budget balance would be ***IF*** the economy were at full-employment.
  - So the full-employment budget balance does not change with the business cycle; only with changes in government fiscal policy.
    - Changes in the structural budget balance will represent changes in discretionary fiscal policy.

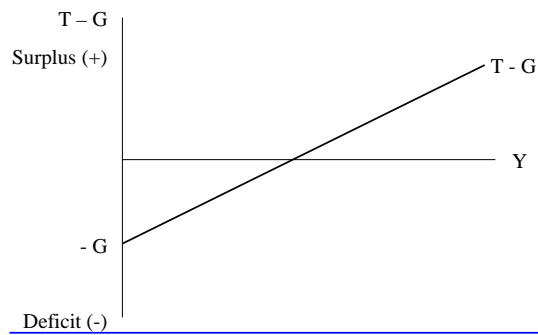
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## Increasing government purchases



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## Decreasing tax rates



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## Measuring Budget Change

- Budget Concepts:

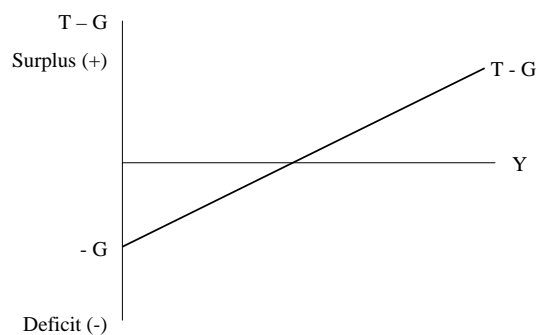
- Actual budget balance, ABB, is measured at actual Y.
- Structural budget balance, SBB, is measured at  $Y^*$ .
- Cyclical budget balance, CBB, occurs when economy is not at full-employment output.

- $CBB = BB - SBB$ .

- If actual budget < structural, then cyclical budget < 0.
- If actual budget > structural, then cyclical budget > 0.

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## Three Budget Balances



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## Designing Effective Short-run Fiscal Policy

- Size and composition of fiscal package.

- Relative effectiveness:

- A dollar more of G has a larger effect than a dollar less of T.
  - The G multiplier is larger than the T multiplier.
  - G has direct effect on spending, T has indirect effect.

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## Designing Effective Short-run Fiscal Policy

- Government spending considerations.
  - New spending or replacement outlays.
  - Prospective timing of outlays.
    - How quickly can you spend the money.
  - Nature and location of the prospective outlays.
    - How much “leaks” abroad.

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## Designing Effective Short-run Fiscal Policy

- Tax considerations:
  - Personal Taxes.
    - Permanent or temporary.
    - Marginal propensities to consume.
    - Design of tax.
    - Ease of implementation.

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## Designing Effective Short-run Fiscal Policy

- Tax considerations:
  - Corporate Taxes.
    - Permanent or temporary.
    - Design of tax.
    - Ease of implementation.

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