EE432 Monetary Theory and Policy

Recap I

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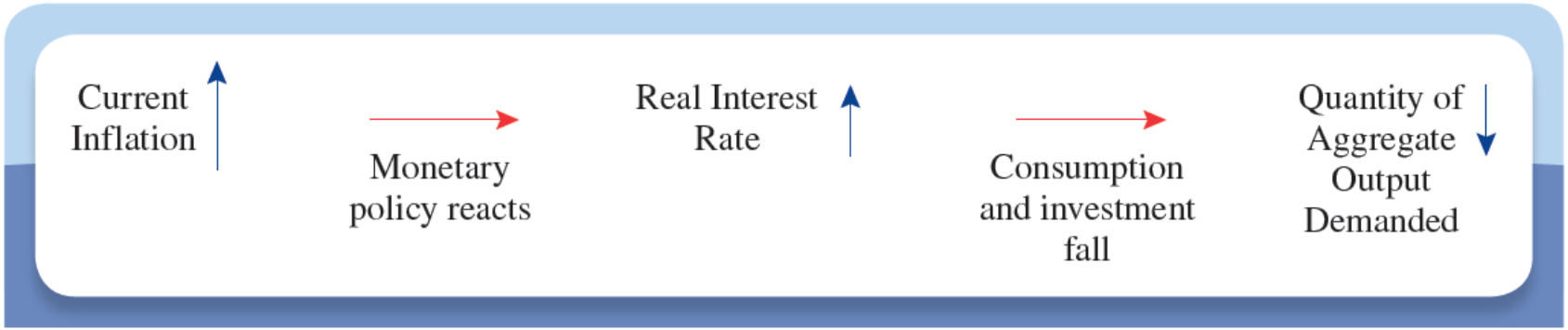
Chapter 21

Output, Inflation, and Monetary Policy

Monetary Policy and the Dynamic Aggregate Demand Curve

Figure 21.1 Inflation, Monetary Policy, and Aggregate Demand



Monetary Policy and the Dynamic Aggregate Demand Curve

1. **Aggregate expenditure** and the **real interest rate**:
   - There is a ***downward sloping*** relationship.
2. **Inflation** and the **real interest rate**, and the **monetary policy reaction curve**:
   - There is an ***upward sloping*** relationship that we call the ***monetary policy reaction curve***.
3. **Inflation** and **aggregate output** :
   - This is a ***downward sloping*** relationship, which represents **the dynamic aggregate demand curve**.

Inflation, the Real Interest Rate, and the Monetary Policy Reaction Curve

- When **current inflation** is ***high*** or **current output** is ***running above*** **potential output**, central bankers will **raise policy interest rate**.
- ***Changes*** in the **nominal policy interest rate** will *translate into* a **change in the real interest rate**.

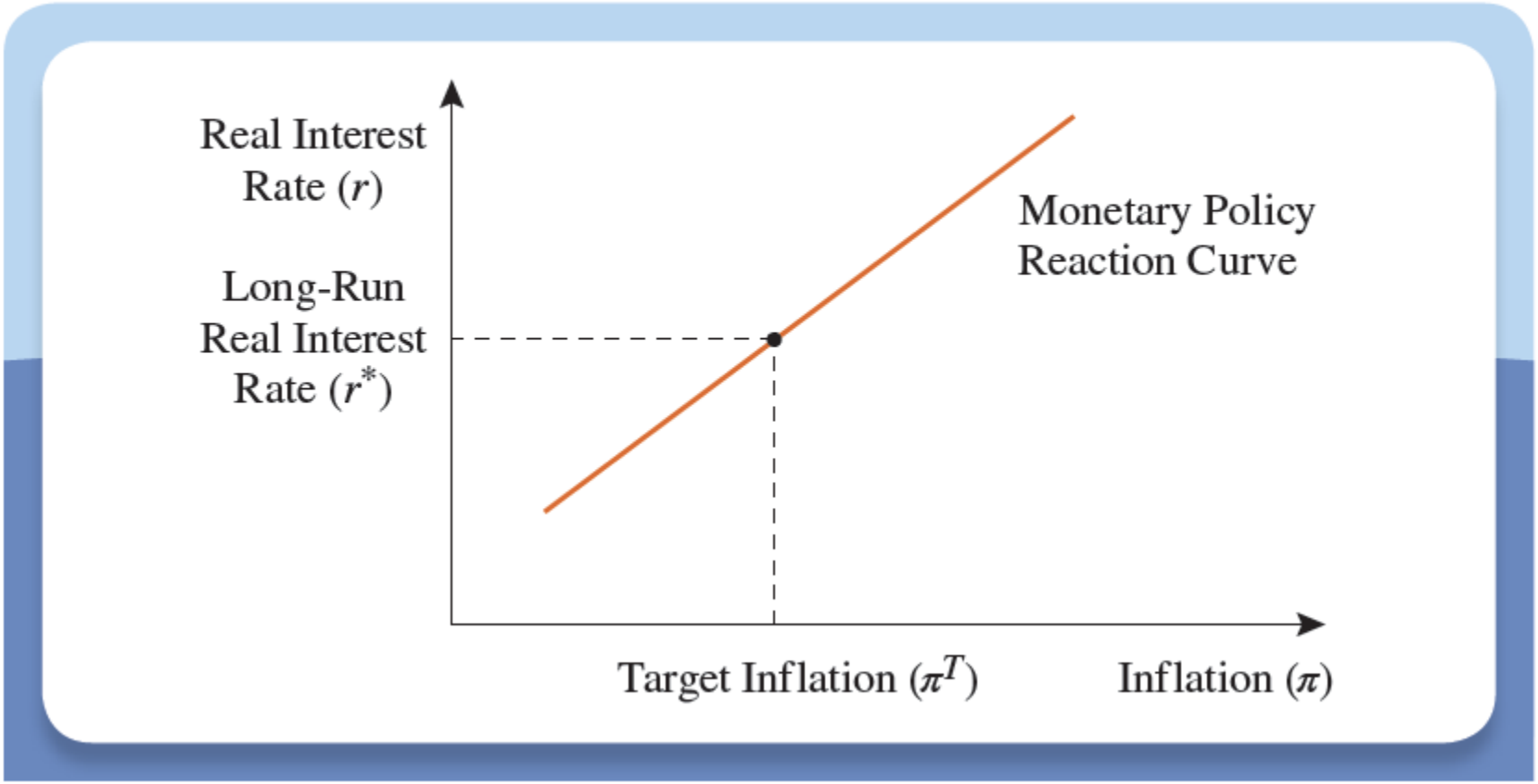
Deriving the Monetary Policy Reaction Curve

- The **monetary policy reaction curve** is ***set*** so that when ***current inflation*** equals ***target inflation*** (π^T), the ***real interest rate*** equals the ***long-run real interest rate***.

$$r = r^* \text{ when } \pi = \pi^T$$

Deriving the Monetary Policy Reaction Curve

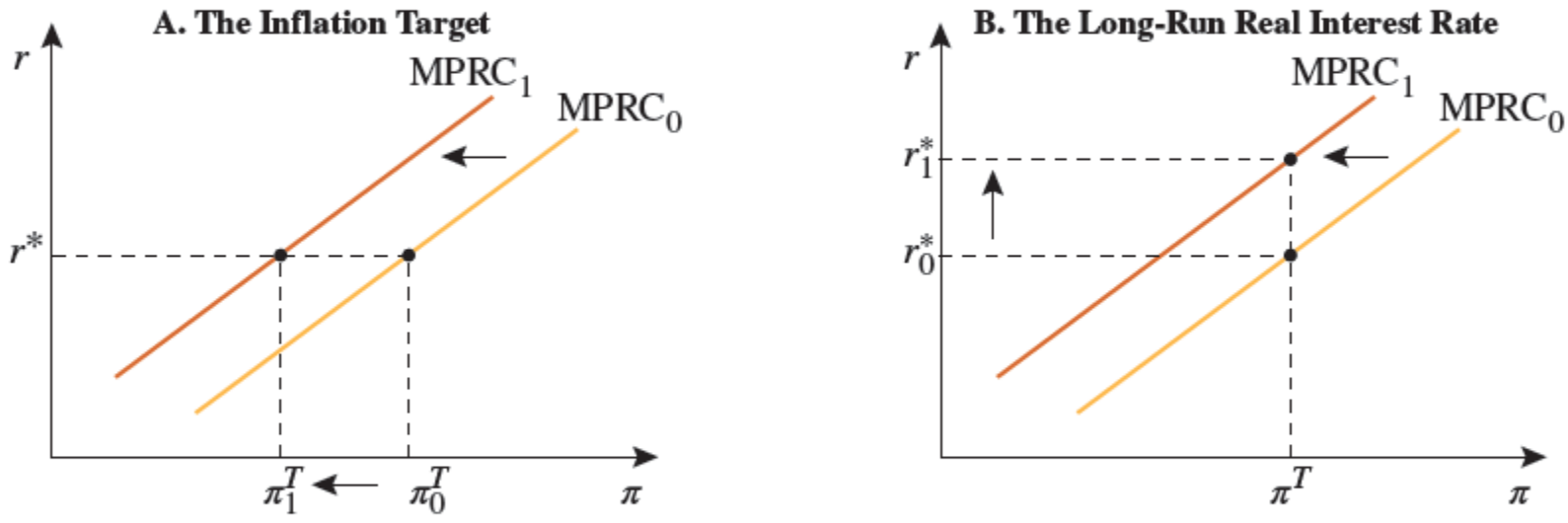
Figure 21.7 The Monetary Policy Reaction Curve



A **movement along the curve** is a ***reaction to a change in current inflation***.

Shifting the Monetary Policy Reaction Curve

Figure 21.8 Shifting the Monetary Policy Reaction Curve



A decline in the inflation target from π_0^T to π_1^T shifts the monetary policy reaction curve to the left from $MPRC_0$ to $MPRC_1$.

An increase in the long-run real interest rate from r_0^* to r_1^* shifts the monetary policy reaction curve to the left from $MPRC_0$ to $MPRC_r$

Deriving the Dynamic Aggregate Demand Curve

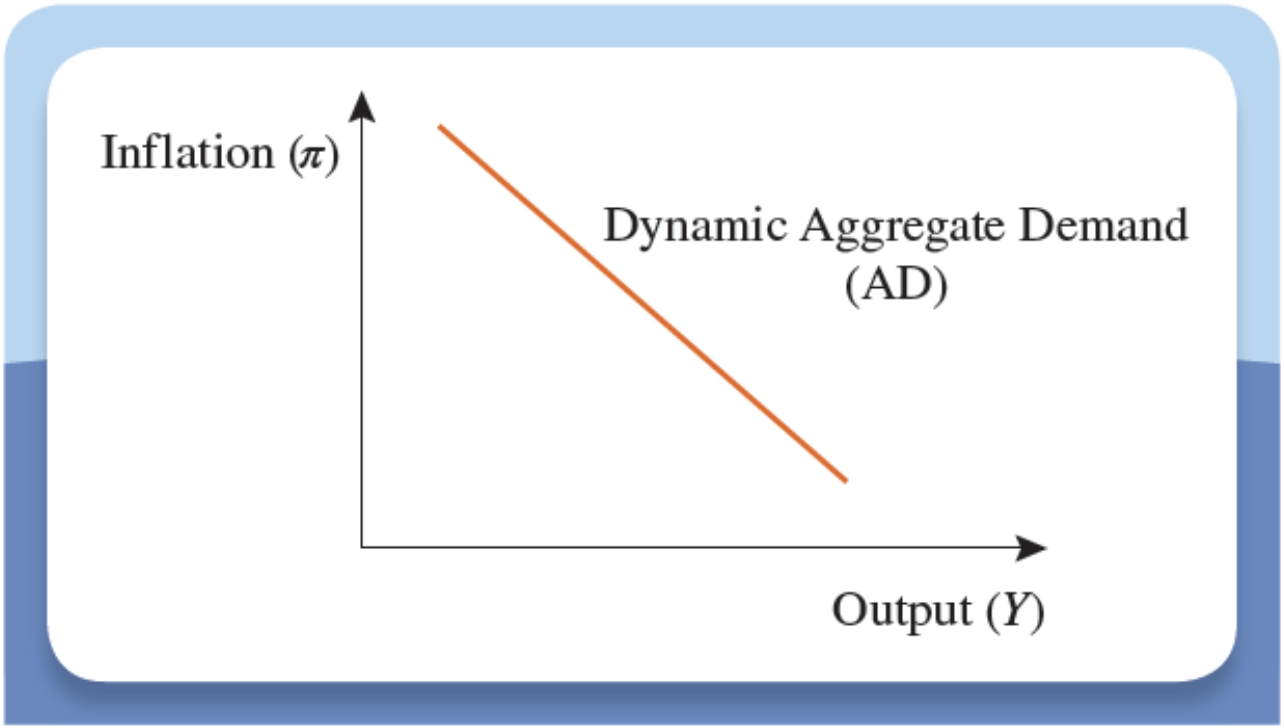
- The **dynamic aggregate demand curve** *relates* **inflation** and the level of **output,**
- Accounting for the fact that *monetary policymakers* ***respond to*** changes in current ***inflation*** by ***changing the interest rate***.

Deriving the Dynamic Aggregate Demand Curve

- When current **inflation *rises***:
  - *Monetary policymakers* ***raise*** the **real interest rate**, moving the economy upward *along* the **monetary policy reaction curve**.
  - The ***higher*** **real interest rate** ***reduces*** the *interest-sensitive components* of ***aggregate expenditure***.
  - This ***causes*** a ***fall*** in the quantity of ***aggregate output***.
- Thus, *changes in* current ***inflation*** *move the economy along* a ***downward-sloping*** **dynamic aggregate demand curve**.

Deriving the Dynamic Aggregate Demand Curve

Figure 21.9 The Dynamic Aggregate Curve



Shifting the Dynamic Aggregate Demand Curve

- All of the following ***increase*** in **exogenous expenditure**, thereby **shifting** the ***dynamic aggregate demand curve*** to the ***right***:
  - Increased **consumer confidence**
  - Increased **optimism** about **future business prospects**
  - Increased **government spending** or **expansionary fiscal policy**
  - Increased **net exports**

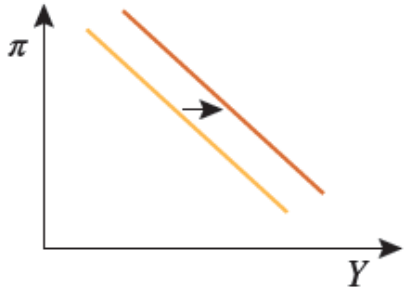
Shifting the Dynamic Aggregate Demand Curve

Figure 21.10 Shifting the Dynamic Aggregate Demand Curve

Changes in Components of Aggregate Expenditure

$C \uparrow, I \uparrow, G \uparrow, NX \uparrow$

Increases in consumption, investment, government expenditure, or net exports (all unrelated to the real interest rate) shift the dynamic aggregate demand curve to the *right*.



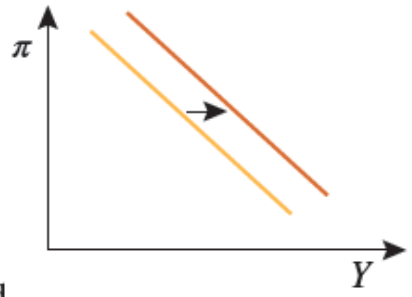
Shifts in the Monetary Policy Reaction Curve

$\pi^T \uparrow$

Increases in the central bank's inflation target shift the dynamic aggregate demand curve to the *right*.

$r^* \downarrow$

Decreases in the long-run real interest rate shift the dynamic aggregate demand curve to the *right*.



Shifting the Dynamic Aggregate Demand Curve

- Whenever the **monetary policy reaction curve** ***shifts***, the **dynamic aggregate demand curve** ***shifts***, too.
- Consider an ***increase*** in the **central bank's inflation target**.
  - The ***monetary policy reaction curve*** shifts ***right***.
  - The ***real interest rate*** that policymakers ***set*** at *every level of* ***inflation falls***.
  - The *lower real interest rate* ***increases*** the *quantity of* ***aggregate output*** demanded *at every level of inflation*.
  - The ***dynamic aggregate demand curve*** shifts ***right***.

Shifting the Dynamic Aggregate Demand Curve

- **Changes** in the ***long-run real interest rate r**** **shift** the **dynamic aggregate demand curve**.
- Suppose the **level of potential output increases**.
  - The long-run **real interest rate r*** must ***fall***.
  - This ***drives up*** the interest-rate-sensitive components of **aggregate expenditure**.
  - This ***shifts*** the **dynamic aggregate demand curve *rightward***.

Shifting the Dynamic Aggregate Demand Curve

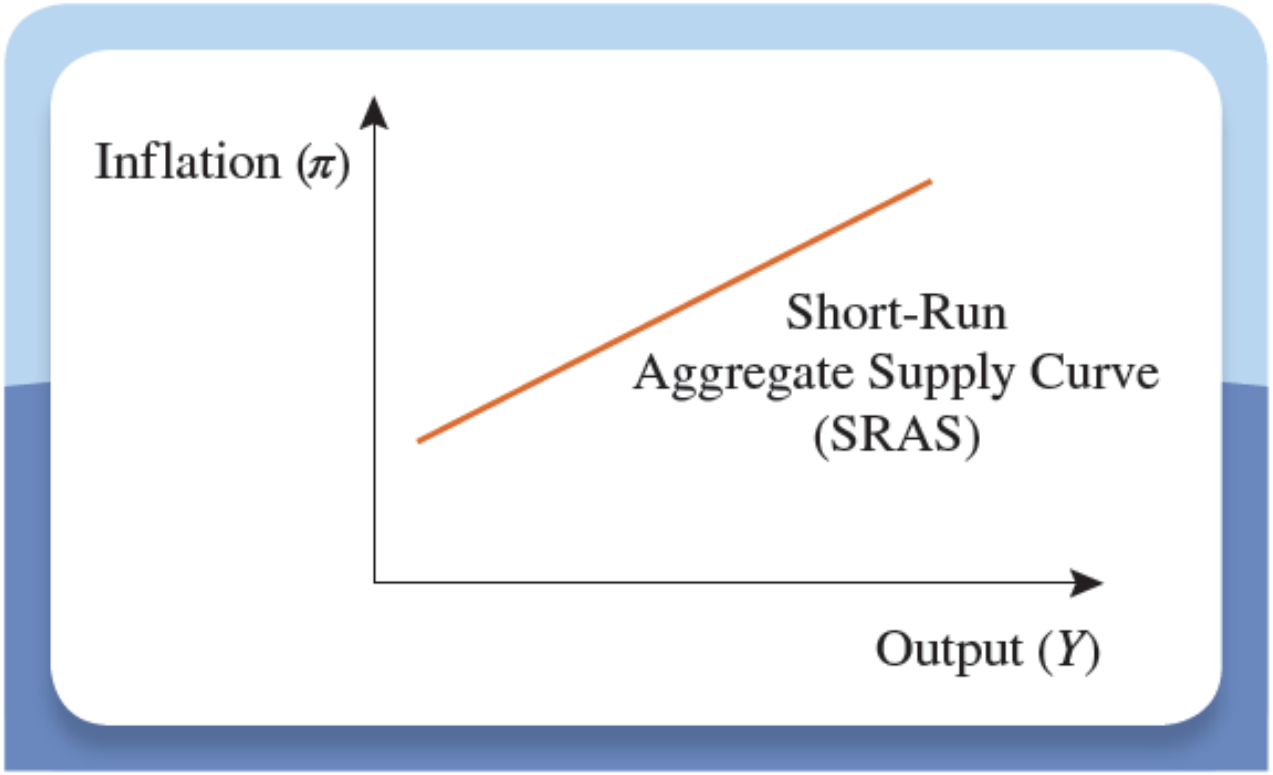
- Any ***shift*** in the **monetary policy reaction curve *shifts*** the **dynamic aggregate demand curve** in the *same direction*.
- For example, **expansionary monetary policy** *shifts* the **dynamic aggregate demand curve** to the ***right***.

Short-Run Aggregate Supply

- In the short term, when product **prices *rise***, firms ***increase*** **supply** in order to take advantage.
- The **short-run AS curve** is the ***upward-sloping*** relationship between current **inflation** and the quantity of **output**.

Short-Run Aggregate Supply

Figure 21.11 Short-Run Aggregate Supply Curve



Shifts in the Short-Run Aggregate Supply Curve

- When **production costs** *change*, the ***short-run AS curve shifts***.
  1. ***Changes*** in ***expectations of future inflation***.
  2. ***Factors*** that drive ***production costs*** up or down.

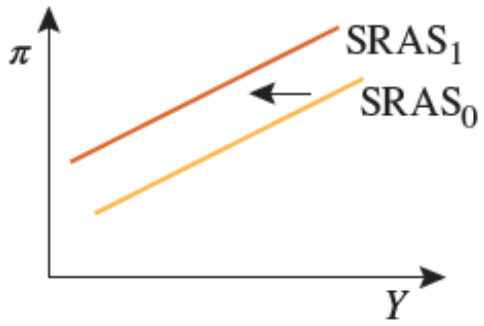
Shifts in the Short Run Aggregate Supply Curve

- An ***increase*** in **expected inflation** ***increases*** **production costs** lowering production at every level of current inflation.
  - This ***shifts*** the **short-run AS curve** to the ***left***.
- An ***increase*** in the **oil price** or **labor wage** *shifts* the **short-run AS curve** *leftward*.

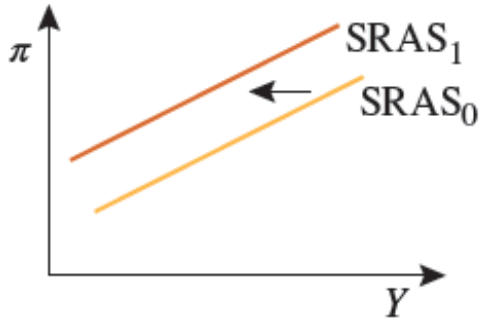
Shifts in the Short Run Aggregate Supply Curve

Figure 21.12 Shifting the Short-Run Aggregate Supply Curve

Expected π ↑
A rise in *expected future inflation* shifts the short-run aggregate supply curve to the *left* from $SRAS_0$ to $SRAS_1$.



Costs of Production Inputs ↑
A rise in costs of inputs into the production process, like energy, shifts the short-run aggregate supply curve to the *left* from $SRAS_0$ to $SRAS_1$.

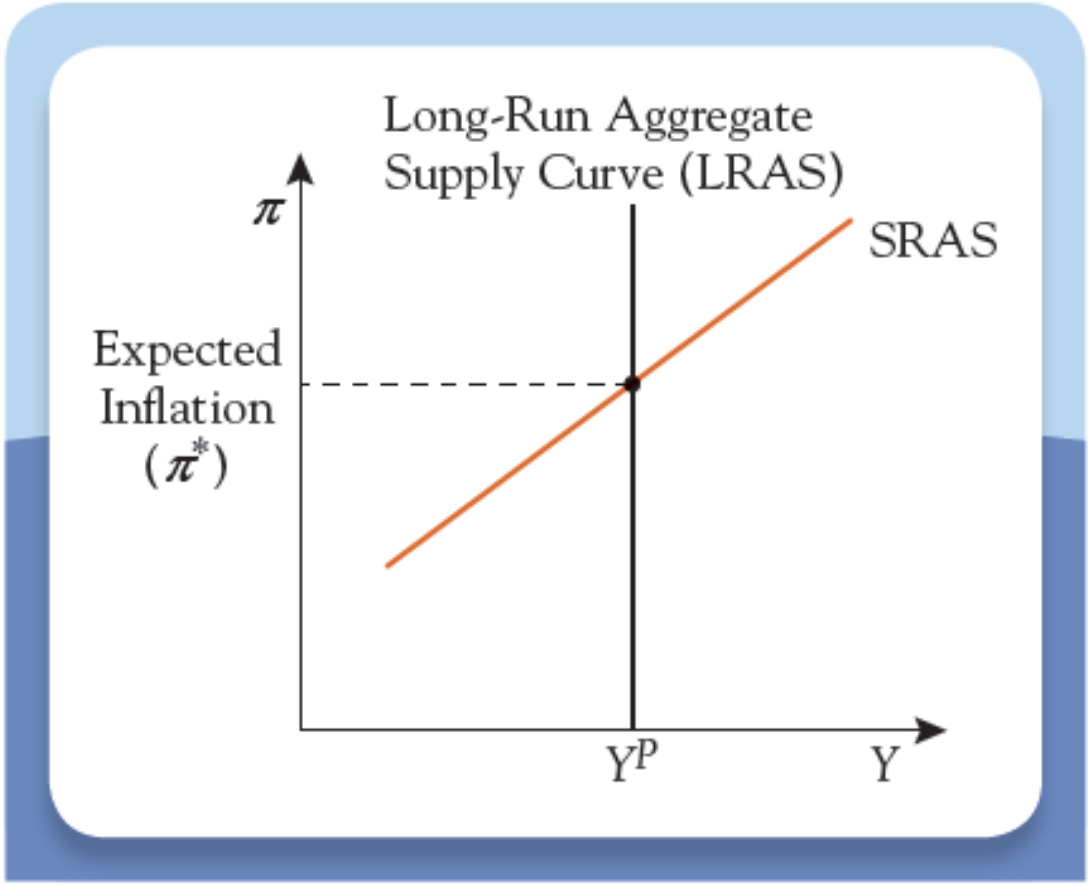


The Long-Run Aggregate Supply Curve

- In the ***long run***, ***output and inflation are unrelated*** and the **long-run aggregate supply curve (LRAS)** is **vertical** at the point ***where*** *current output equals* ***potential output***.
- In the long-run,
  - **Current output** must *equal* **potential output**
  - **Inflation** must be *determined by* **monetary policy**
- For the economy to be in **long-run equilibrium**, **current inflation** must *equal* **expected inflation**

Long-Run Aggregate Supply

Figure 21.14 Short- and Long-Run Aggregate Supply Curves

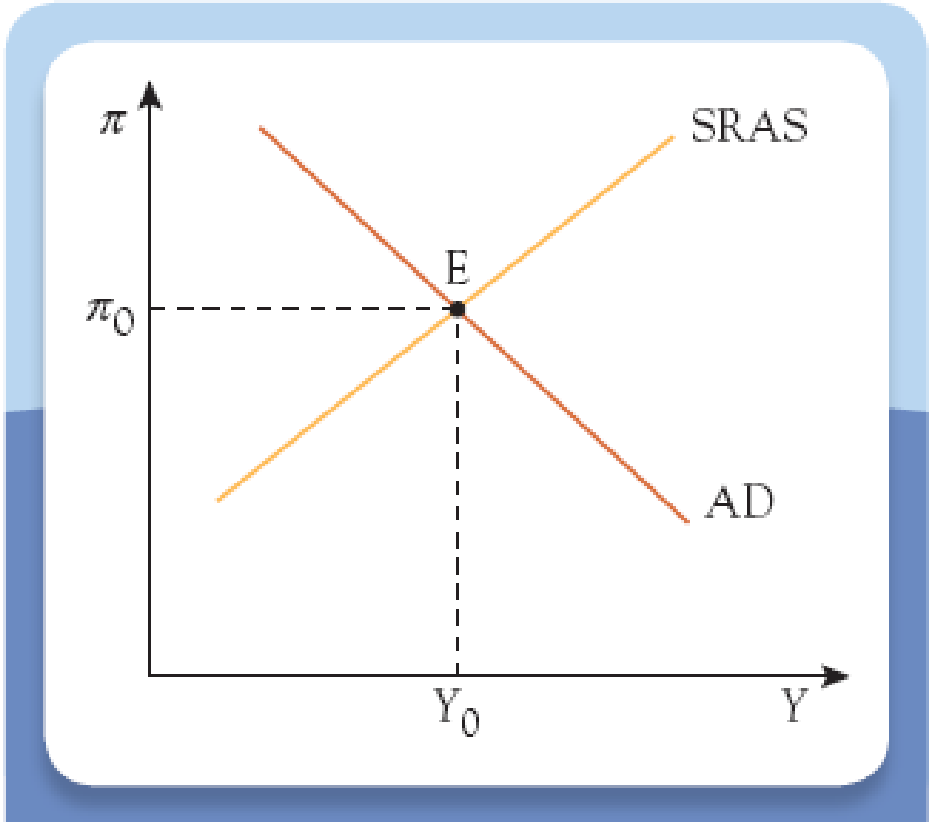


Equilibrium and the Determination of Output and Inflation

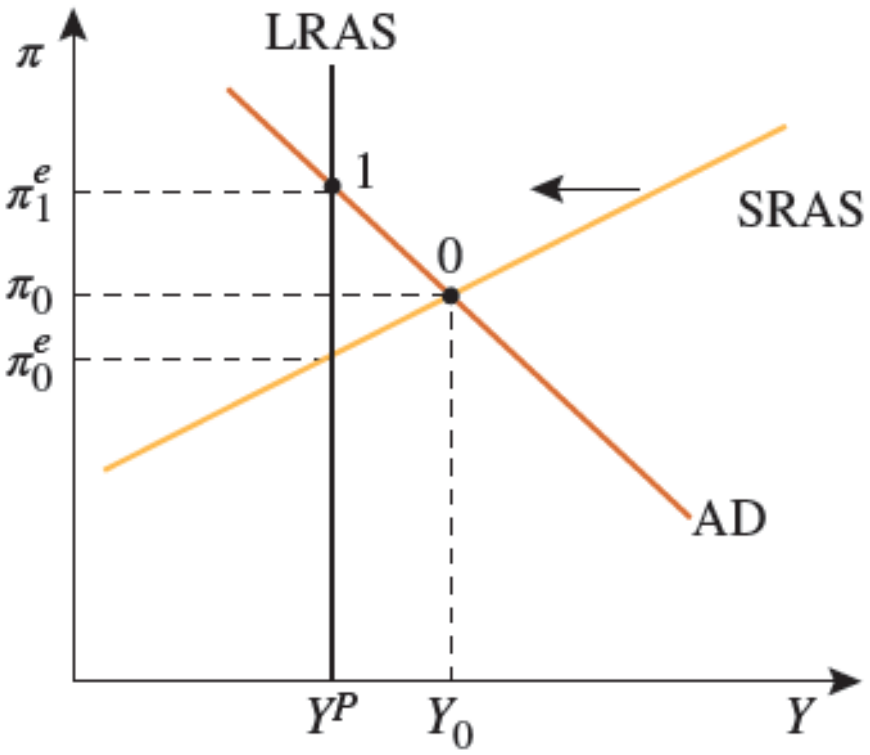
Short Run Equilibrium

- SR equilibrium is *determined by the* ***intersection*** of:
  - The **dynamic aggregate demand curve (AD)** and
  - The **short-run aggregate supply curve (SRAS).**

Figure 21.15 Short-Run Determination of Output and Inflation

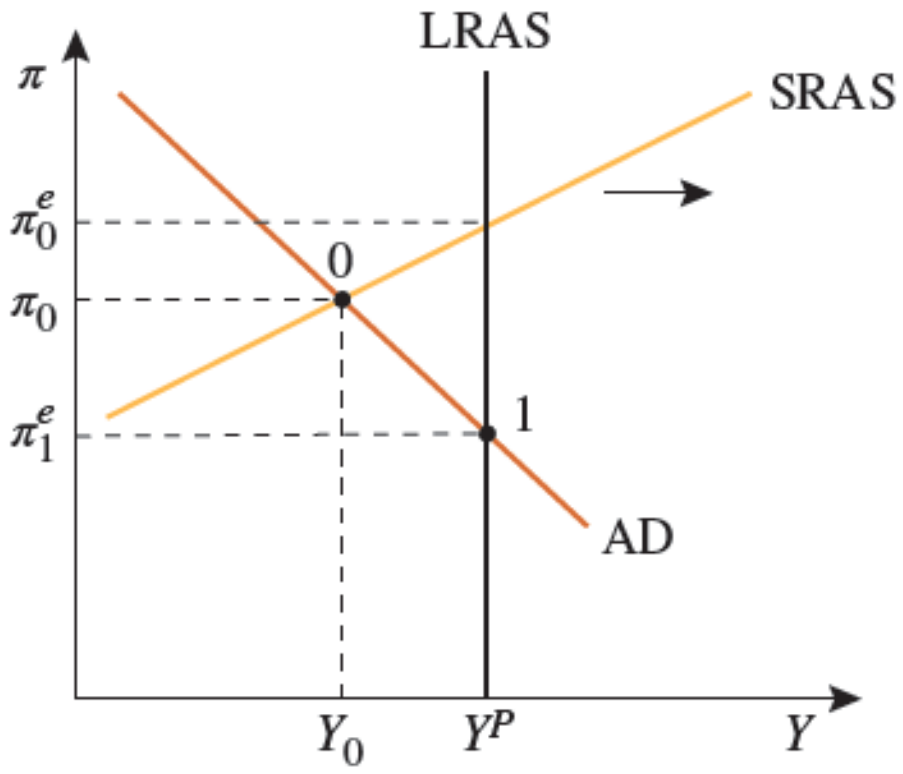


Adjustment to Long-Run Equilibrium



- ***Expansionary output gaps*** push **current inflation *above* expected inflation**
- **Current inflation** is *greater* than **expected inflation** so ***expected inflation rises***
- **SRAS *shifts left*** *until current inflation* and *expected inflation* are equal.

Adjustment to Long-Run Equilibrium



- ***Contractionary output gaps***
- **Current inflation** is *less* than **expected inflation** so ***expected inflation falls***.
- **SRAS *shifts right*** *until current inflation* and *expected inflation* are *equal*.

Adjustment to Long-Run Equilibrium

Implications

1. The economy has a ***self-correcting mechanism***.
2. The fact that ***inflation changes*** whenever there is an ***output gap***, so that the **long run output** returns to **potential output**.

Adjustment to Long-Run Equilibrium

There are **three conditions** for **long run equilibrium**:

1. **Current inflation** *equals* **expected inflation**: $\pi = \pi^e$.
2. **Current output** *equals* **potential output**: $Y = Y^P$.
3. **Current inflation** is *steady* and *equal* to **target inflation**: $\pi = \pi^T$

The Sources of Fluctuations in Output and Inflation

- **Inflation *in the long run*** will only change if policymakers have ***changed inflation target***.
- In the **short run fluctuations** can *come from*
  - **Increases** in **exogenous spending** (*shift* of **AD**)
  - A ***permanent easing*** of **monetary policy** (*shift* of **monetary policy reaction curve**)
  - **Increases** in the **costs of production** (*shift* of **SRAS**).

Chapter 22

Understanding Business Cycle Fluctuations

Sources of Fluctuations in Output and Inflation

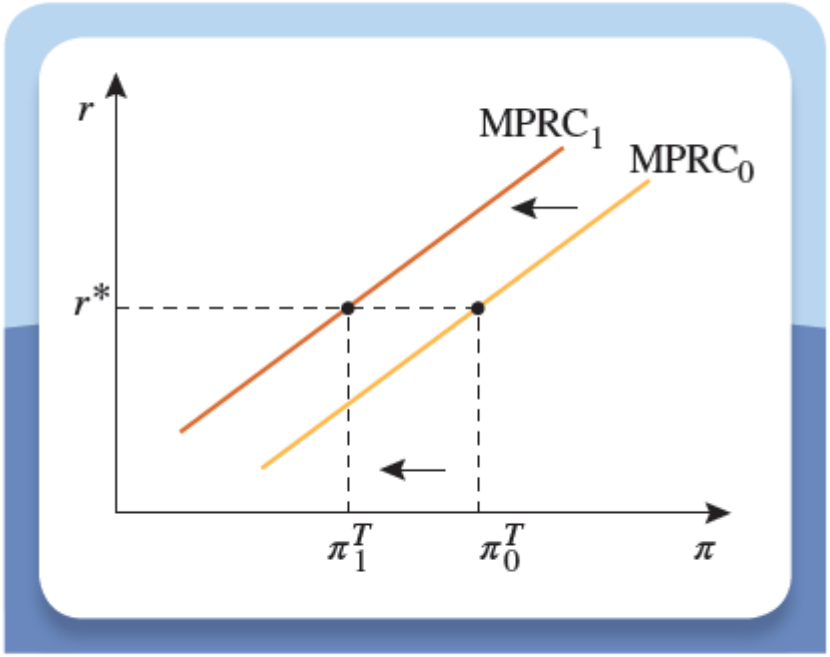
- A **shock** *shifts* the *AD* or *SRAS* curve.
  - A **supply shock** affects *costs of production*
    - For example; an **oil price increase**.
  - A **demand shock** affects *exogenous spending and thus aggregate expenditure*
    - For example; **change in consumer confidence**

A Decline in the Central Bank's Inflation Target

- A *fall* in π^T ***shifts*** *the* ***monetary policy reaction curve*** to the *left*.
  - The ***decrease*** in the ***inflation target*** **raises** the ***real interest rate*** policymakers *set at each level of inflation*.
  - This **reduces** **aggregate expenditure** ***shifting*** the **AD curve** to the ***left*** as well.
    - The economy moves to a **new short-run equilibrium**.

A Decline in the Central Bank's Inflation Target

Figure 22.2 A Decline in the Central Bank's Inflation Target



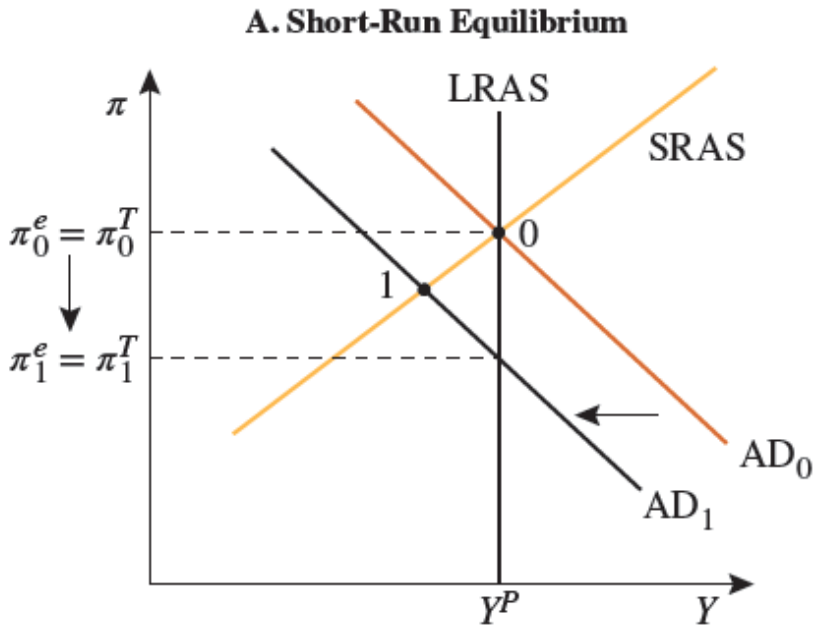
A decline in the inflation target from π_0^T to π_1^T shifts the monetary policy reaction curve to the left from $MPRC_0$ to $MPRC_r$

A Decline in the Central Bank's Inflation Target

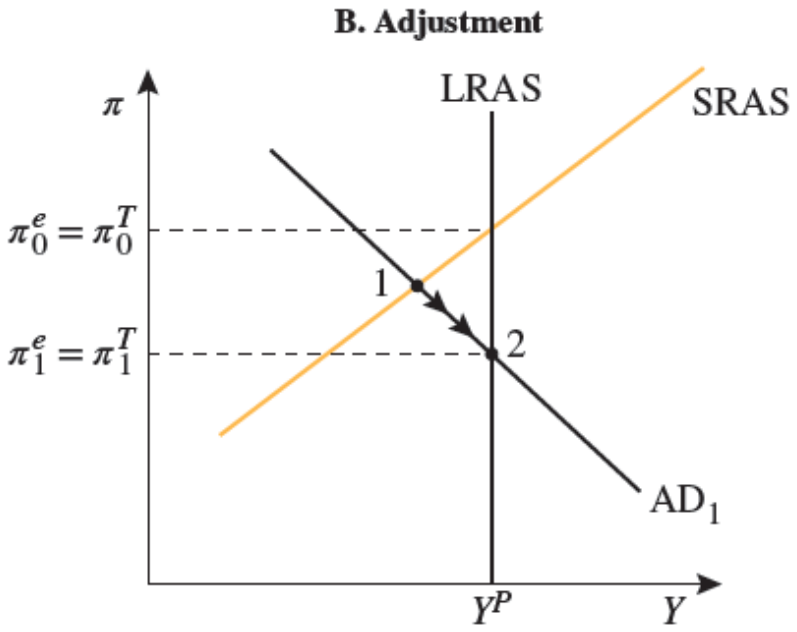
- At the new short-run equilibrium point, ***inflation*** and ***current output*** are **lower** than they were *prior to* the *monetary policy tightening*.
  - The **dynamic aggregate demand curve *shifts left***, moving the economy *along the SRAS*
- **Current inflation** is ***less than*** **expected inflation**
  - **Expected inflation *falls*, shifting** the **SRAS *right***
- The **economy** will ***move*** along the new dynamic aggregate demand curve ***to*** *the* ***new long-run equilibrium*** where **inflation** *equals* the **new central bank's target**, and **output** *equals* **potential output**.

A Decline in the Central Bank's Inflation Target

Figure 22.3 A Decline in the Central Bank's Inflation Target



A decrease in the central bank's inflation target shifts the dynamic aggregate demand curve to the left from AD_0 to AD_1, moving the economy from point 0 to point 1.



When the economy is at point 1, current inflation is less than the initial level of expected inflation (π_0^e). As a result, expected inflation falls, shifting the short-run aggregate supply curve to the right. The process continues until the economy reaches point 2, where expected inflation equals the new inflation target ($\pi_1^e = \pi_1^T$).

An Increase in Government Purchases

- An ***increase*** in **government spending** ***shifts*** the **AD curve** to the ***right***.
- The *economy* moves from the original *short-run equilibrium* to a ***new short-run equilibrium***.
  - The immediate impact is to ***raise*** both **current output** and **inflation**.

An Increase in Government Purchases

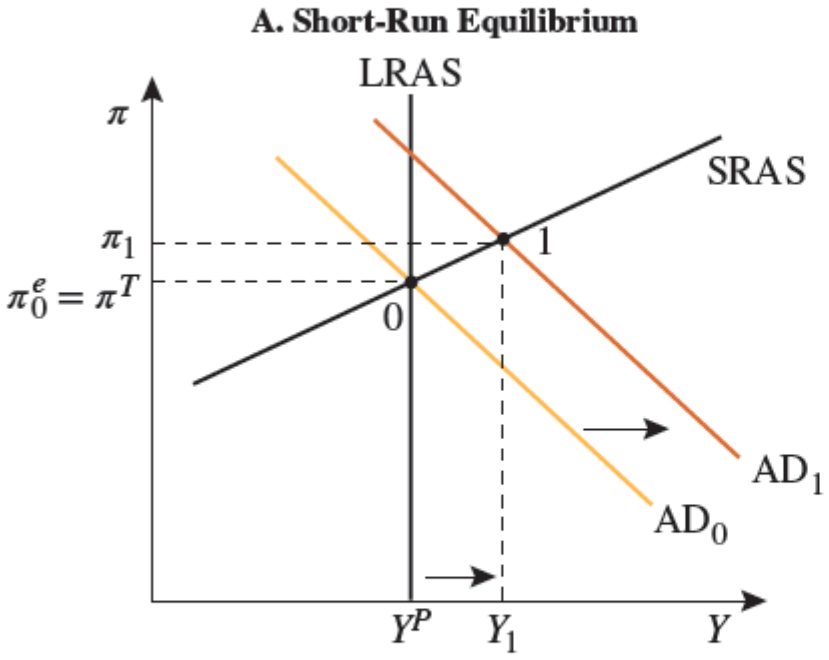
- Because **current inflation** *exceeds* **expected inflation**, this can't be the long-run effect.
- **Expected inflation *rises***, ***shifting*** the **SRAS** curve to the ***left***.
  - As the economy travels along aggregate demand, **current inflation *rises*** and **current output *falls*** until the point at which the **dynamic aggregate demand curve *crosses*** the **LRAS** curve

An Increase in Government Purchases

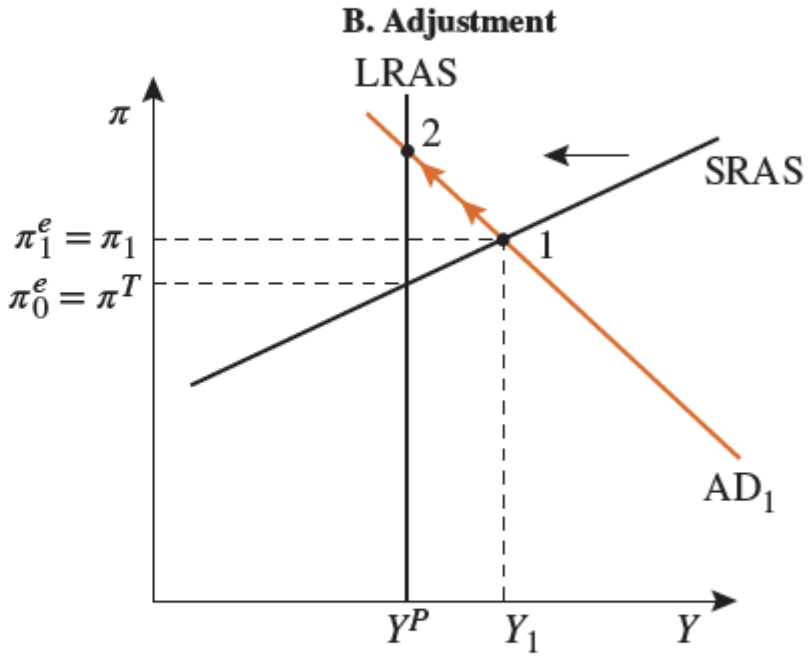
- **Inflation** is ***higher*** at the new equilibrium point than it at the original.
- This is ***above*** the **policymakers' original inflation target**, π^T
- **Unless** ***monetary policy adjusts***, when the *dynamic aggregate demand curve* shifts to the *right*, **inflation** *will* ***rise***.

An Increase in Government Purchases

Figure 22.4 An Increase in Government Expenditure



An increase in government expenditure shifts the AD curve to the right from AD_0 to AD_1. This moves the economy from point 0 to point 1. In the short run, output rises to Y_1 while inflation increases to π_1.



When the economy is at point 1, current inflation is initially above expected inflation ($\pi_1 > \pi_0^e$). As expected inflation rises in response, the short-run aggregate supply curve shifts to the left, moving the economy along AD_1 toward point 2.

An Increase in Government Purchases

- As long as monetary policymakers **remain committed to their *original inflation target***, they need to do something to *get the economy back to the point where it began*.
- In this case, **tighter monetary policy *shifts*** the **AD curve** to the ***left***.
  - This **brings the economy back** to the ***long-run equilibrium*** where **output** equals **potential output** and **inflation** equals the **central bank's target**.
- **Without a change in target inflation**, *an **increase in government purchases** causes a **temporary increase** in both **output** and **inflation**.*

Shifts in Short-Run Aggregate Supply

- **Changes in production costs *shift*** the **SRAS curve.**
- A ***negative supply shock*** that ***increases production costs***; for example, *increase in the price of oil*, will ***shift*** the **SRAS curve** to the ***left***, reducing the amount supplied at every level of inflation
  - **Higher inflation** and **lower growth**

Shifts in Short-Run Aggregate Supply

- The **short-run equilibrium** moves to where the **new SRAS curve *meets* AD**.
- This *creates* a condition referred to as ***stagflation***.
  - **Economic stagnation** coupled with ***increased*** **inflation**.
- **Expected inflation *rises*** as well and because **current inflation** is ***below*** this level, the **SRAS** curve ***shifts*** back to the ***right***

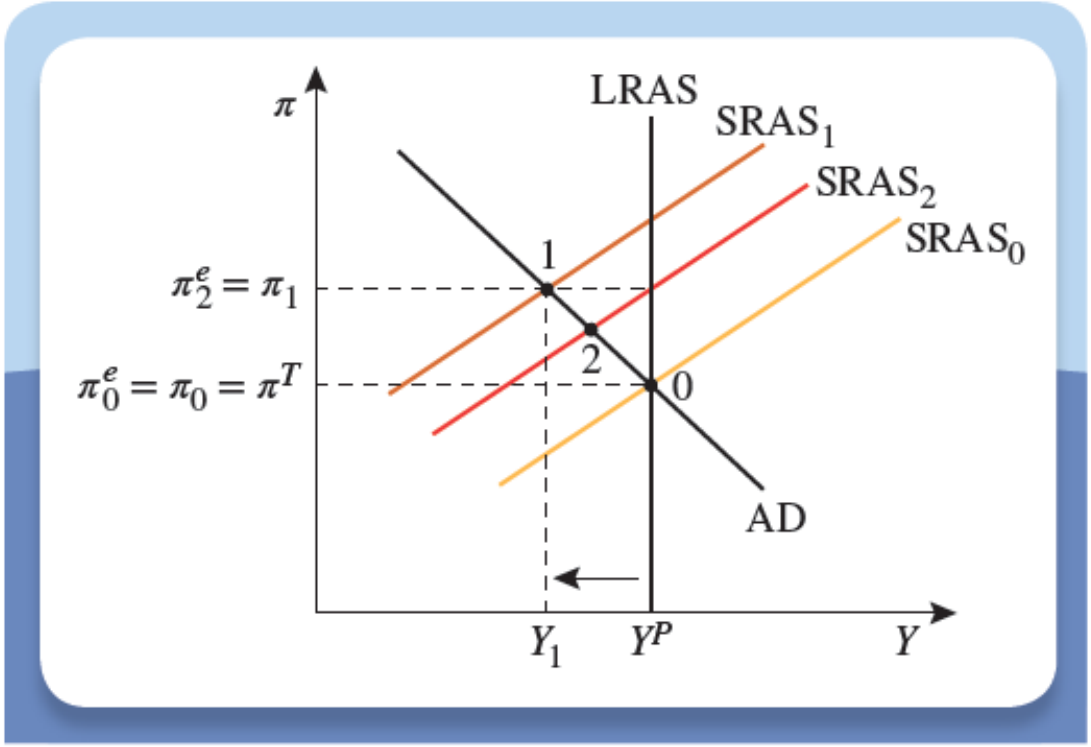
Shifts in Short-Run Aggregate Supply

- **Inflation** continues to ***fall*** and **output** *continues to* ***rise*** until **current inflation** and **expected inflation** ***return*** to the **central bank's inflation target**, and **output** equals **potential output**.

- ***Inflation*** *is at its* **highest** *and* ***output*** *at its* **lowest** *immediately,* ***following a negative shock to SRAS***
- ***Over time,*** **self-correcting** forces *will unwind the shock,* ***restoring long-run equilibrium***

Shifts in Short-Run Aggregate Supply

Figure 22.5 A Negative Supply Shock



A negative supply shock shifts the SRAS curve to the left, moving the short-run equilibrium from point 0 to point 1, raising inflation to $\pi_1 > \pi^T$. At point 1, current inflation is *below* the intersection of $SRAS_1$ and LRAS that marks expected inflation in the long run, so the SRAS curve shifts back right to $SRAS_2$, which intersects the LRAS at the point where expected inflation (π_2^e) equals π_1. The SRAS curve continues to shift right until inflation and expected inflation again equal target inflation at point 0.

Shifts in Short-Run Aggregate Supply

- As with an increase in government purchases, a **supply shock** has **no effect on** the economy's ***long-run equilibrium point***.
- A **supply shock** causes **inflation** to ***rise temporarily*** and *then* ***fall***.
  - This happens at the same time that **current output *falls temporarily*** and *then* ***rises***.
- In the **long run**, the economy ***returns*** to the point where **output** equals **potential output** and **inflation** equals the **central bank's target**.

How Do Policymakers Achieve Their Stabilization Objectives?

- The aggregate demand-aggregate supply framework is useful *in understanding* **how *monetary and fiscal* policymakers** seek to **stabilize** *output* and *inflation* using ***stabilization policy***.

- When shifting their reaction curve, ***central bankers* shift AD**.
  - They **cannot shift** the **SRAS curve**.
- This means **monetary policymakers** can **neutralize demand shocks**, but *cannot* offset **supply shocks**.

How Do Policymakers Achieve Their Stabilization Objectives?

- **Positive supply shocks** that ***raise*** **output** and ***lower*** **inflation** *provide* policymakers with an *opportunity*.
  - Central bankers **can guide** the economy **to** a **new**, **lower inflation target** *without inducing a recessionary output gap*.
- **Fiscal policy *can work*** to **stabilize** the economy

Monetary Policy

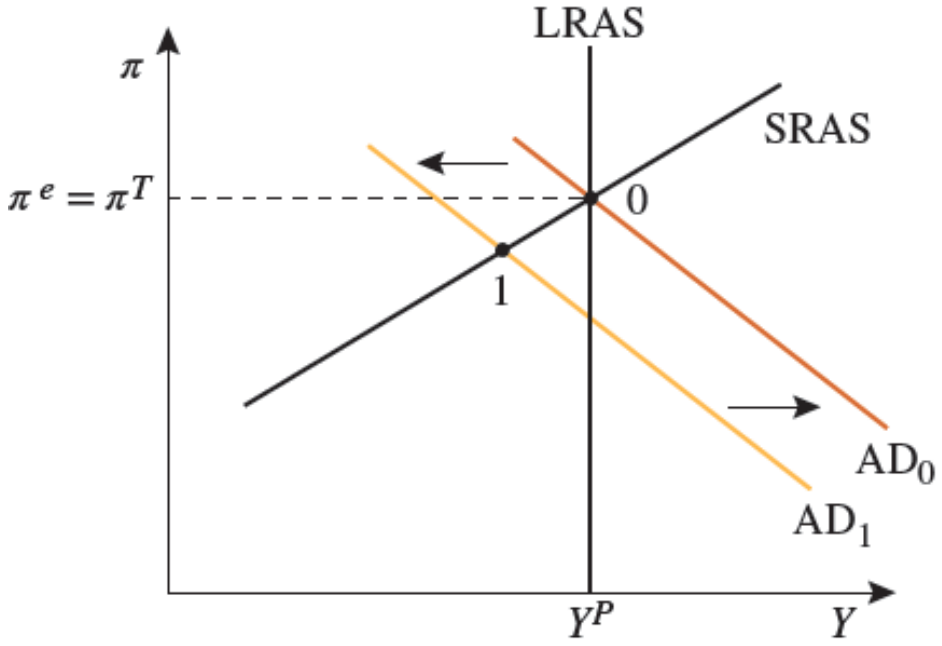
- A *reduction in consumption and investment*, ***shifts*** the **dynamic aggregate demand curve** to the ***left***
  - **Current inflation** would ***fall below*** **expected inflation** and **current output** to ***fall below*** **potential output**.

Monetary Policy

- **Drop in consumer or business confidence**:

  $AD_0 \rightarrow AD_1$

  Economy: points $0 \rightarrow 1$
- ***Stabilization*** *requires* ***shifting AD back*** *to where it started*.

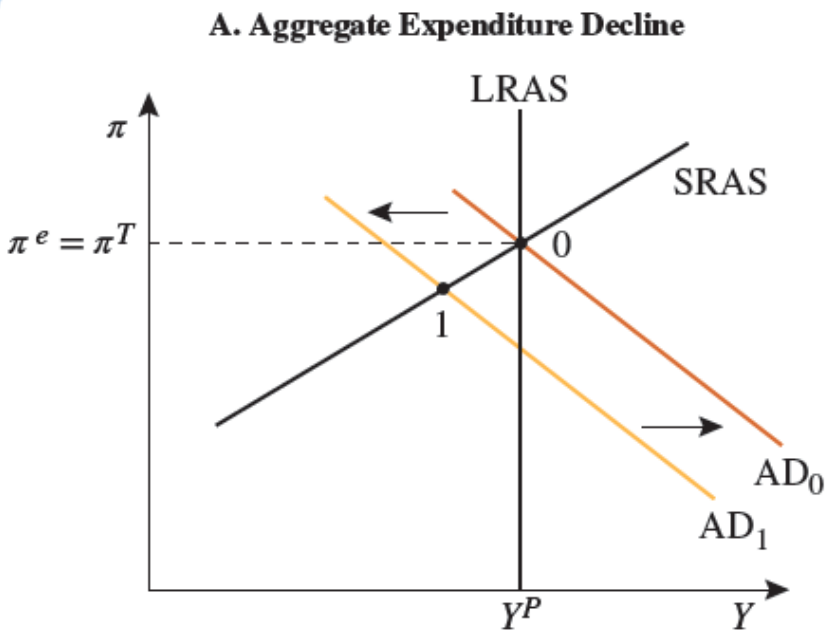


Monetary Policy

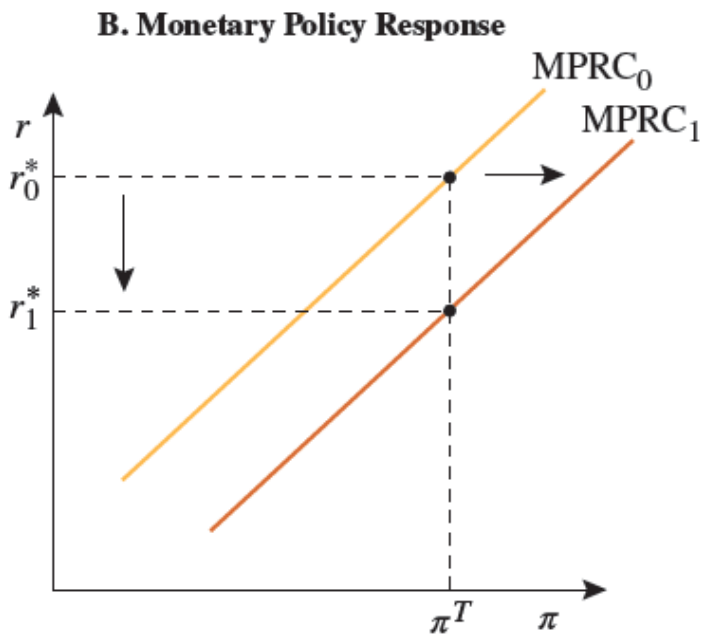
- Policymakers will conclude that the **long-run real interest rate** has ***fallen***.
- If the ***inflation target*** *stays the same*, the ***drop*** in **aggregate expenditure** prompts them to *shift the* ***monetary policy reaction curve*** to the *right*.
  - This ***reduces*** the level of the **long-run real interest rate**.
- The **AD curve** now ***shifts right***, **back to** its **original** level.
- The policy response means the **economy** will be **back** at **long run equilibrium**.

Monetary Policy

Figure 22.7 Stabilizing a Shift in Dynamic Aggregate Demand



Following a drop in consumer or business confidence the dynamic aggregate demand shifts to the left from AD_0 to AD_1, moving the economy from point 0 to point 1. Realizing this, monetary policymakers shift their MPRC to the right, shifting the dynamic aggregate demand curve back to where it started and returning the economy to point 0.



Following a drop in consumer confidence, the long-run real interest rate falls from r_0^* to r_1^*. Policymakers respond by shifting their reaction curve from $MPRC_0$ to $MPRC_1$, shifting the AD curve back to its original position, AD_0.

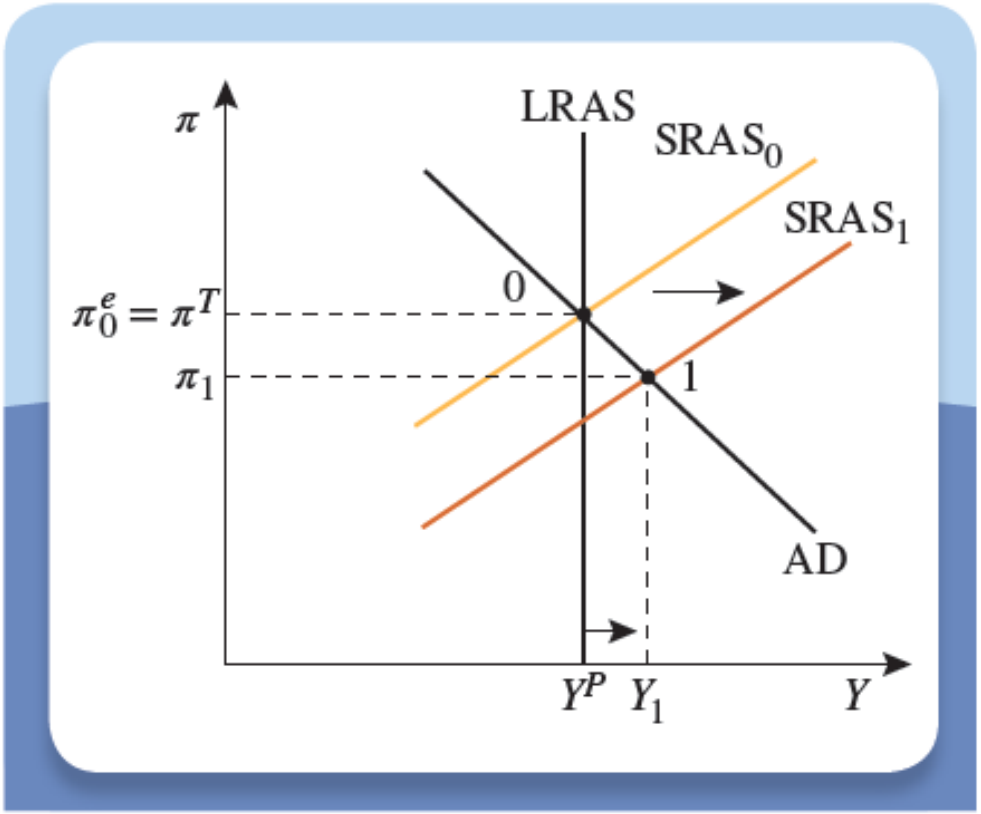
Positive Supply Shocks and the Opportunity They Create

- When **production costs *fall*** - a ***positive* supply shock**
- The **SRAS curve** *shifts* to the **right**.
  - This ***drives up* inflation** and **output** immediately.
  - **Current inflation** is ***below* expected inflation** and **expectations** initially ***fall***.
- This leads to **inflation** *above* **expected inflation** so ***expectations start to rise*** and the **SRAS curve** *shifts* to the **left**.
  - This continues **until the economy returns** to the ***original* long-run equilibrium**.

Positive Supply Shock

- ***Fall*** in **production costs** **shifts SRAS Right**.
  - Economy 0→1
- **Inflation** is ***above*** **expected inflation** and **SRAS *moves back*** to *original level*.
  - Economy 1→0

Figure 22.8 A Positive Supply Shock

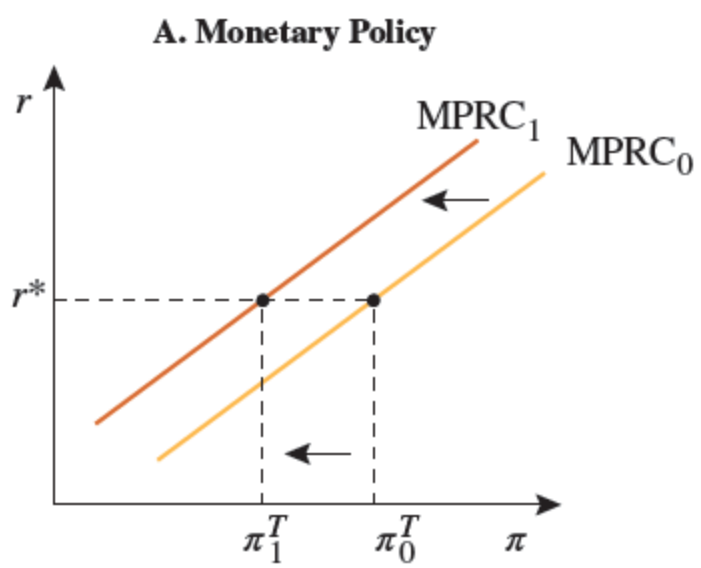


Positive Supply Shocks and the Opportunity They Create

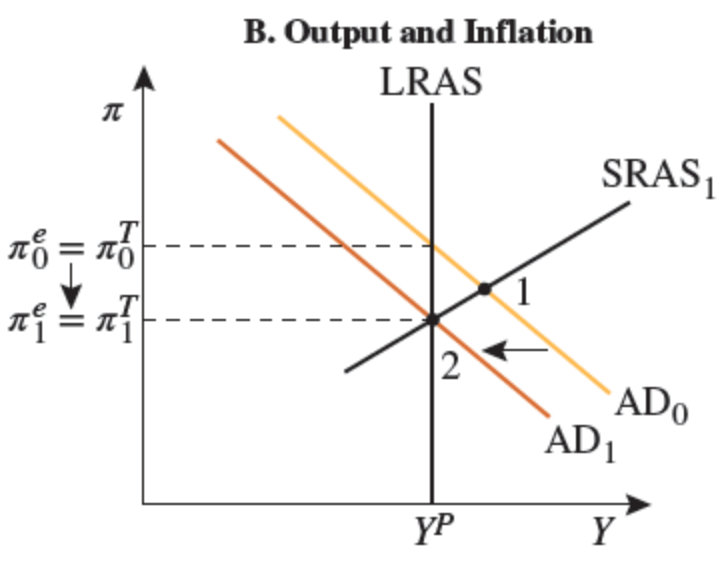
- A **positive supply shock** *creates an* ***opportunity*** for policymakers to ***guide the economy*** *to* ***a new***, ***lower inflation target*** *without* inducing a *recession*.
  - Central bankers will *shift* the **monetary policy reaction curve** to the **left**.
  - The **AD** *shifts* **left** as well.
  - This **continues** *until* it reaches the point where the **new SRAS curve *intersects*** the **LRAS curve**.

Positive Supply Shocks and the Opportunity They Create

Figure 22.9 Lowering the Inflation Target



A decline in the inflation target from π_0^T to π_1^T shifts the monetary policy reaction curve to the left from $MPRC_0$ to $MPRC_1$.



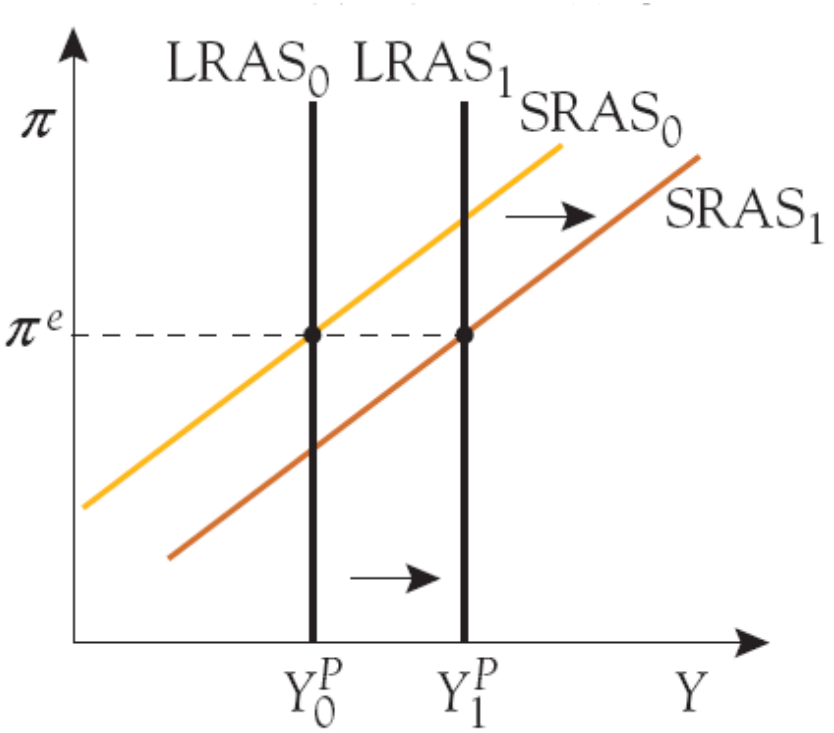
Following a positive supply shock, policymakers can reduce their inflation target by shifting the dynamic aggregate demand curve from AD_0 to AD_1. This lowers expected inflation from π_0^e to π_1^e. Instead of going to point 1, the economy moves to point 2.

What Happens When Potential Output Changes?

- *What happens* when **Y^P increases** due to an **increase in productivity**?
  - The **long-run aggregate supply curve** will *shift* to the **right** as **Y^P increases**.
  - An ***increase in productivity*** **reduces costs of production**, so it is a ***positive supply shock*** as well.
  - The **SRAS curve** will *shift* **right**.
    - Remember that the **SRAS curve** *intersects* the **LRAS curve** at the point *where* **current inflation** equals **expected inflation**.

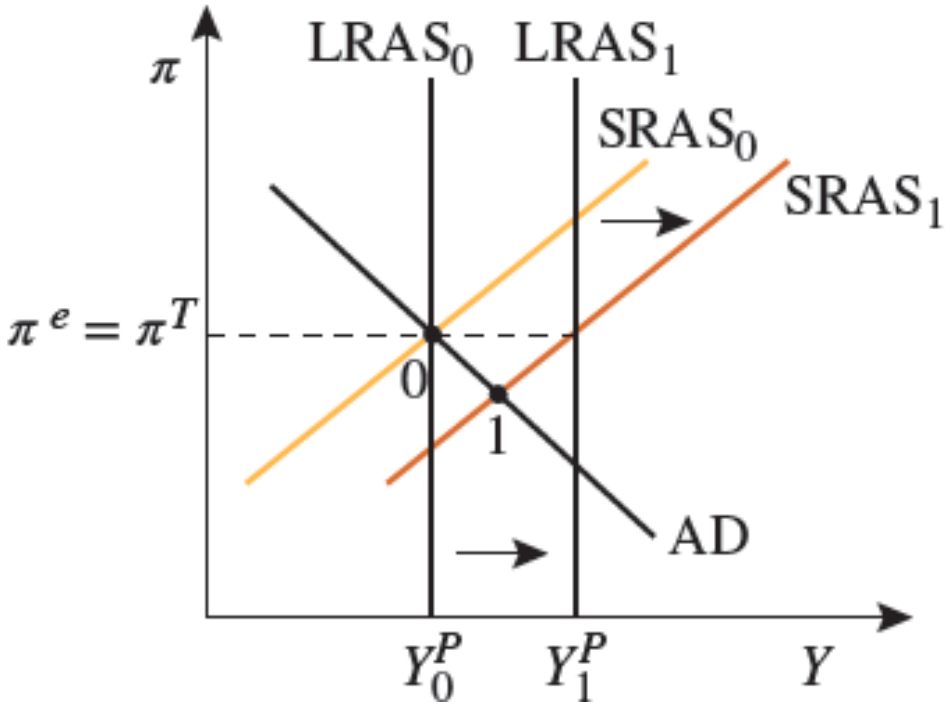
What Happens When Potential Output Changes?

- An **increase in Y^P** *shifts* **SRAS *right*** and shifts **LRAS** *right*.
- But **SRAS** still *crosses* **LRAS** where **$\pi = \pi^e$**.
- **SRAS** *shifts* the ***same distance*** as **LRAS**.



What Happens When Potential Output Changes?

- *In the short-run*, **output** *and* **inflation** are <u>determined by</u> the **intersection** of **SRAS** and **AD**.
- Since **AD** is **unchanged**, the ***economy is at <u>point 1</u>*** in the short-run.



What Happens When Potential Output Changes?

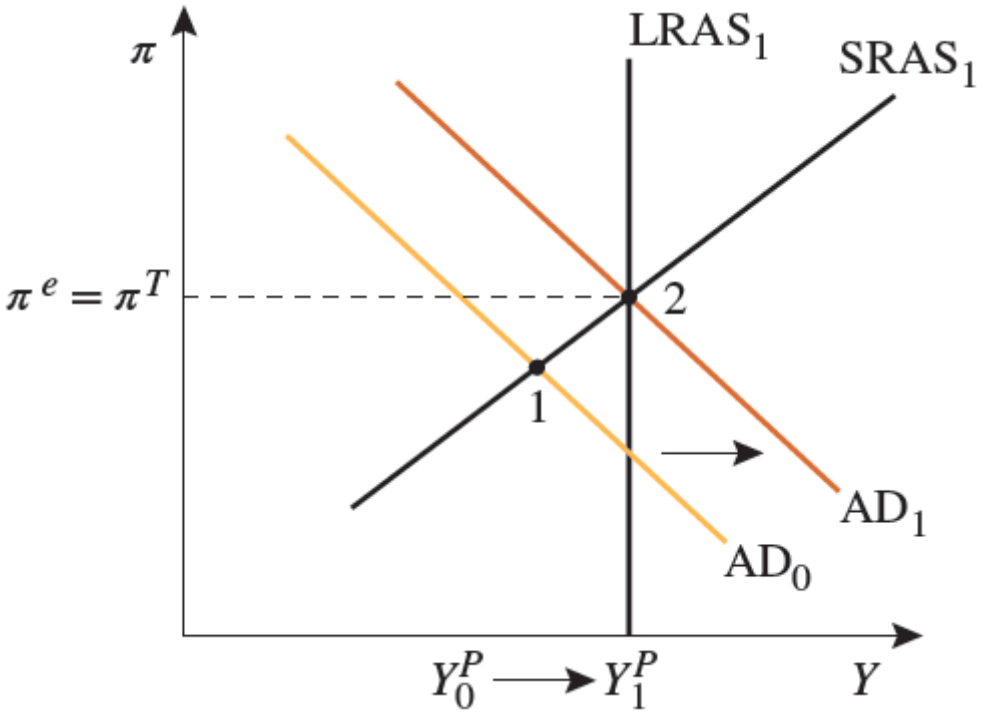
- In the **long run**, **output** must *go to the* ***new*** *level of* **potential output**, $\mathbf{Y^P_1}$.
- *How it gets there* depends on *what monetary policymakers do*.
- *If* **policymakers** are happy with their ***inflation target***, they will ***work to move*** *the economy* to the point on the **LRAS curve *consistent with*** their **target**.

What Happens When Potential Output Changes?

- But the **higher** level of **potential output** *comes along with* a ***lower*** **long-run real interest rate**.
  - **Returning inflation** to its *higher level* means *shifting* the **MPRC** to the **right**.
  - This *shifts* **AD** to the **right**.
  - The policy adjustment will *drive* ***output*** and ***inflation*** *up* until they **reach their new LR equilibrium level** at the ***original inflation target*** and $\mathbf{Y^P_1}$.

What Happens When Potential Output Changes?

- With π^T **unchanged**, policymakers *shift* **AD right**.
- The economy *moves to* the **new** level of **potential output** *and* the **original** π^T *at point 2.*

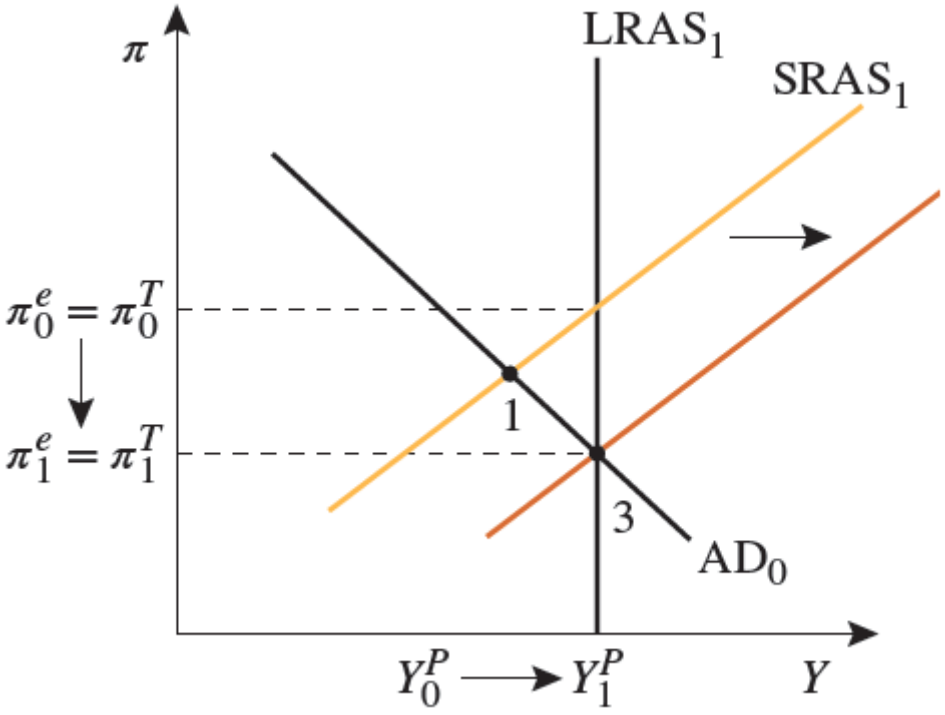


What Happens When Potential Output Changes?

- If **policymakers** now **do nothing**, **expected inflation** *exceeds* **current inflation**
  - The **SRAS curve** to the ***right***.
  - **Inflation *falls*** even *further*
- **Long run** in this case is at a ***new*** **lower inflation target** at the ***new*** **potential output**.

What Happens When Potential Output Changes?

- With a **new, lower π^T:** policymakers *allow the economy to move* to **point 3**.
- They do this by *leaving* the **monetary policy reaction curve** alone.



What Happens When Potential Output Changes?

- *In the 1990s* the **LRAS curve** *shifted* to the **right**, and the **Fed *took the opportunity*** to **reduce** their implicit **inflation target**.
- At the time, this was *referred to* as ***opportunistic disinflation*.**
  - Declines in inflation
- **Real-business cycle theory**: ***prices and wages are flexible***, so ***inflation adjusts rapidly***, **current output** always equals **potential output**, and all ***business-cycle fluctuations*** arise *from* ***changes in potential output***

What Are the Implications of Globalization for Monetary Policy?*

- *Shifting* the factors of production *from* **domestic** *to* **foreign factories** is the same as U.S. producers **finding** a ***new, cheaper technology*** to produce domestically.
  - **Improvements in technology *increase* potential output**
- Our conclusion is that ***globalization*** *and* ***trade*** do ***reduce inflation*** *in the* ***short run***.
  - And *just like* any **positive supply shock** they provide an **opportunity to reduce inflation** *permanently*.

Can Policymakers Stabilize Output and Inflation Simultaneously?*

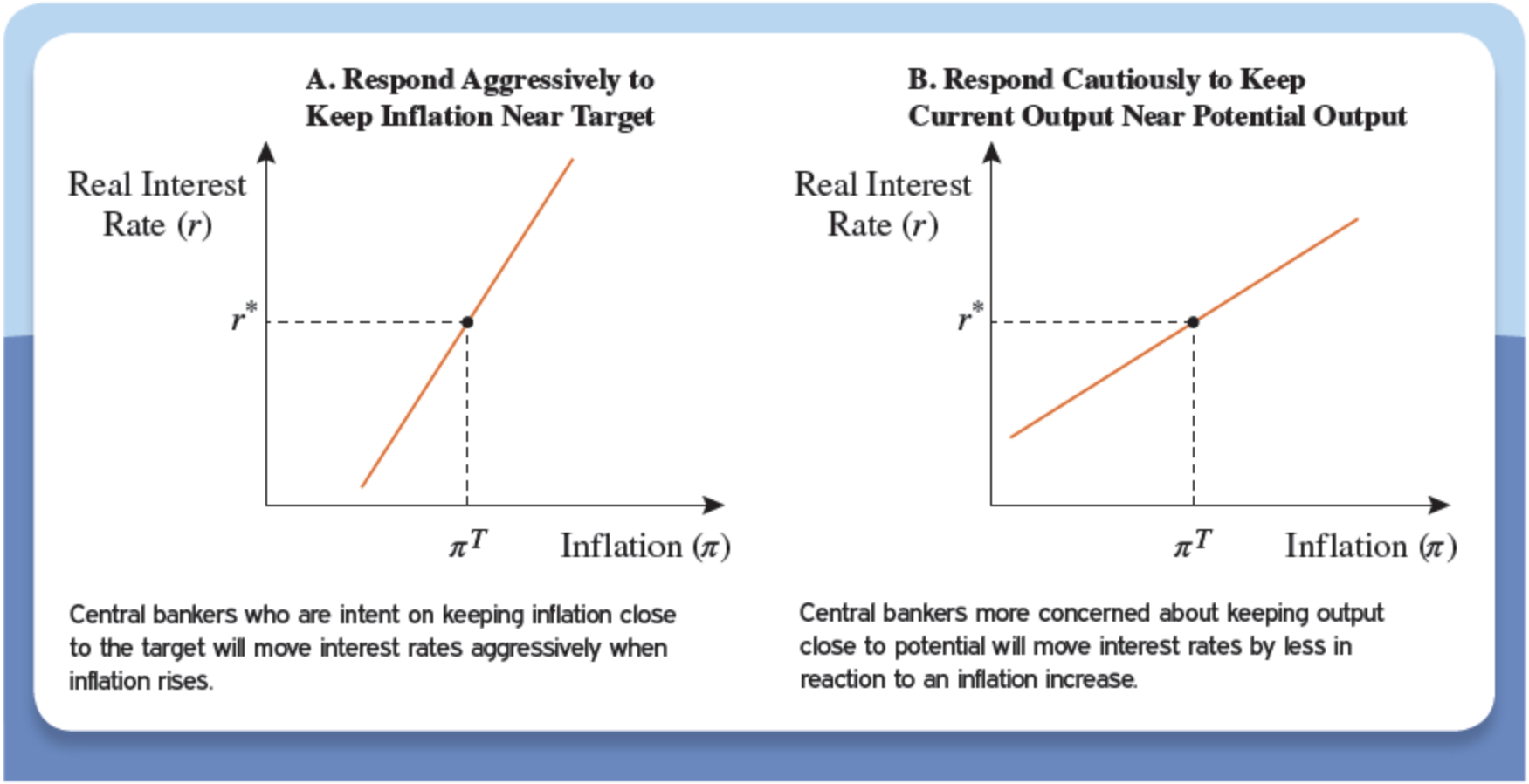
- ***Short run* fluctuations** in **output** and **inflation** are ***caused by*** either ***demand*** *shifts* or ***supply*** *shifts*.
- By *shifting* their **monetary policy reaction curve**, policymakers **offset *demand shocks***.
- **Unfortunately**, ***supply shocks*** are a *different* story.
  - There is **no way** to ***neutralize*** them.

Can Policymakers Stabilize Output and Inflation Simultaneously?*

- Monetary policymakers can *shift* the **AD curve**, but **cannot *move*** the **SRAS curve**.
- Central bankers can *choose how aggressively* they ***react to deviations of inflation*** *from their target* caused by **supply shocks**.
  - *Picking the slope* of their **MPRC**, which ***determines*** the *slope of the AD curve*.

Can Policymakers Stabilize Output and Inflation Simultaneously?*

Figure 22.12 The Slope of the Monetary Policy Reaction Curve



Can Policymakers Stabilize Output and Inflation Simultaneously?*

- The *more aggressively* policymakers are **keeping current inflation *close to* target**, the ***steeper*** their **monetary policy reaction curve**,
  - The ***flatter*** the **AD curve**.
  - By **controlling the *slope* of AD**, policymakers *choose the extent* to which **supply shocks** *translate into* ***changes in output*** or ***changes in inflation***.
- The ***more*** central bankers **stabilize inflation**, the ***more* volatile output** will be, and vice versa.
  - There is a **tradeoff**.

Can Policymakers Stabilize Output and Inflation Simultaneously?*

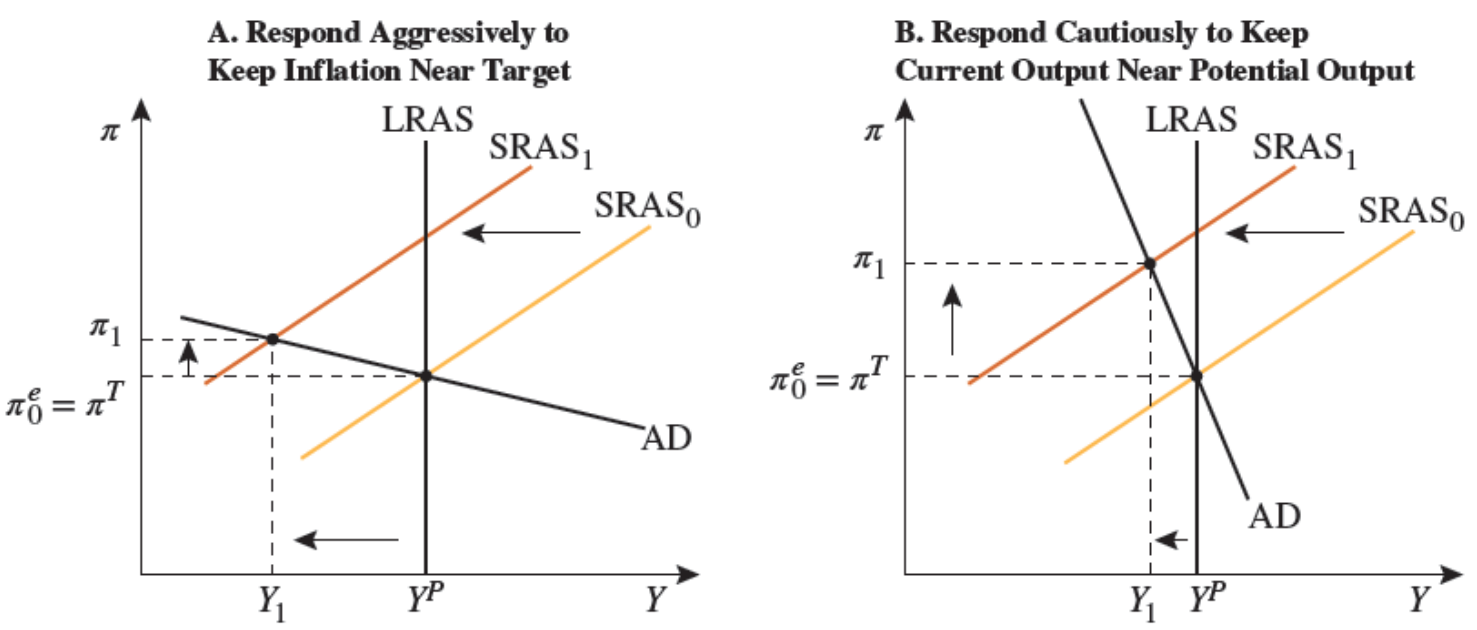
- A ***relatively* flat AD curve** implied by the ***steep* monetary policy reaction curve** means:
  - A **negative supply shock** prompts a ***large decline*** in **current output** and a ***small increase*** in **current inflation.**
- By **reacting aggressively**, policymakers *ensure* that **inflation** (and **inflation expectations**) ***remain* close to** their **target**.
- **Stable inflation *means* volatile output**.

Can Policymakers Stabilize Output and Inflation Simultaneously?*

- When policymakers **worry about *more short-run fluctuations in output*** *than* about ***temporary movements in inflation***, they will **choose** a **relatively *flat* monetary policy reaction curve**.
  - The result is a **steep AD curve**.
- **Inflation *rises*** and **output *falls***
  - The **output gap** is ***small*** while the **deviation of inflation** *from expected inflation* is ***large***
- **Expected inflation *rises*** *significantly* and *slowly adjusts* **back to target**.
- **Stable output** *means* **volatile inflation**.

Can Policymakers Stabilize Output and Inflation Simultaneously?*

Figure 22.13 The Policymaker's Choice



Central bankers intent on keeping inflation close to the target will move interest rates aggressively when inflation rises and create bigger fluctuations in output.

Policymakers more concerned about keeping output close to potential will move interest rates by less in reaction to an inflation change, resulting in bigger fluctuations in inflation.

End of lecture