

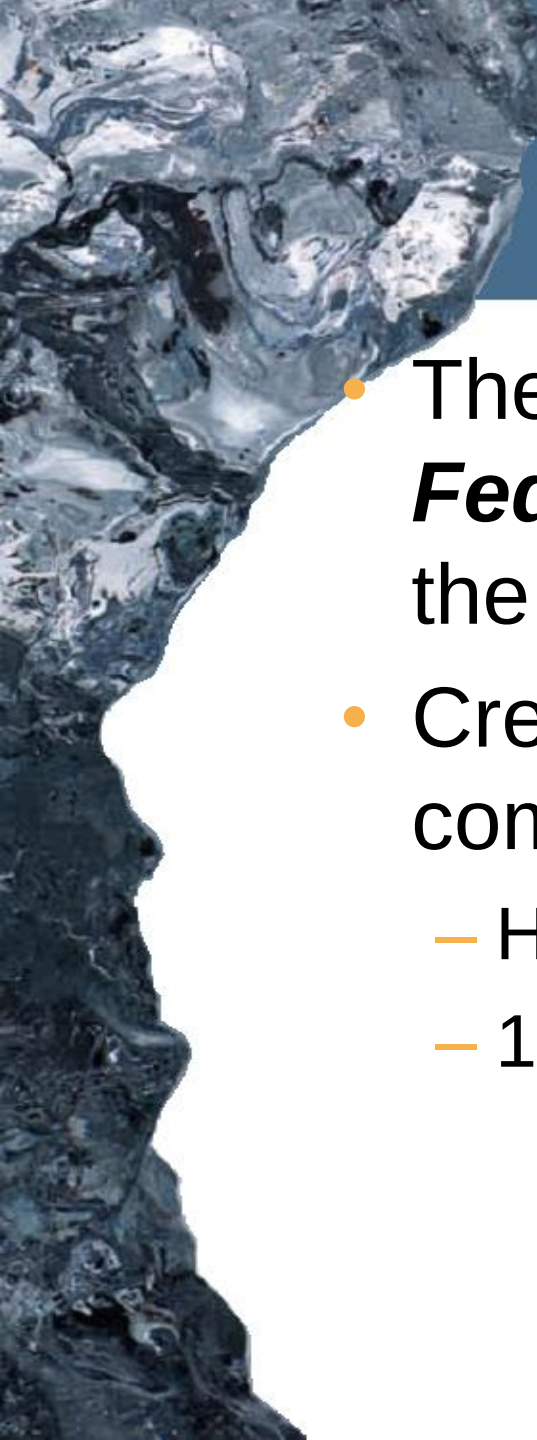


Everyone's Smart University

Introduction to Economics

Chapter 8

MONETARY POLICY



The Federal Reserve System

- The Federal Reserve System (***the Fed***) is the central banking system of the United States
- Created in 1913, it consists of two components:
 - Headquarters in Washington, D.C.
 - 12 District Banks



Monetary Policy

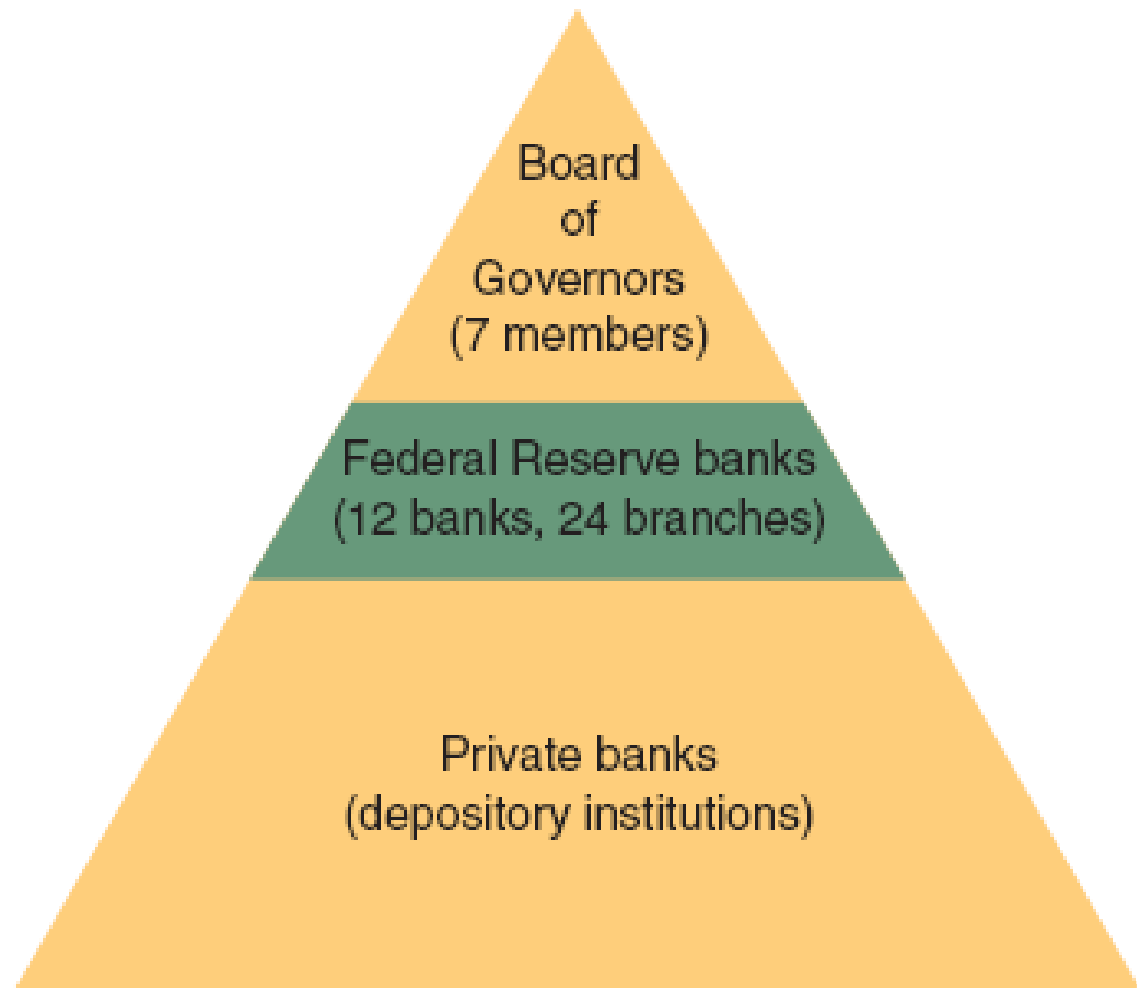
- A central responsibility of the Federal Reserve is ***monetary policy***—the use of money and credit controls to influence macroeconomic activity.

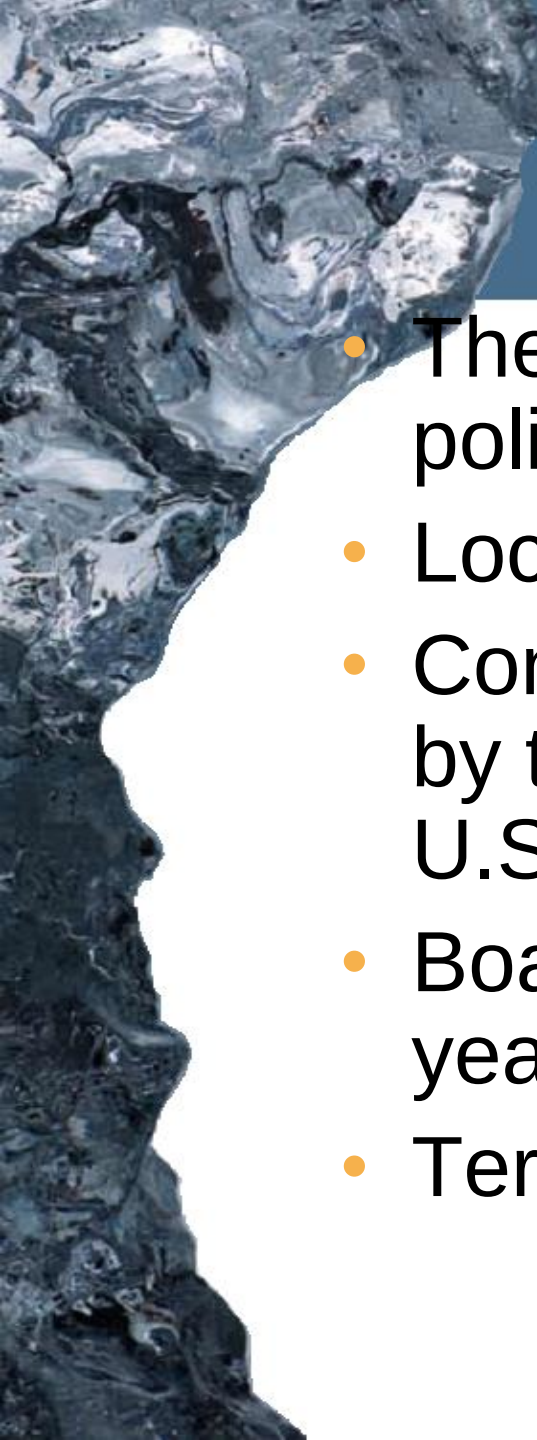


Federal Reserve District Banks

- The 12 district banks perform many critical services, including the following:
 - Clearing checks between private banks
 - Holding bank reserves
 - Providing currency
 - Providing loans (called *discounting*)

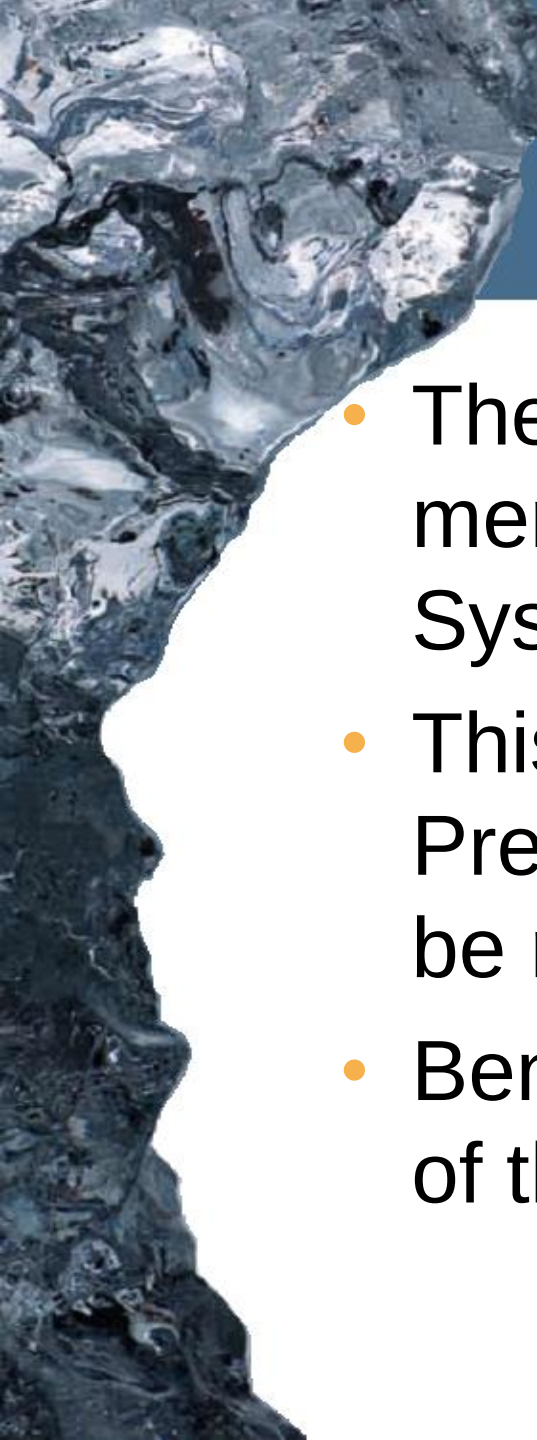
Figure 8.1





The Board of Governors

- The key decision maker for monetary policy.
- Located in Washington, D.C
- Consists of seven members appointed by the President and confirmed by the U.S. Senate.
- Board members are appointed for 14-year terms and *cannot* be reappointed.
- Terms are staggered every two years.



The Fed Chairman

- The Chairman is the most visible member of the Federal Reserve System.
- This person is selected by the President for a four-year term and may be reappointed.
- Ben Bernanke is the current Chairman of the Fed.

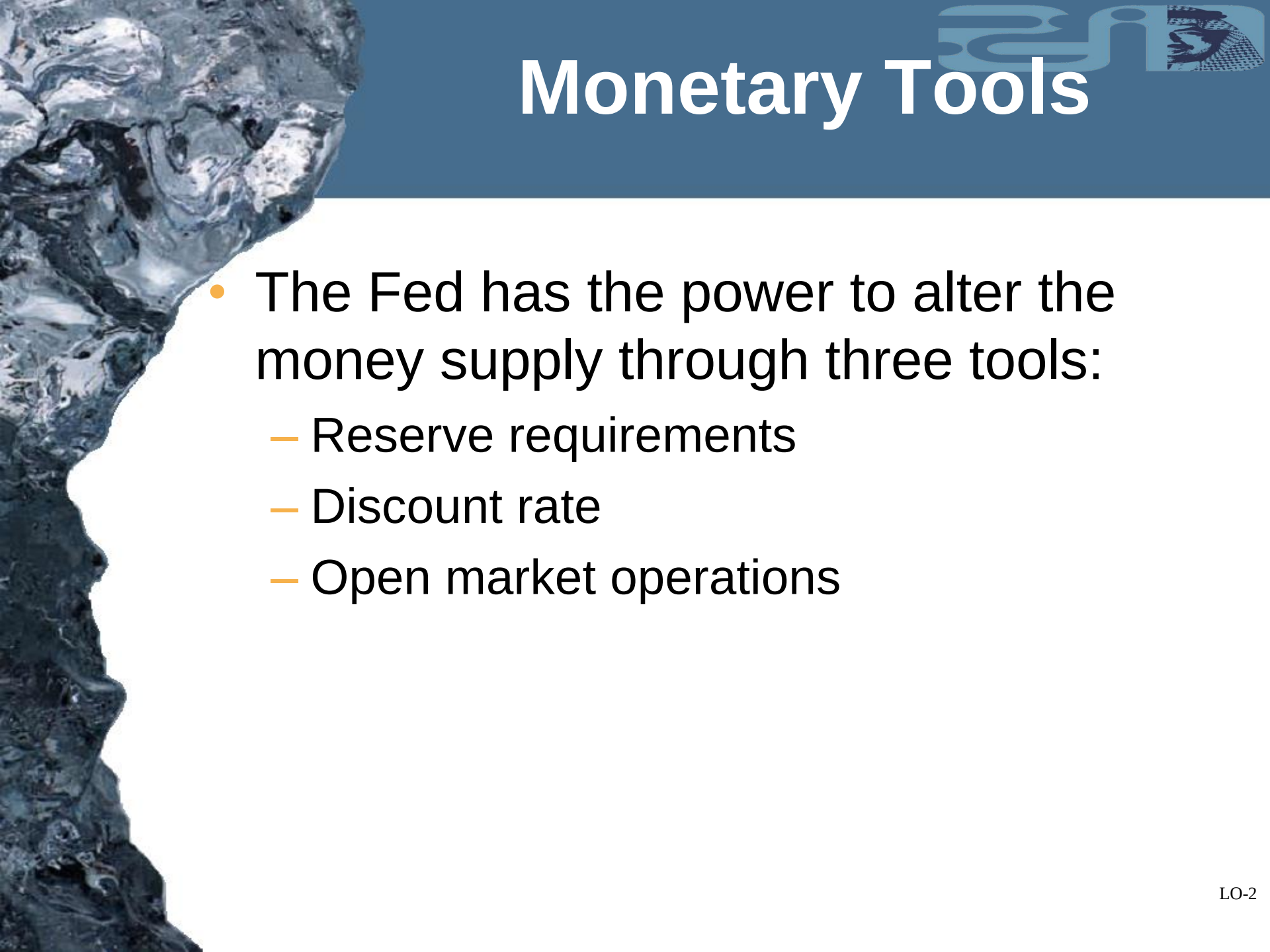
البنك المركزي السعودي



- البنك المركزي السعودي والمعروف سابقاً باسم مؤسسة النقد العربي السعودي (المصرف المركزي للمملكة العربية السعودية) أنشئ في 1952 وتعرف أيضاً باسم ساما (SAMA اختصاراً لـ Saudi Arabian Monetary Authority) وهو المصرف المركزي للسعودية، وهو جهاز التنظيم الأكثر جدية ومهنية في القطاع المصرفي في منطقة الخليج. وأفضل مدير للمخاطر على مستوى البنوك المركزية في العالم للعام 2018. 2019 بحسب لجنة البنوك المركزية

مهام البنوك المركزية

- ممارسة امتياز إصدار العملة الوطنية لحساب الدولة.
- العمل على تأمين ثبات النقد، وعلى حرية تحويله إلى العملات الأجنبية الأخرى.
- العمل على توجيه سياسة الائتمان بما يساعد على التقدم الاقتصادي والاجتماعي وزيادة الدخل القومي
- مراقبة الجهاز المصرفي في الدولة.
- القيام بوظيفة بنك الحكومة.
- تقديم المشورة المالية للحكومة



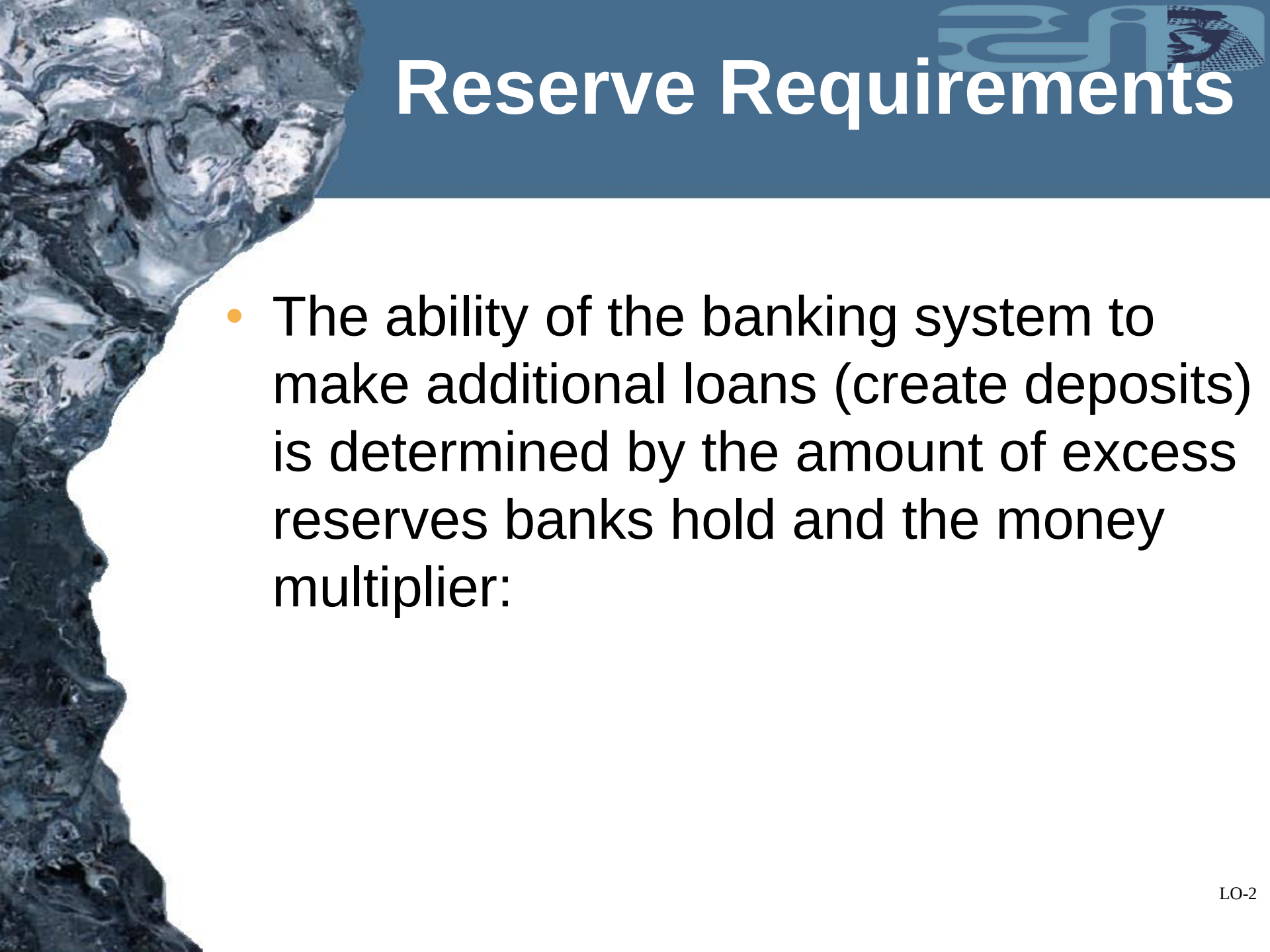
Monetary Tools

- The Fed has the power to alter the money supply through three tools:
 - Reserve requirements
 - Discount rate
 - Open market operations



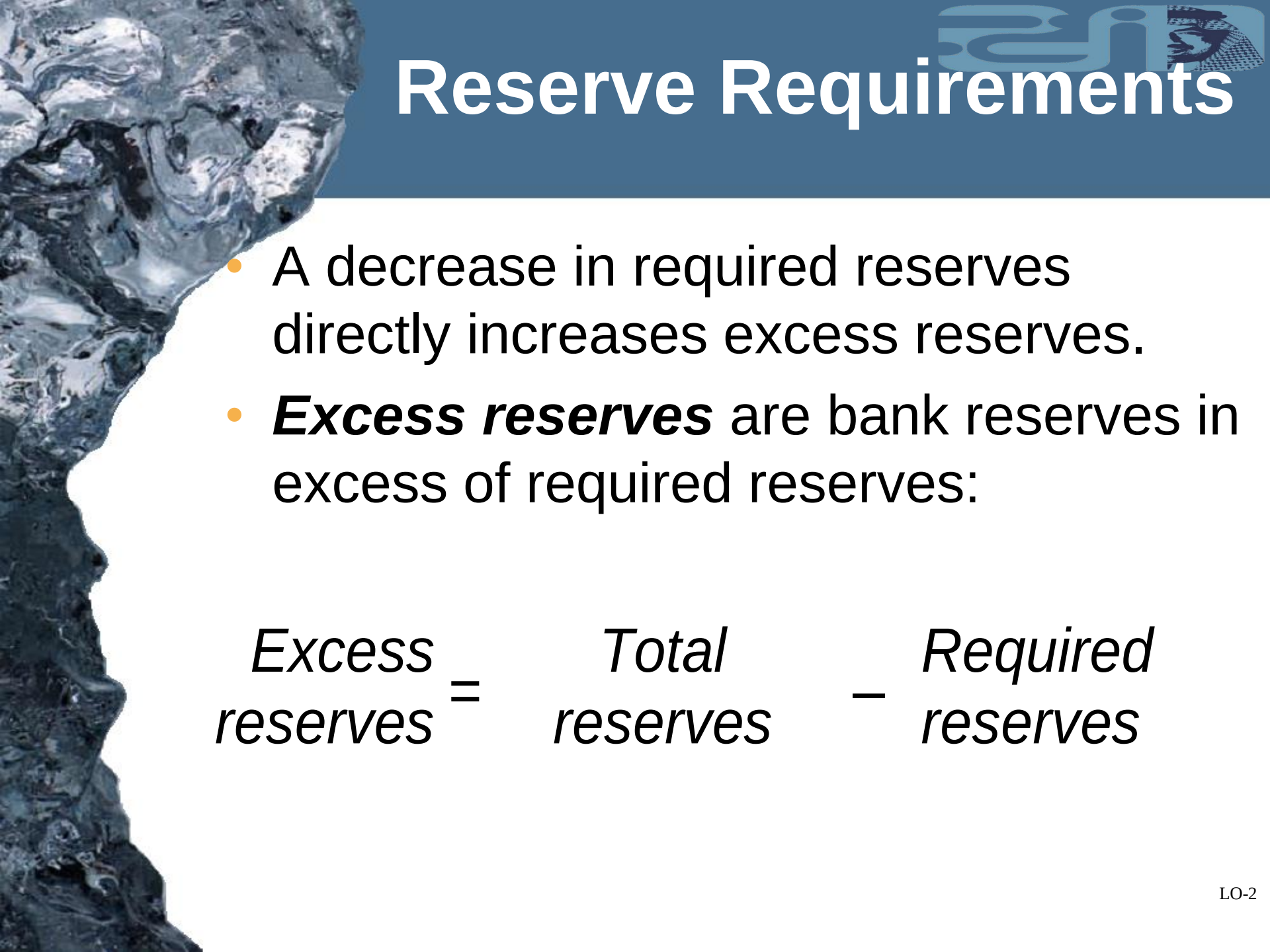
Reserve Requirements

- By changing the reserve requirement, the Fed can directly alter the lending capacity of the banking system.
 - ***Required reserves*** are the minimum amount of reserves a bank is required to hold by government regulation.



Reserve Requirements

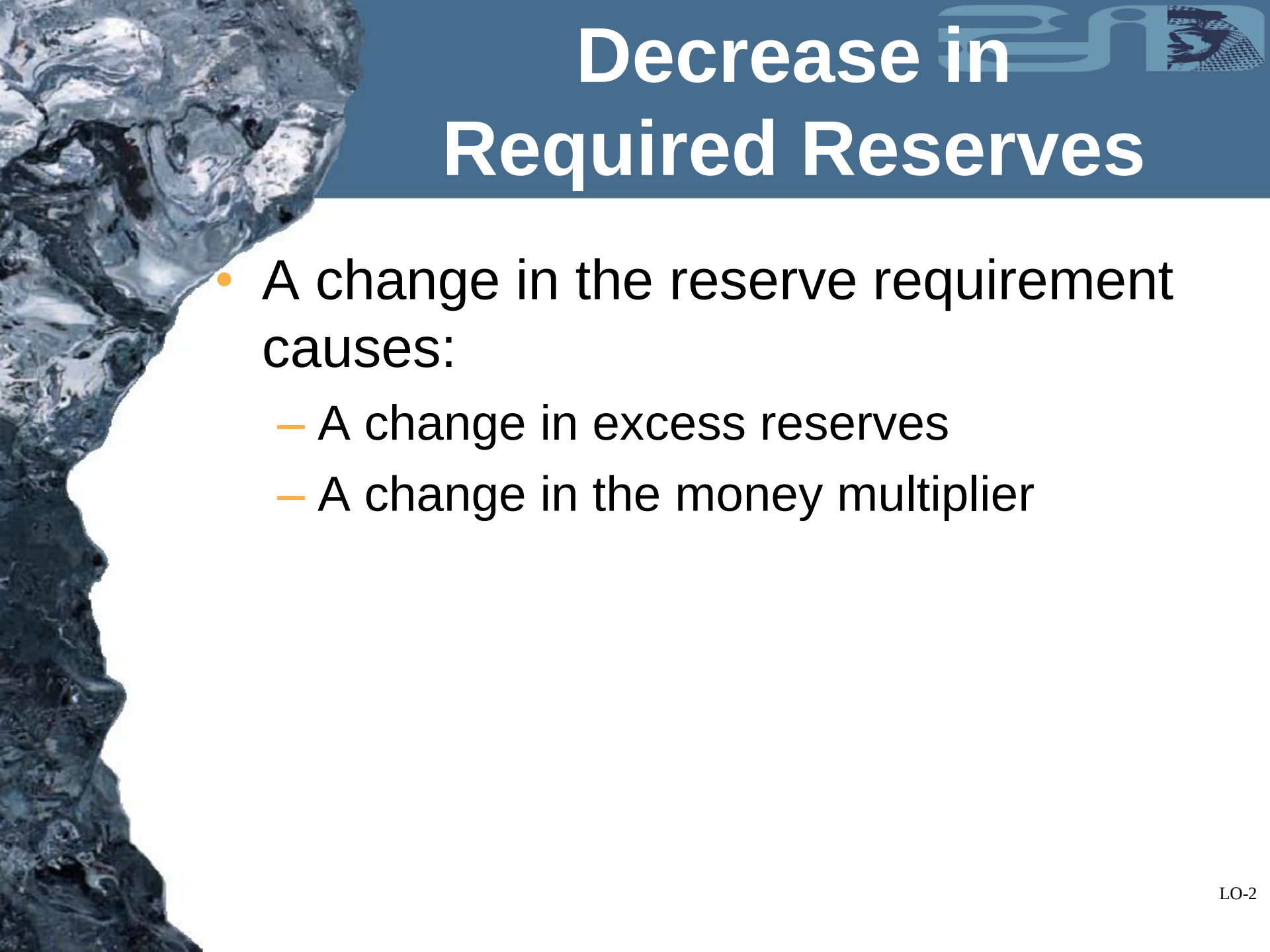
- The ability of the banking system to make additional loans (create deposits) is determined by the amount of excess reserves banks hold and the money multiplier:



Reserve Requirements

- A decrease in required reserves directly increases excess reserves.
- ***Excess reserves*** are bank reserves in excess of required reserves:

$$\text{Excess reserves} = \text{Total reserves} - \text{Required reserves}$$



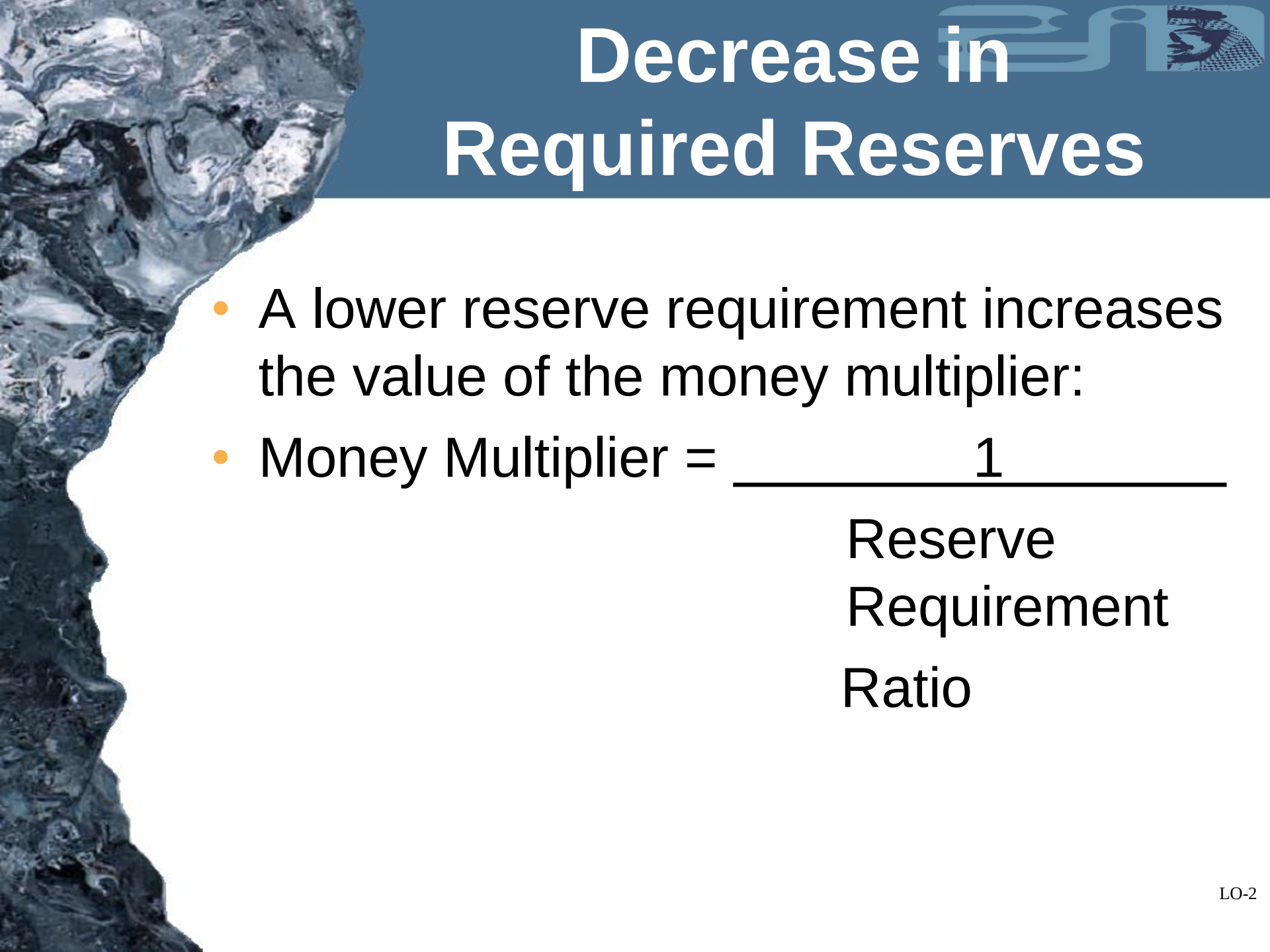
Decrease in Required Reserves

- A change in the reserve requirement causes:
 - A change in excess reserves
 - A change in the money multiplier



Table 8.1

	Required Reserve Ratio	
	25 Percent	20 Percent
1. Total deposits	\$100 billion	\$100 billion
2. Total reserves	30 billion	30 billion
3. Required reserves	25 billion	20 billion
4. Excess reserves	5 billion	10 billion
5. Money multiplier	4	5
6. Unused lending capacity	\$20 billion	\$50 billion



Decrease in Required Reserves

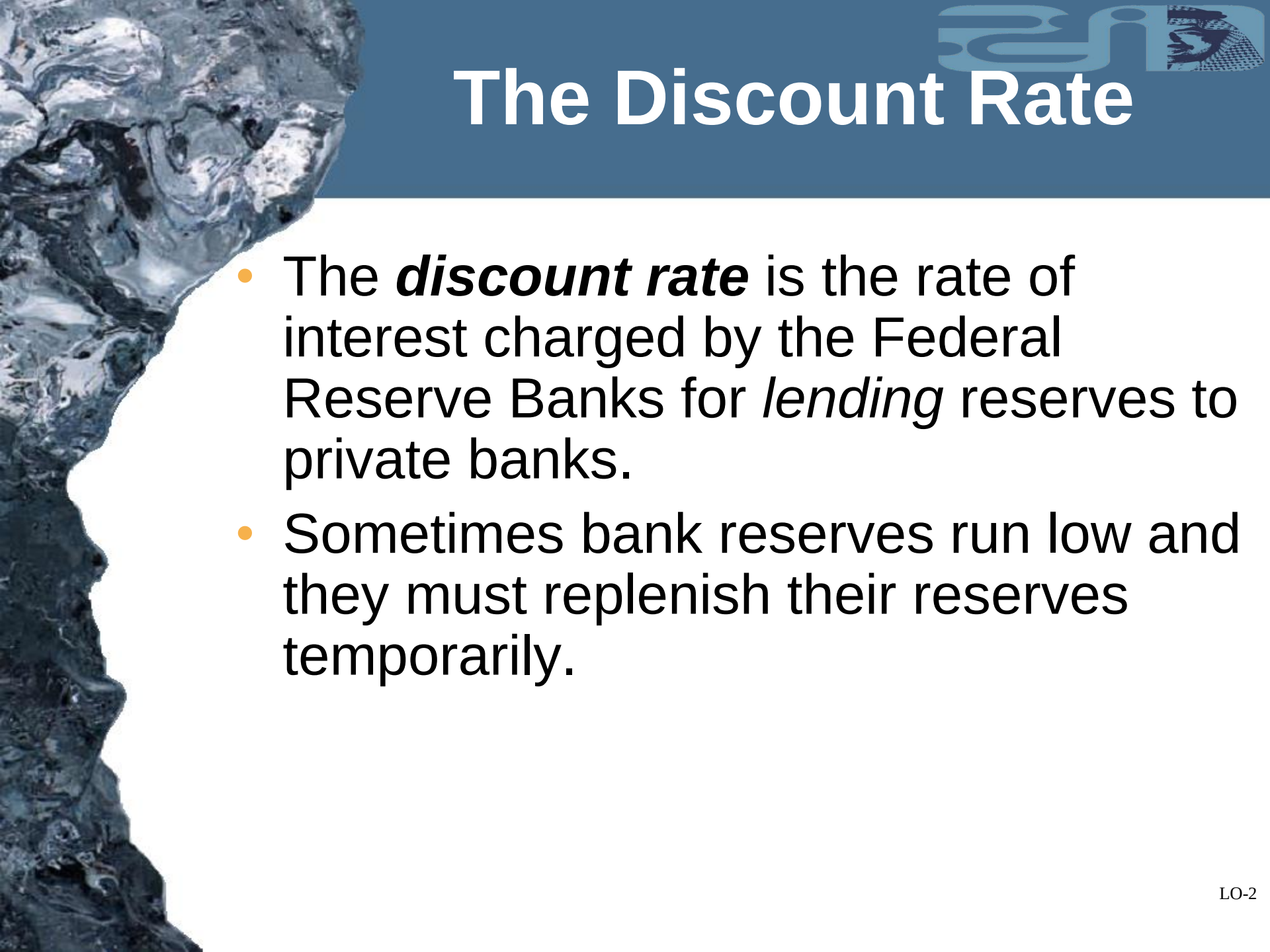
- A lower reserve requirement increases the value of the money multiplier:
- Money Multiplier = $\frac{1}{\text{Reserve Requirement Ratio}}$

- مثال: قام البنك المركزي بإصدار نقود جديدة
- ريال، والاحتياطي النقدي القانوني 1000 قيمتها
وضحي أثر ذلك على عرض النقد؟ 20% يبلغ

$$= \frac{1}{r} (R) = \frac{1}{0.2} = 5$$

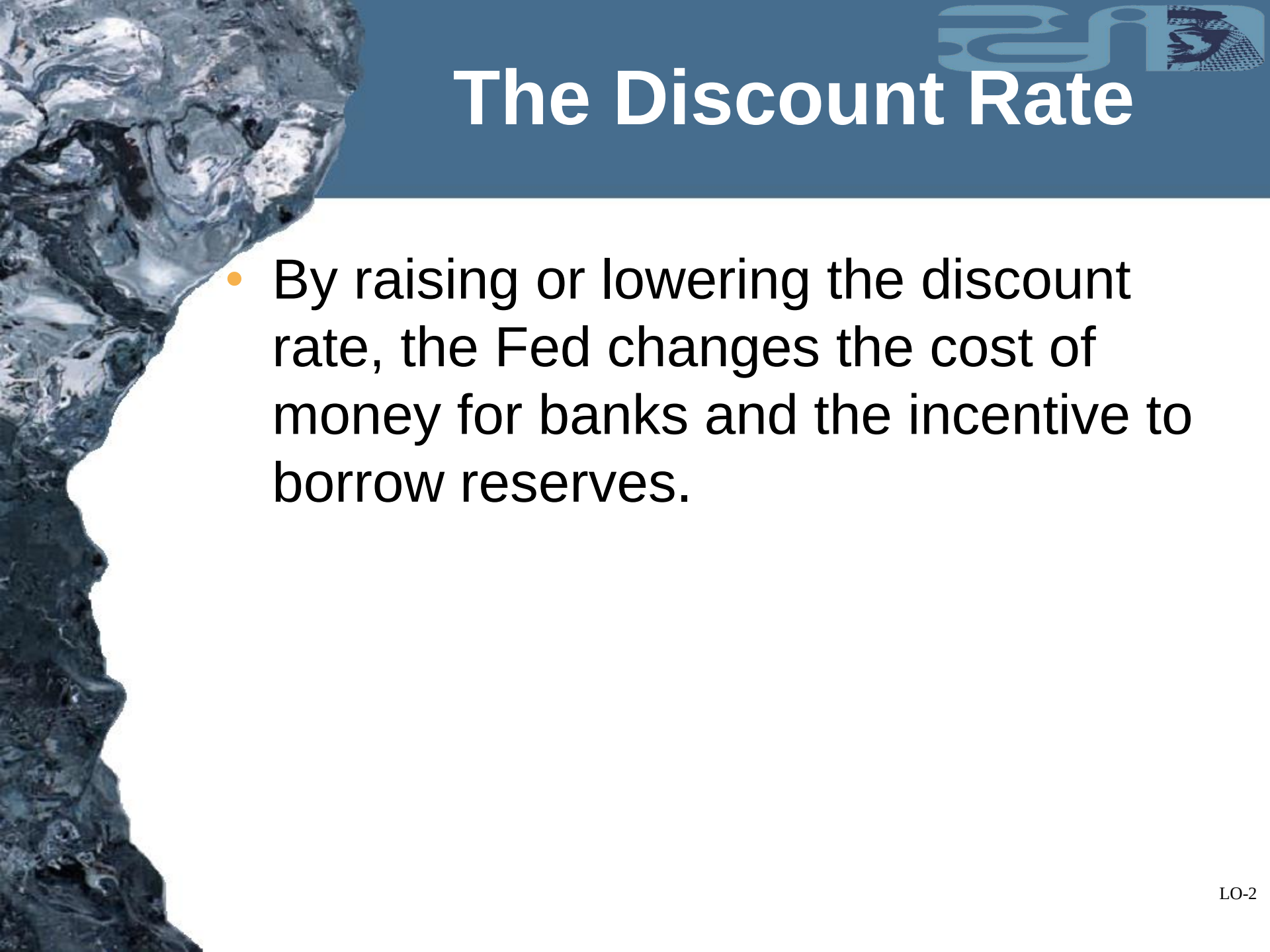
$$D = 5 * 1000 = 5000$$

إذن البنوك التجارية خلقت نقود جديدة قيمتها 5000
ريال



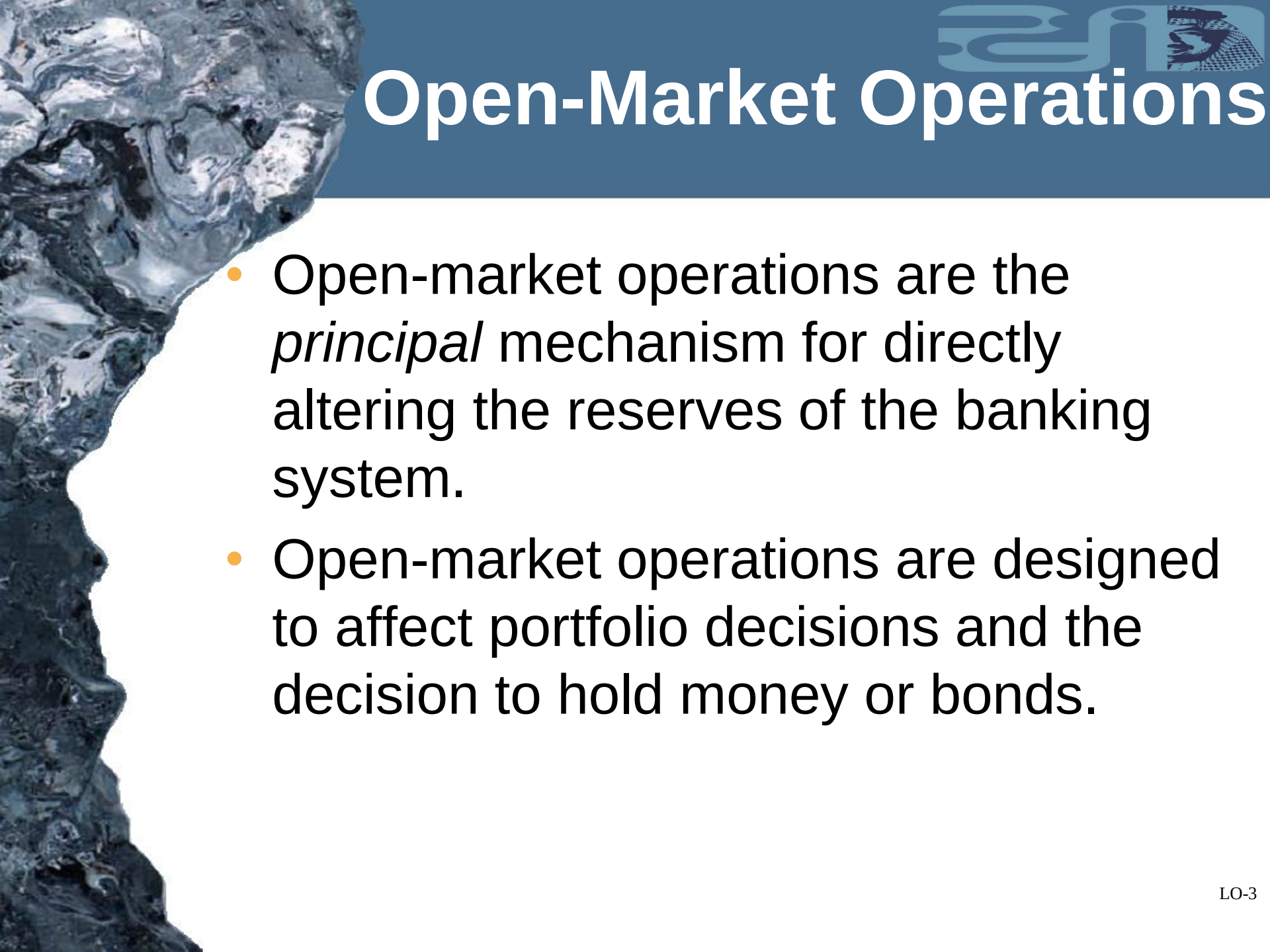
The Discount Rate

- The ***discount rate*** is the rate of interest charged by the Federal Reserve Banks for *lending* reserves to private banks.
- Sometimes bank reserves run low and they must replenish their reserves temporarily.



The Discount Rate

- By raising or lowering the discount rate, the Fed changes the cost of money for banks and the incentive to borrow reserves.



Open-Market Operations

- Open-market operations are the *principal* mechanism for directly altering the reserves of the banking system.
- Open-market operations are designed to affect portfolio decisions and the decision to hold money or bonds.



Open-Market Activity

- ***Open-market operations***—Federal Reserve purchases and sales of government bonds for the purpose of altering bank reserves:
 - If the Fed ***buys bonds***, it *increases* bank reserves.
 - If the Fed ***sells bonds***, it *reduces* bank reserves



Powerful Levers

- To summarize, there are three levers of monetary policy:
 - Reserve requirements
 - Discount rates
 - Open-market operations
- The Fed has effective control of the nation's money supply.



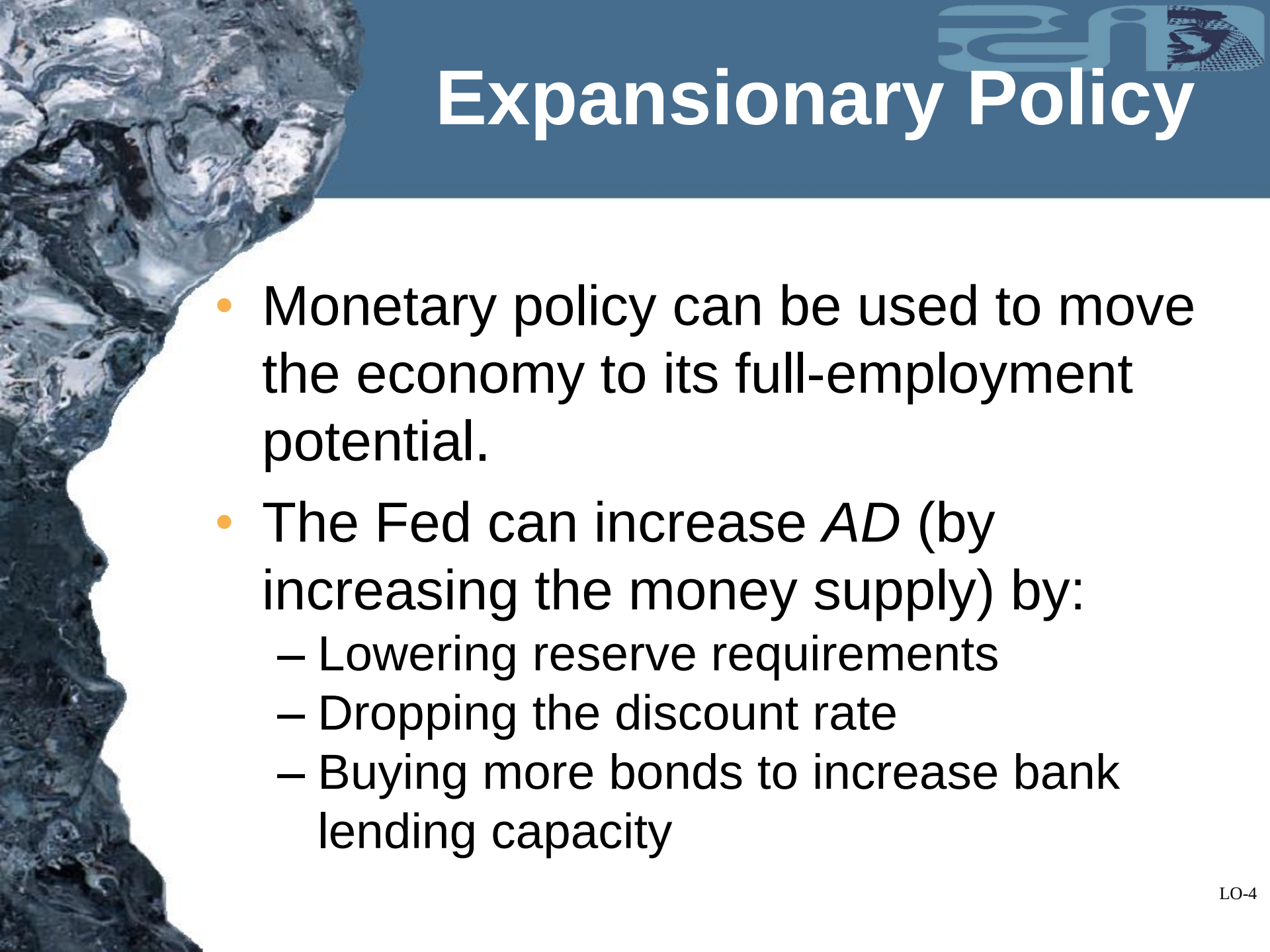
Shifting Aggregate Demand

- The ultimate goal of all macro policy is to stabilize the economy at its full-employment potential.
- Monetary policy may be used to shift aggregate demand.



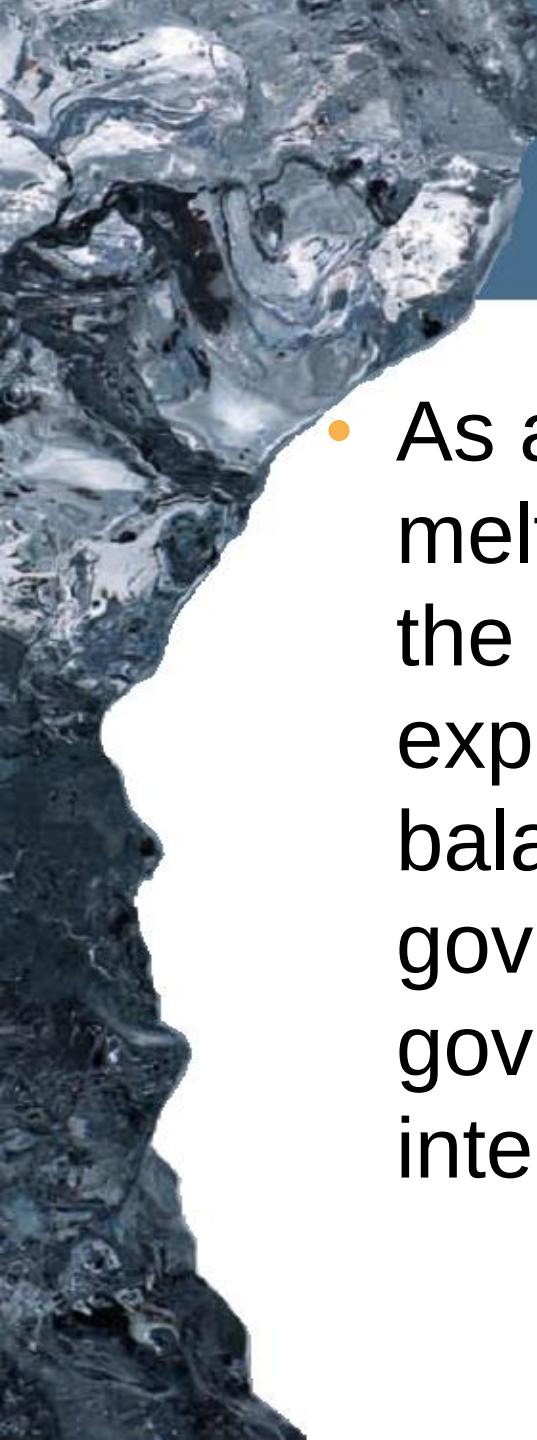
Shifting Aggregate Demand

- ***Aggregate demand*** is the total quantity of output demanded at alternative price levels in a given time period, *ceteris paribus*.



Expansionary Policy

- Monetary policy can be used to move the economy to its full-employment potential.
- The Fed can increase *AD* (by increasing the money supply) by:
 - Lowering reserve requirements
 - Dropping the discount rate
 - Buying more bonds to increase bank lending capacity



Expansionary Policy

- As a result of the near financial meltdown and recession of 2008-09, the Fed took on a massive expansionary policy by expanding its balance sheet (purchasing many government securities and non-government assets) and lowering interest rates to historic levels.



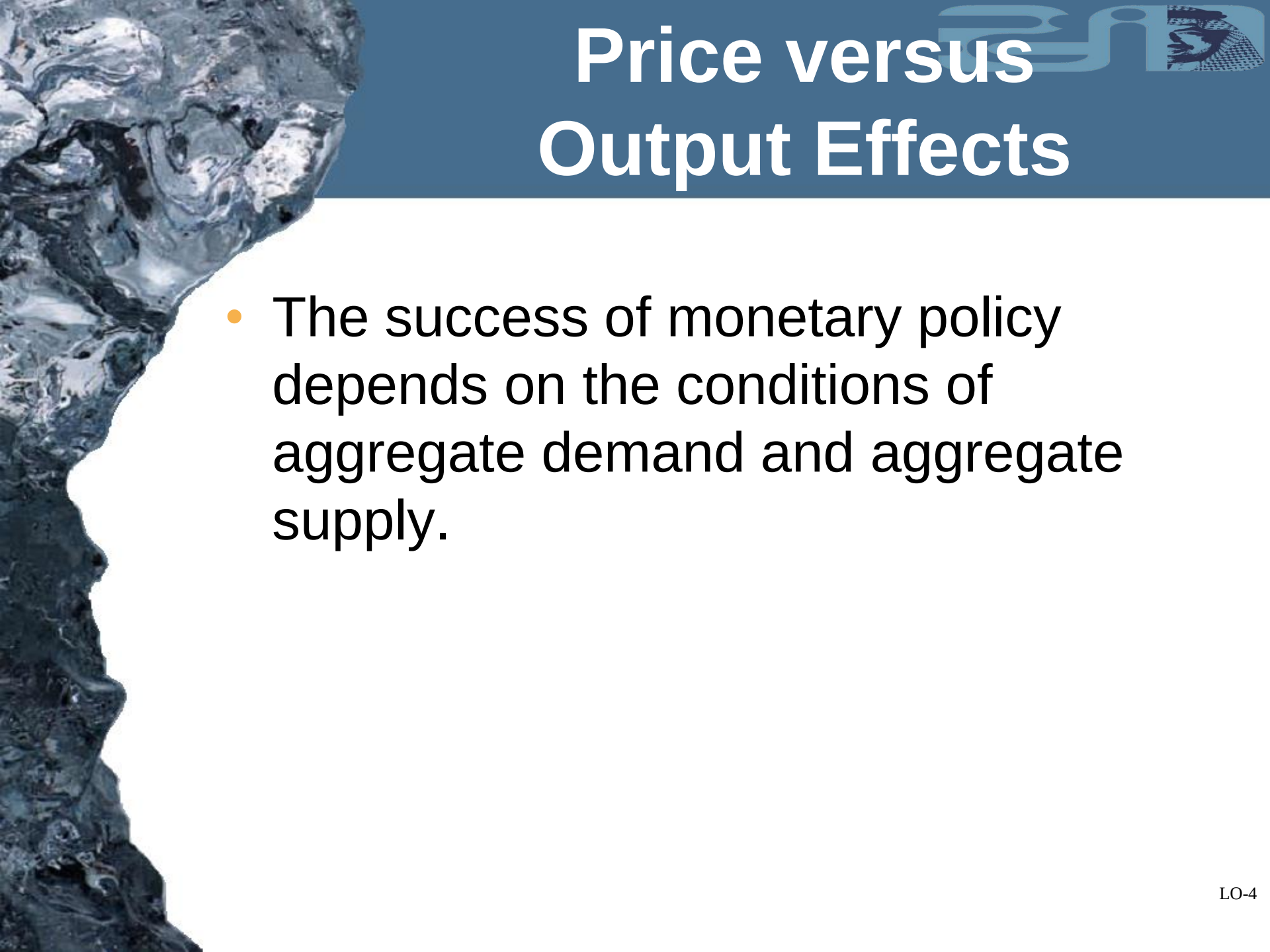
Restrictive Policy

- Monetary policy can also be used to cool an overheating economy.
- The Fed can decrease AD (by decreasing the money supply) by:
 - Raising reserve requirements
 - Increasing the discount rate
 - Selling bonds in the open market



Interest-Rate Targets

- Interest rates are a key link between changes in the money supply and shifts of the AD curve.



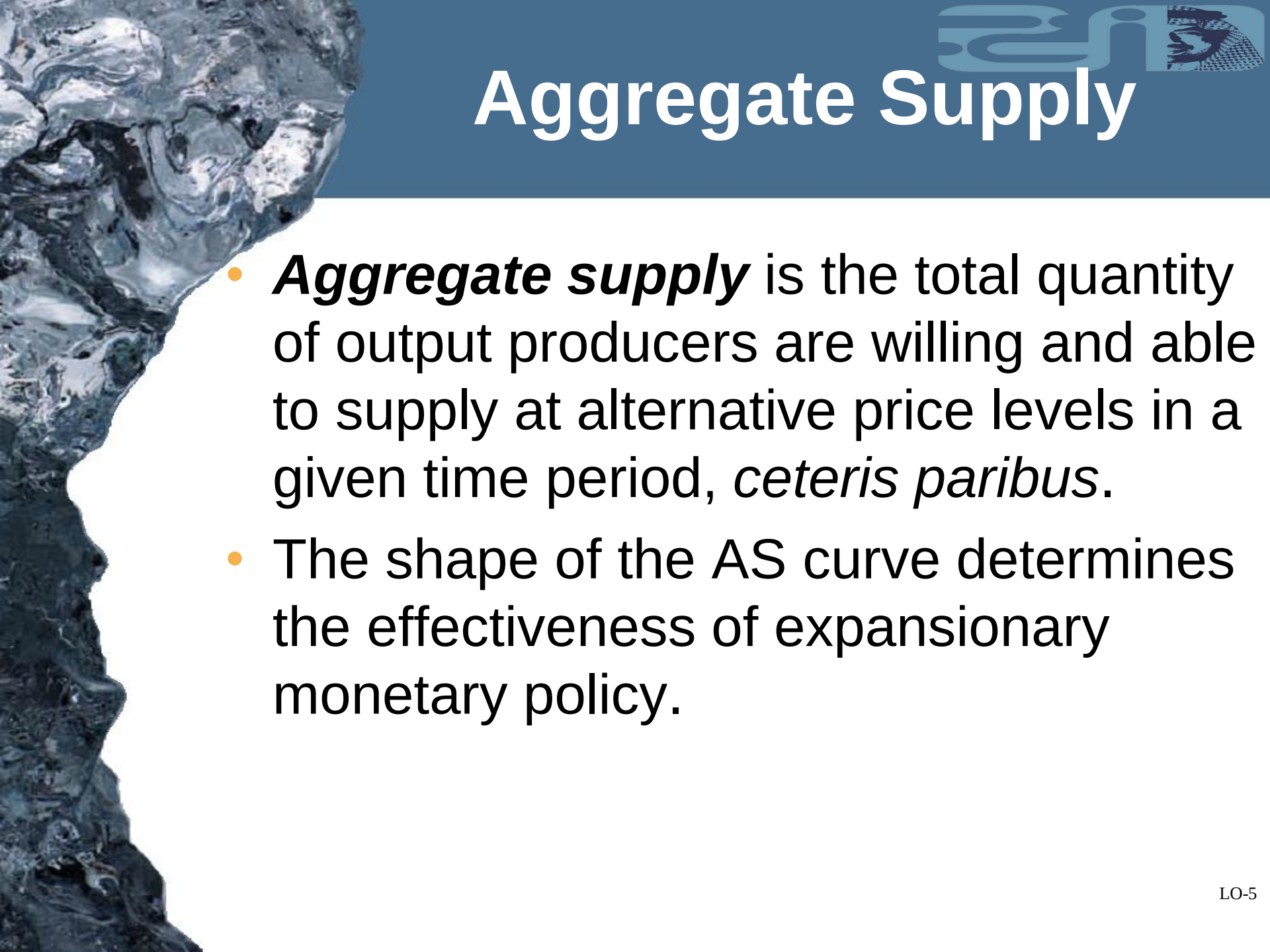
Price versus Output Effects

- The success of monetary policy depends on the conditions of aggregate demand and aggregate supply.



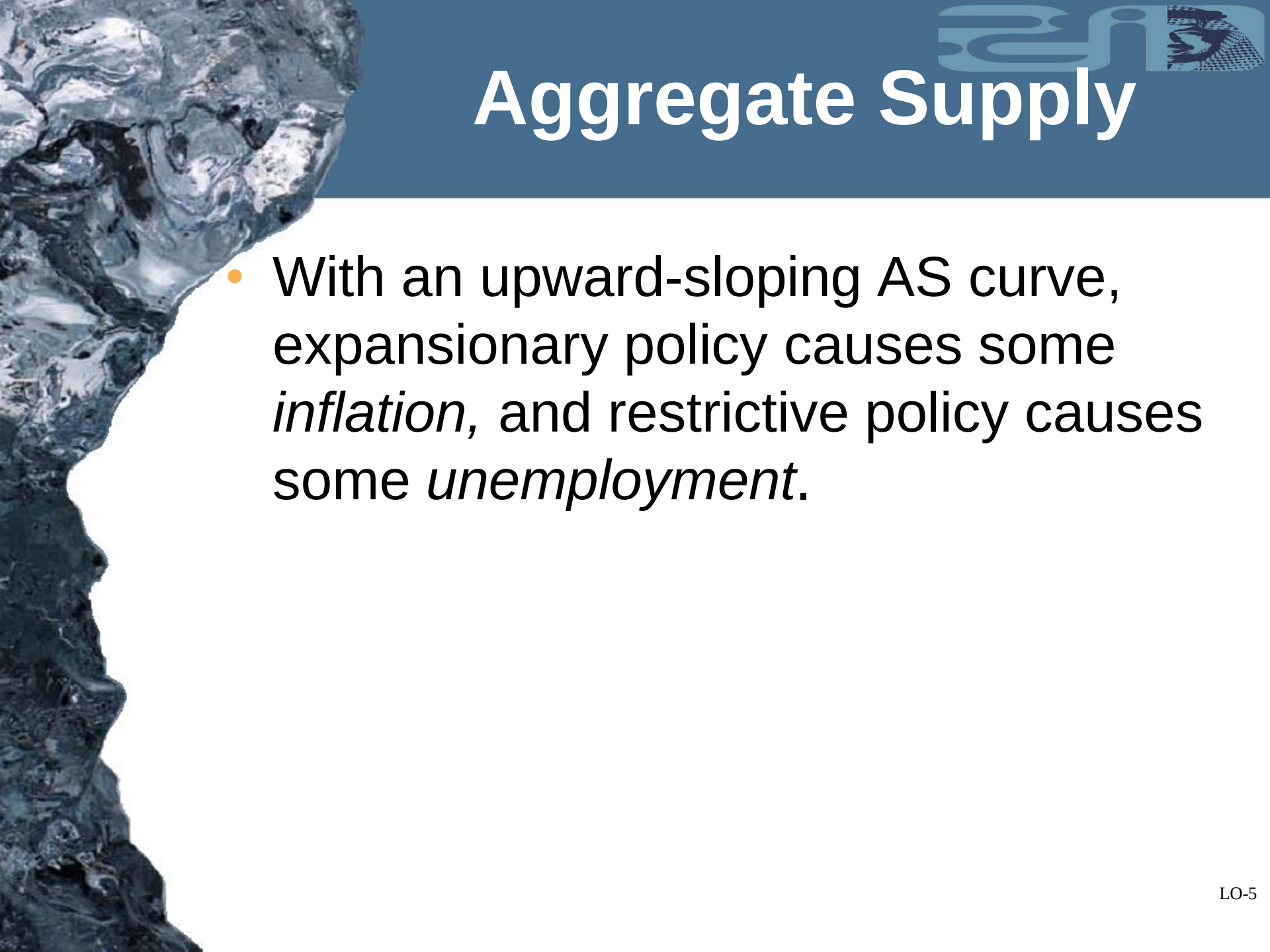
Aggregate Demand

- Increases in the money supply shift AD to the right.



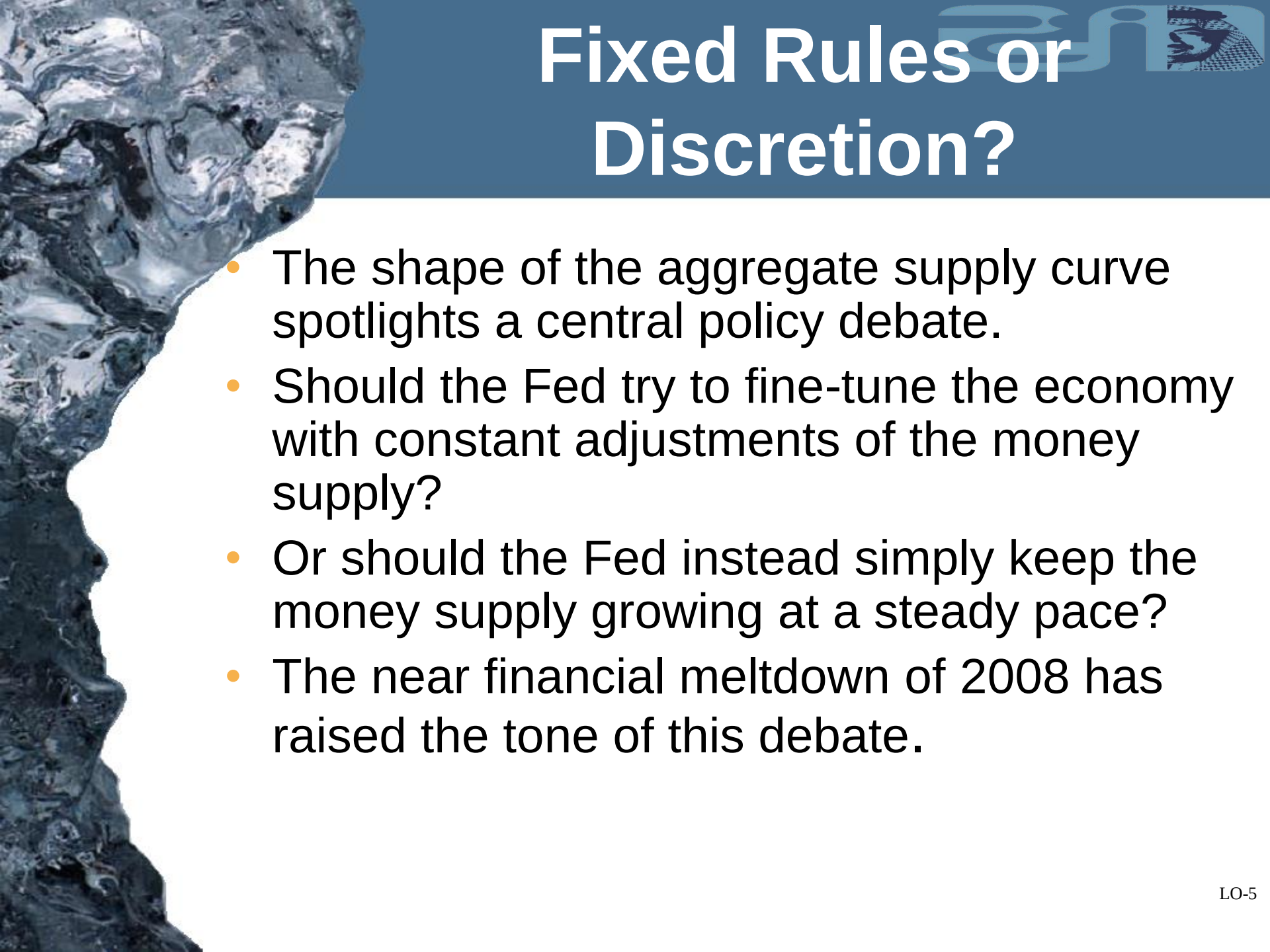
Aggregate Supply

- ***Aggregate supply*** is the total quantity of output producers are willing and able to supply at alternative price levels in a given time period, *ceteris paribus*.
- The shape of the AS curve determines the effectiveness of expansionary monetary policy.



Aggregate Supply

- With an upward-sloping AS curve, expansionary policy causes some *inflation*, and restrictive policy causes some *unemployment*.



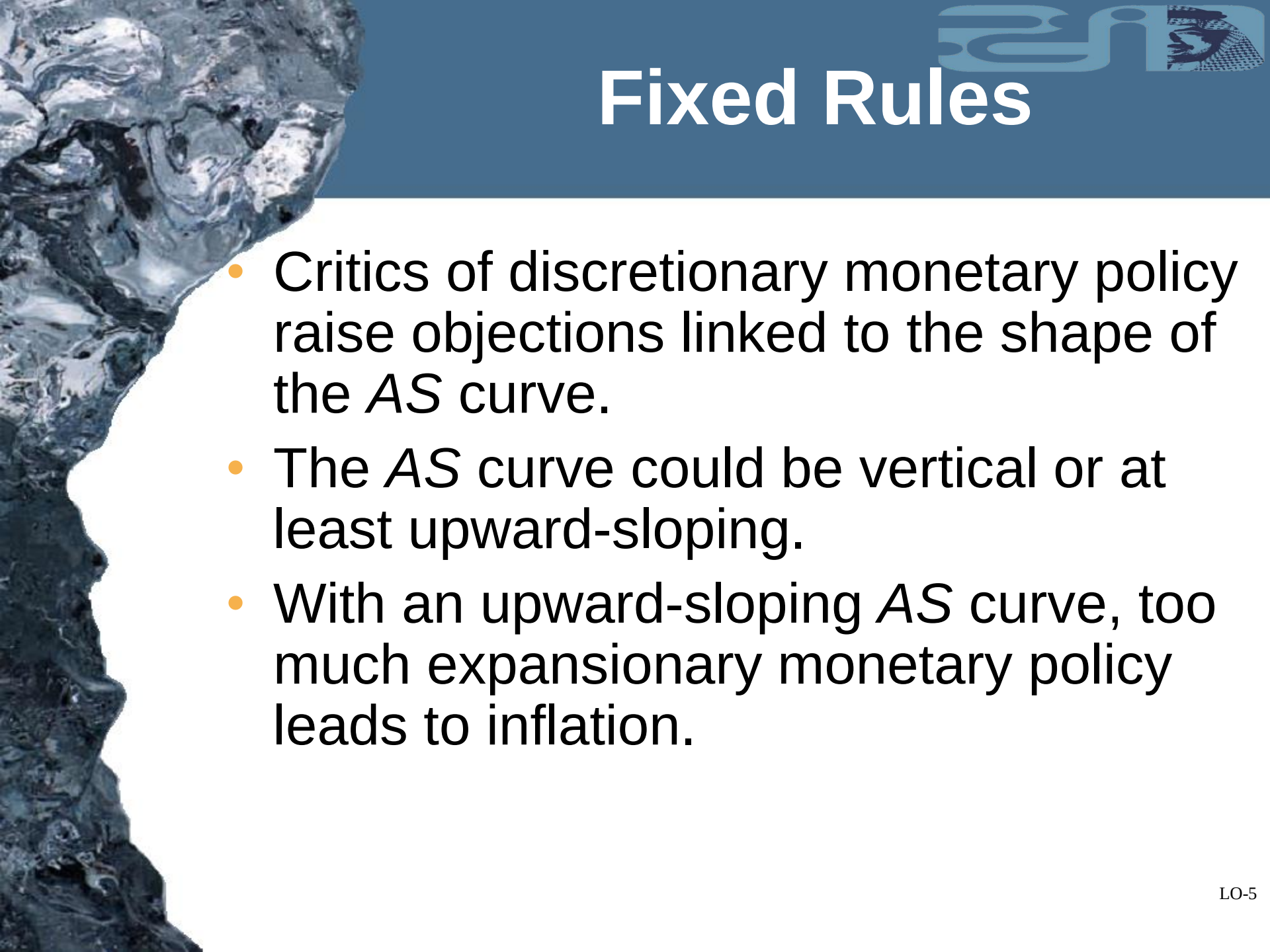
Fixed Rules or Discretion?

- The shape of the aggregate supply curve spotlights a central policy debate.
- Should the Fed try to fine-tune the economy with constant adjustments of the money supply?
- Or should the Fed instead simply keep the money supply growing at a steady pace?
- The near financial meltdown of 2008 has raised the tone of this debate.



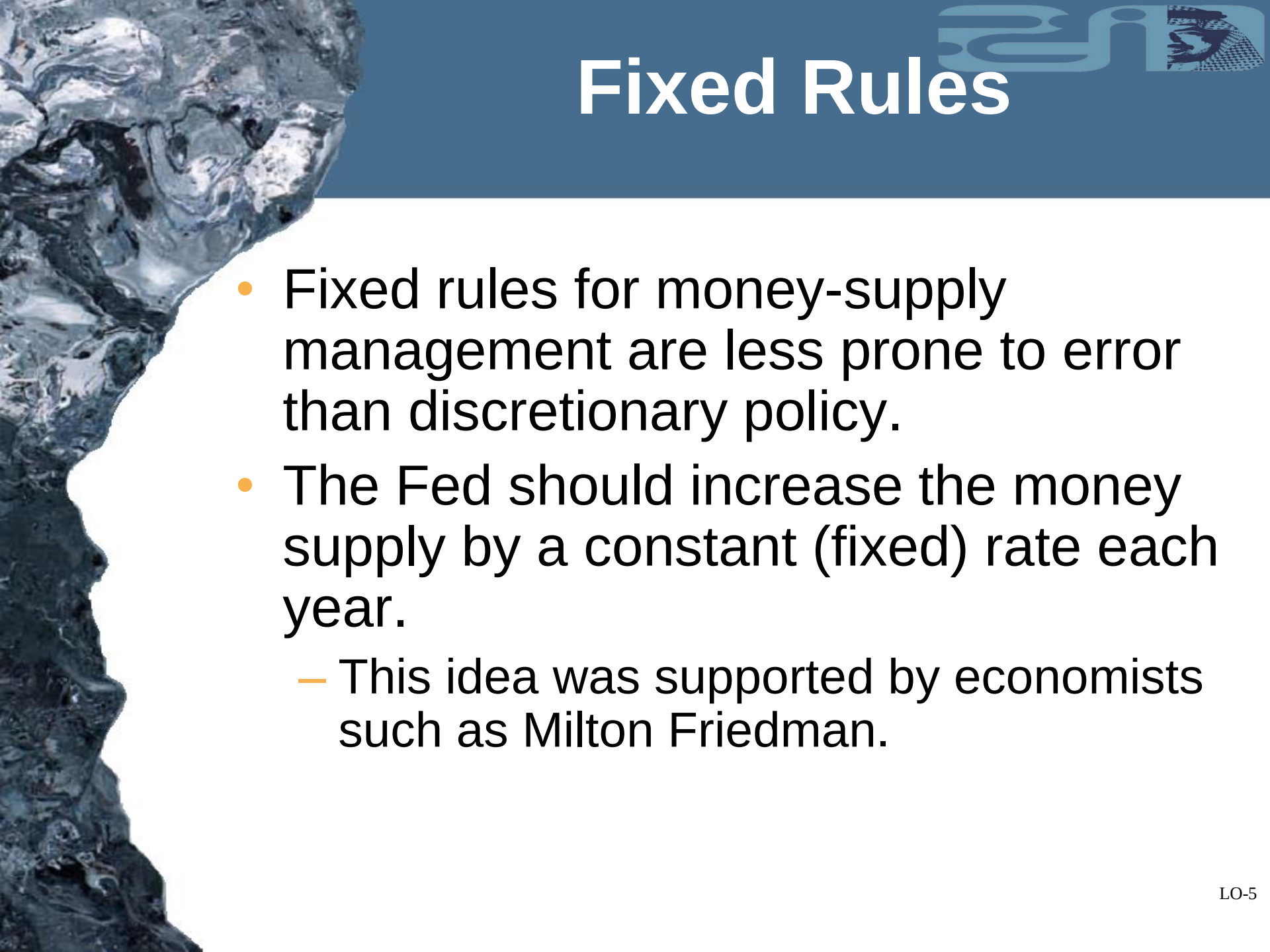
Discretionary Policy

- The economy is constantly beset by positive and negative shocks.
- There is a need for continual adjustments to the money supply.



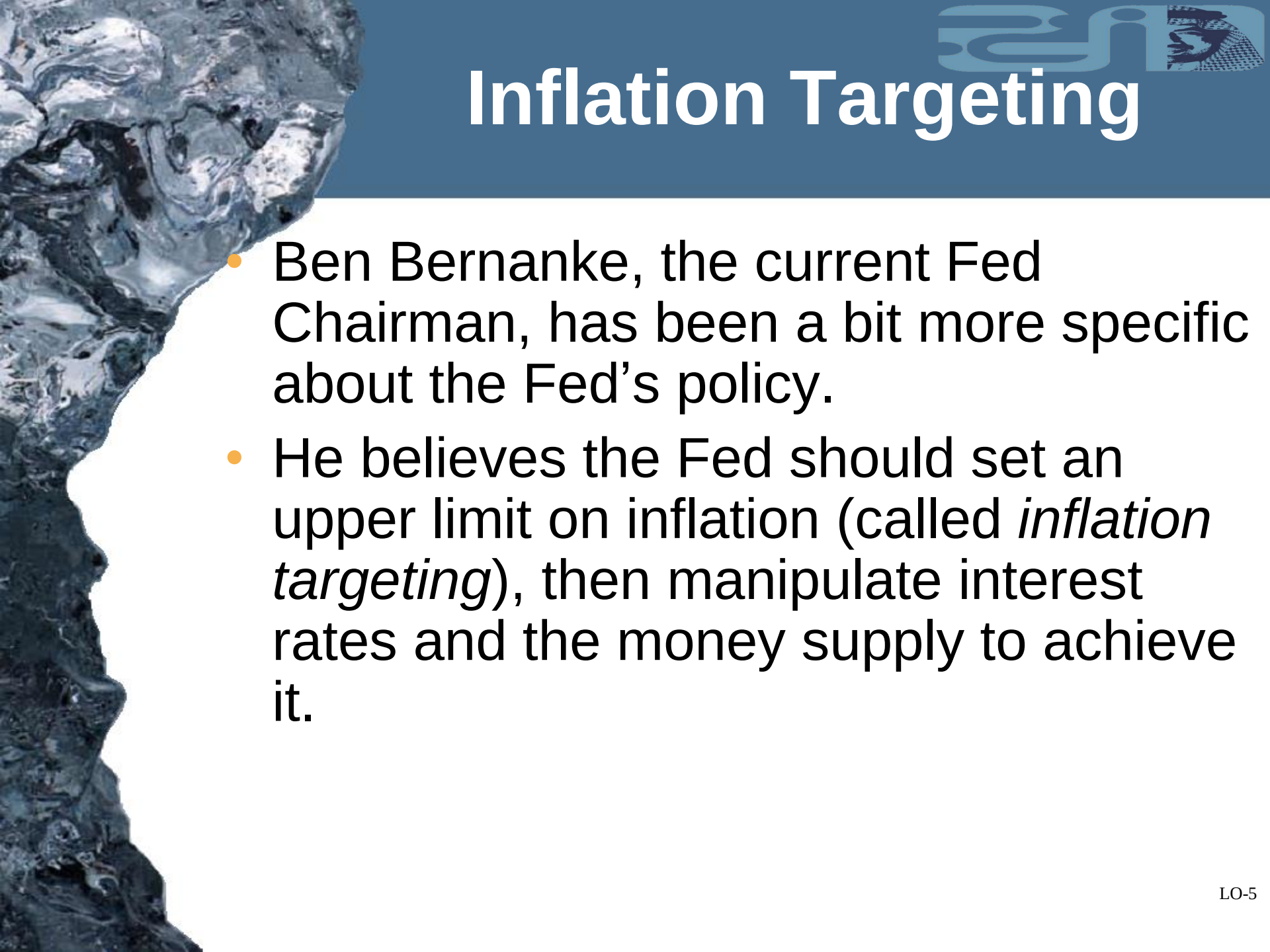
Fixed Rules

- Critics of discretionary monetary policy raise objections linked to the shape of the AS curve.
- The AS curve could be vertical or at least upward-sloping.
- With an upward-sloping AS curve, too much expansionary monetary policy leads to inflation.



Fixed Rules

- Fixed rules for money-supply management are less prone to error than discretionary policy.
- The Fed should increase the money supply by a constant (fixed) rate each year.
 - This idea was supported by economists such as Milton Friedman.



Inflation Targeting

- Ben Bernanke, the current Fed Chairman, has been a bit more specific about the Fed's policy.
- He believes the Fed should set an upper limit on inflation (called *inflation targeting*), then manipulate interest rates and the money supply to achieve it.



END CHAPTER 8