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# Test Yourself: Monetary Policy

The improvement of understanding is for two ends: first, our own increase of knowledge; second, to enable us to deliver that knowledge to others.

John Locke



# What is the transaction demand for money?

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The transaction demand for money is the stock of money people hold to pay everyday predictable expenses.

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# What is the precautionary demand for money?

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The precautionary demand for money  
is the stock of money people hold to  
pay unpredictable expenses.

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# What is the speculative demand for money?

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The speculative demand for money is the stock of money people hold to take advantage of expected future changes in the price of bonds, stocks or other non-monies.

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# How does a change in interest rates affect speculative demand?

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As the interest rate falls, the opportunity cost of holding money falls and people increase their speculative balances.

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# What is the demand for money curve?



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The demand for money curve is a curve representing the quantity of money that people hold at different interest rates, *ceteris paribus*.

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# How do interest rates affect the demand for money?

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There is an inverse relationship  
between the quantity of money  
demanded and the interest rate.  
(inverse = as one goes up the other  
goes down)

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# What gives the demand for money a downward slope?



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The speculative demand for money at possible interest rates gives the demand for money a downward slope.

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# What determines interest rates in the market?

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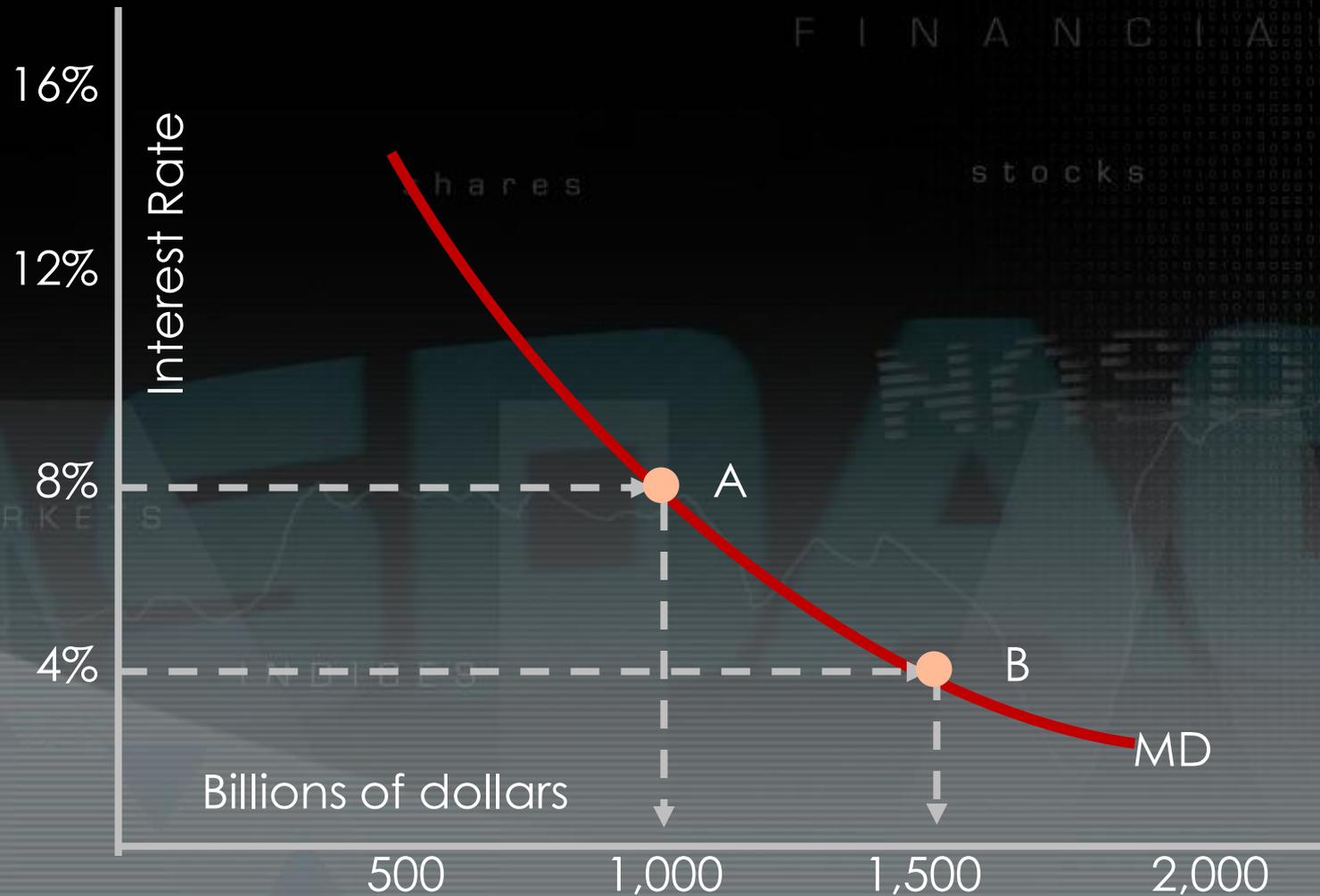


The demand and supply of money in the loanable funds market determines interest rates (the price of money), just as the demand and supply of a good determines its price.

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# The Demand for Money Curve





# The Demand for Money

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Increase in the quantity of  
money demanded

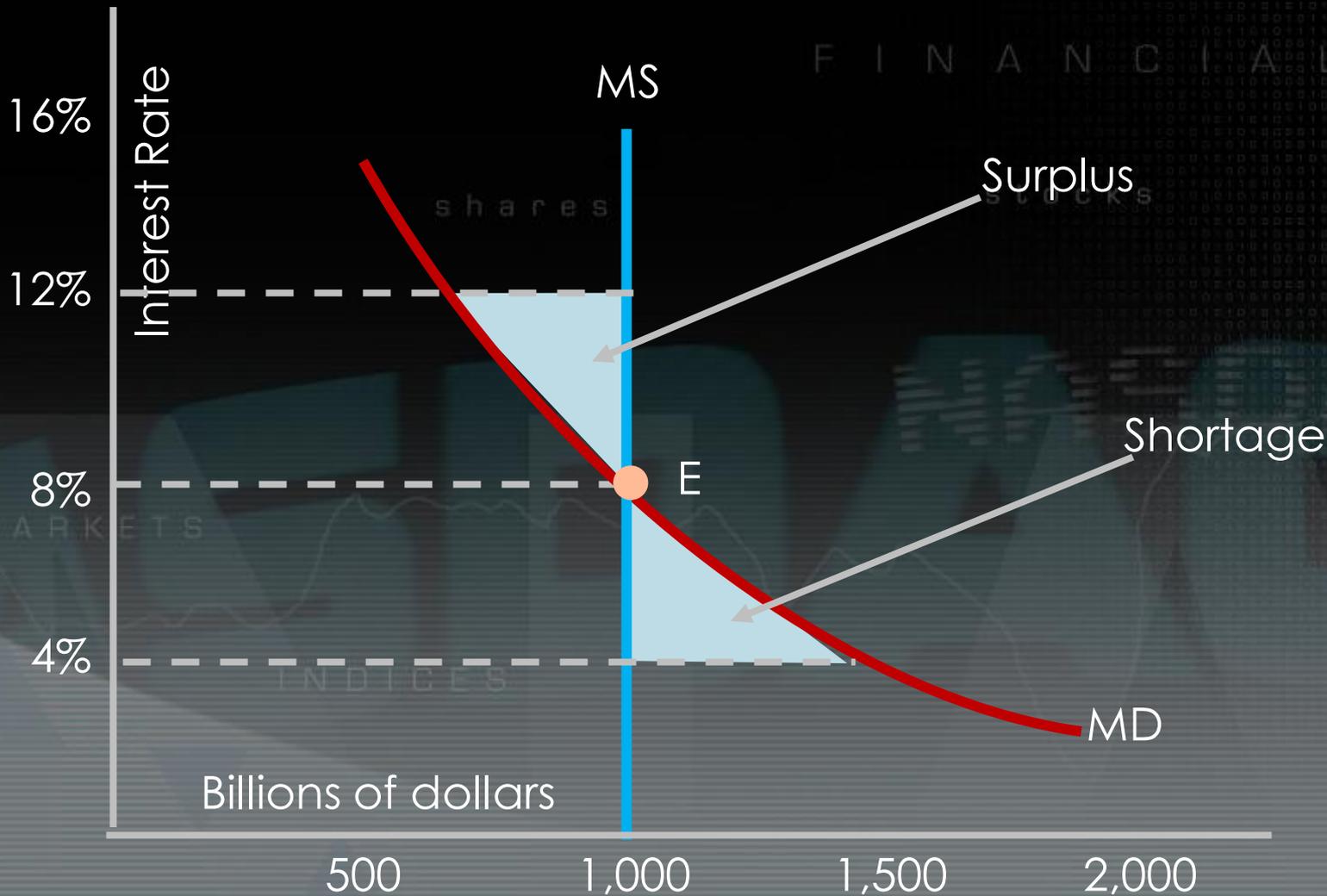


Decrease in the interest  
rate

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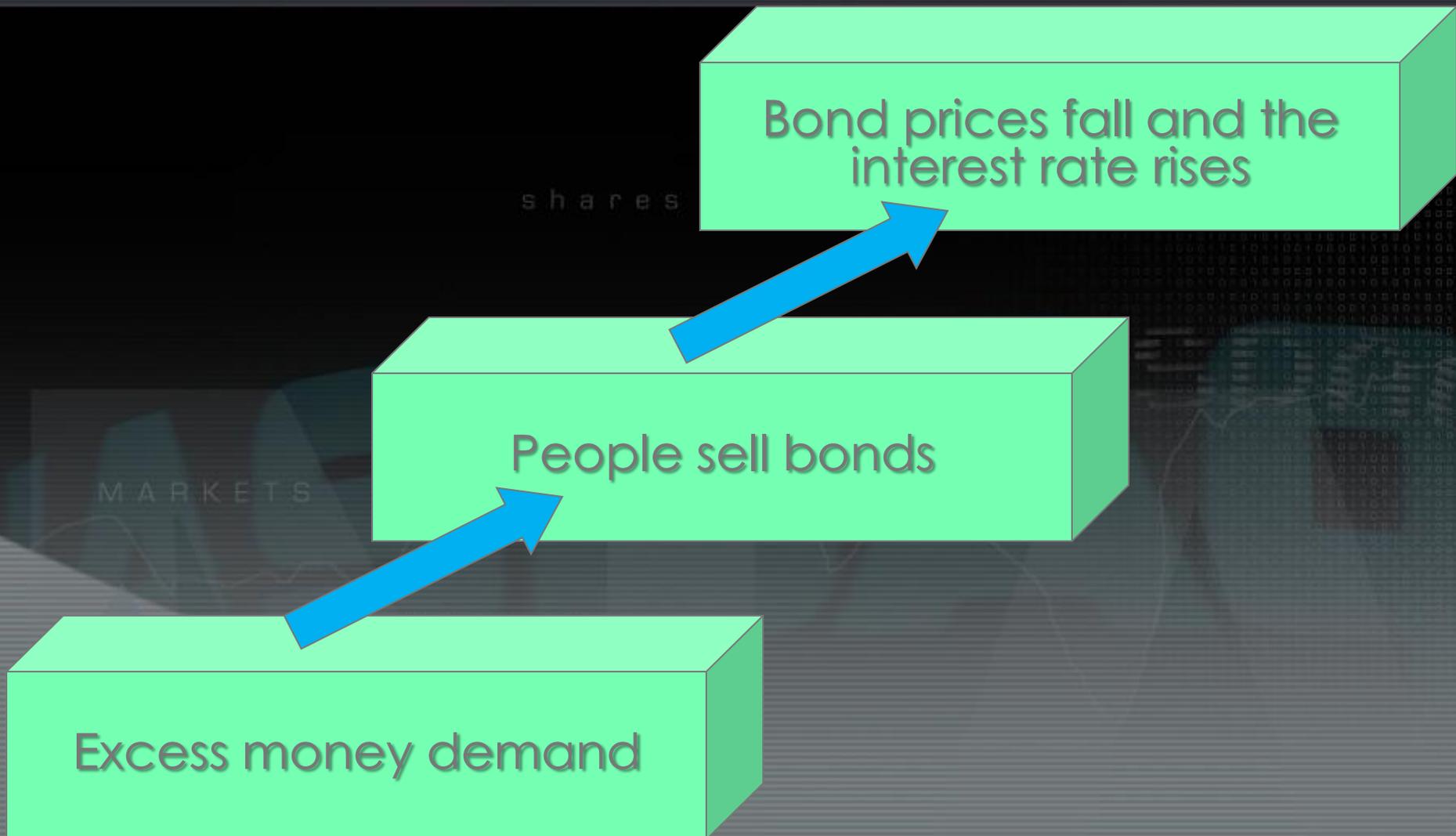


# The Equilibrium Interest Rate



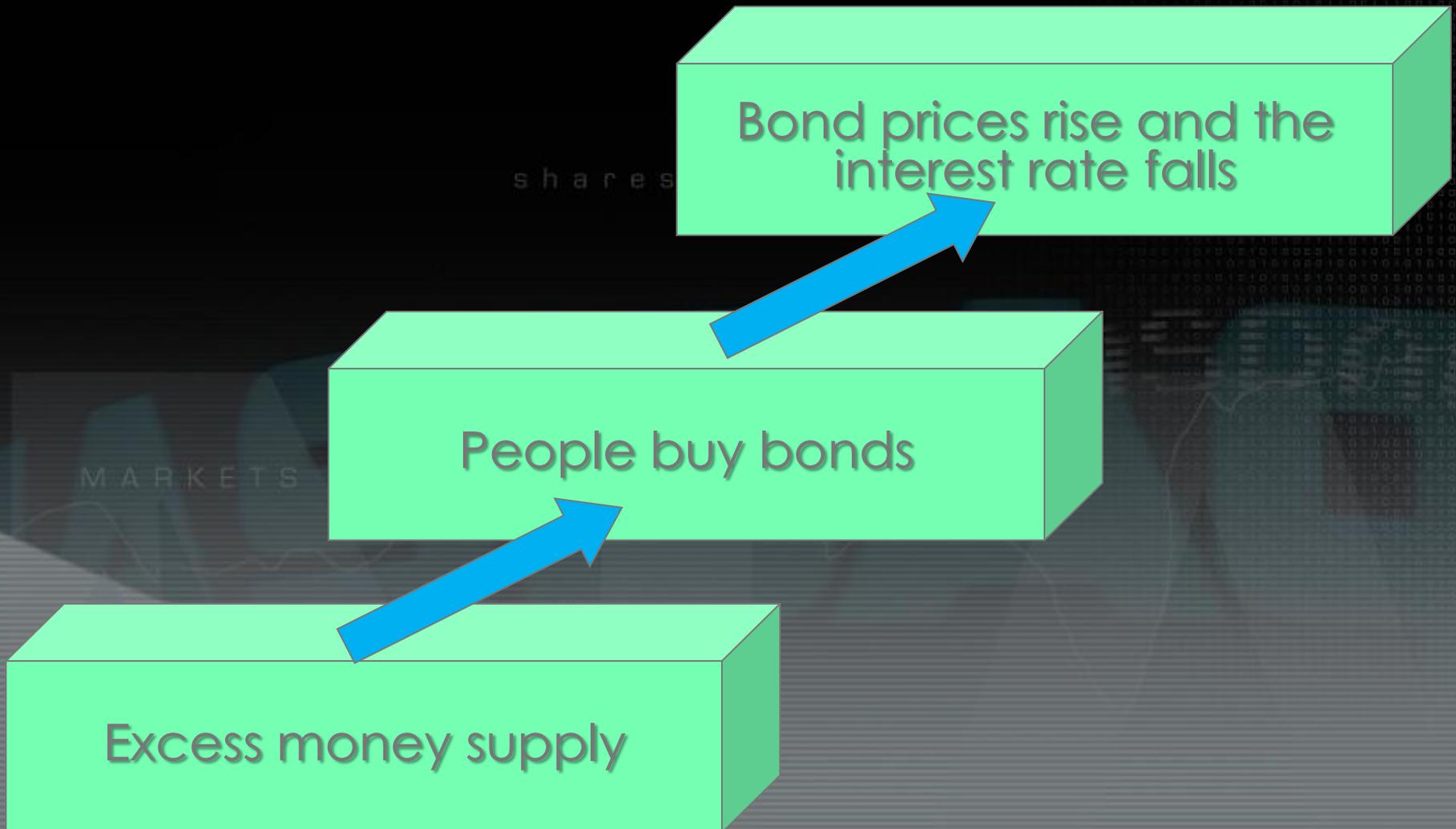


# Excess Money Demand





# Excess Money Supply



# Why do bond prices fall as interest rates rise?



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Bond prices fall as interest rates rise because bond sellers have to offer higher returns (lower price) to attract potential bond buyers or else buyers will go elsewhere to get higher interest returns.

# Why do bond prices rise as interest rates fall?



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Bond prices rise as interest rates fall because bond sellers are put in a better bargaining position as interest rates fall (higher price).

Potential buyers can't easily go elsewhere to get higher interest returns.



# How can the Fed influence the equilibrium interest rate?

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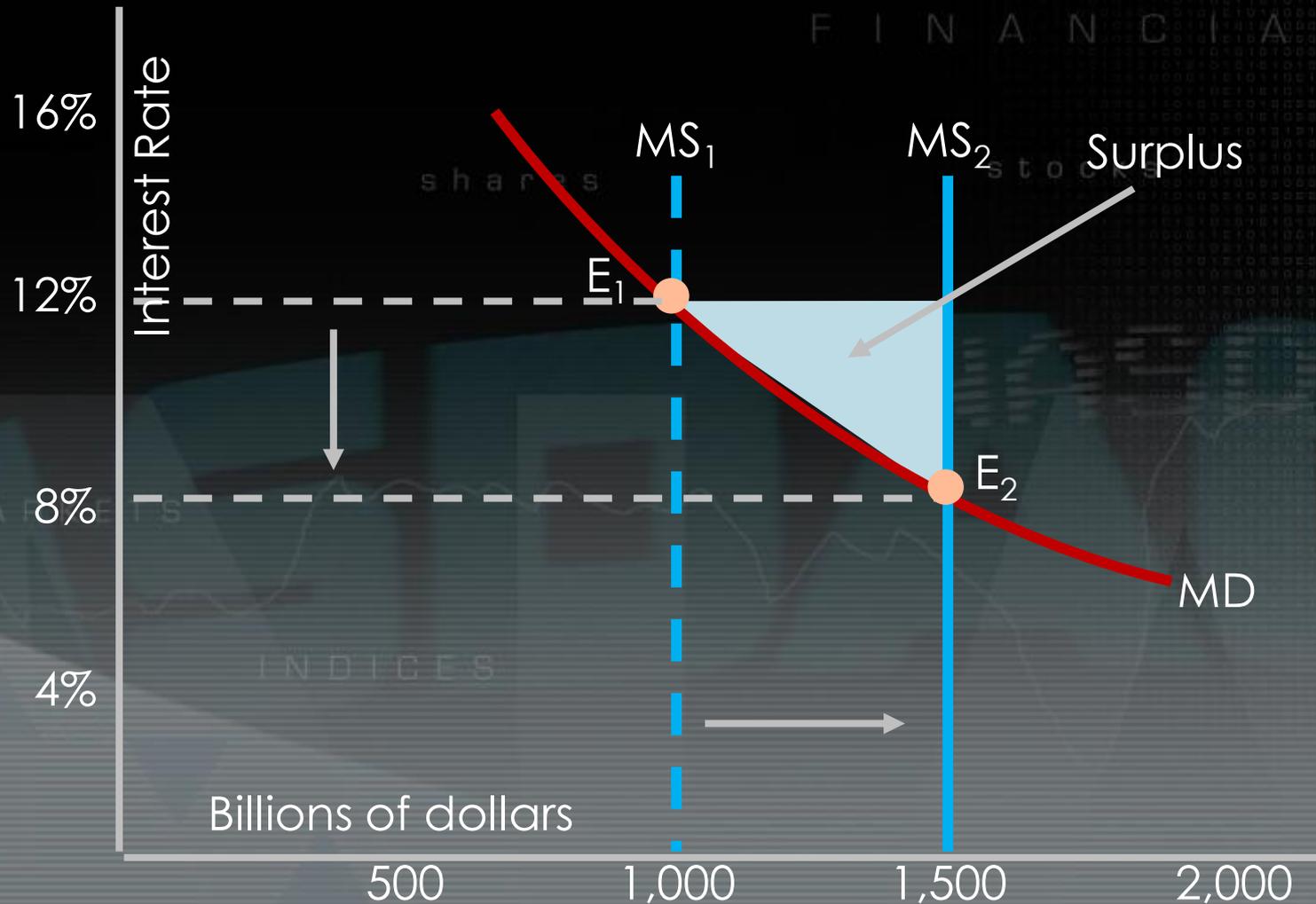


The Fed can influence the equilibrium interest rate by increasing or decreasing the supply of money.

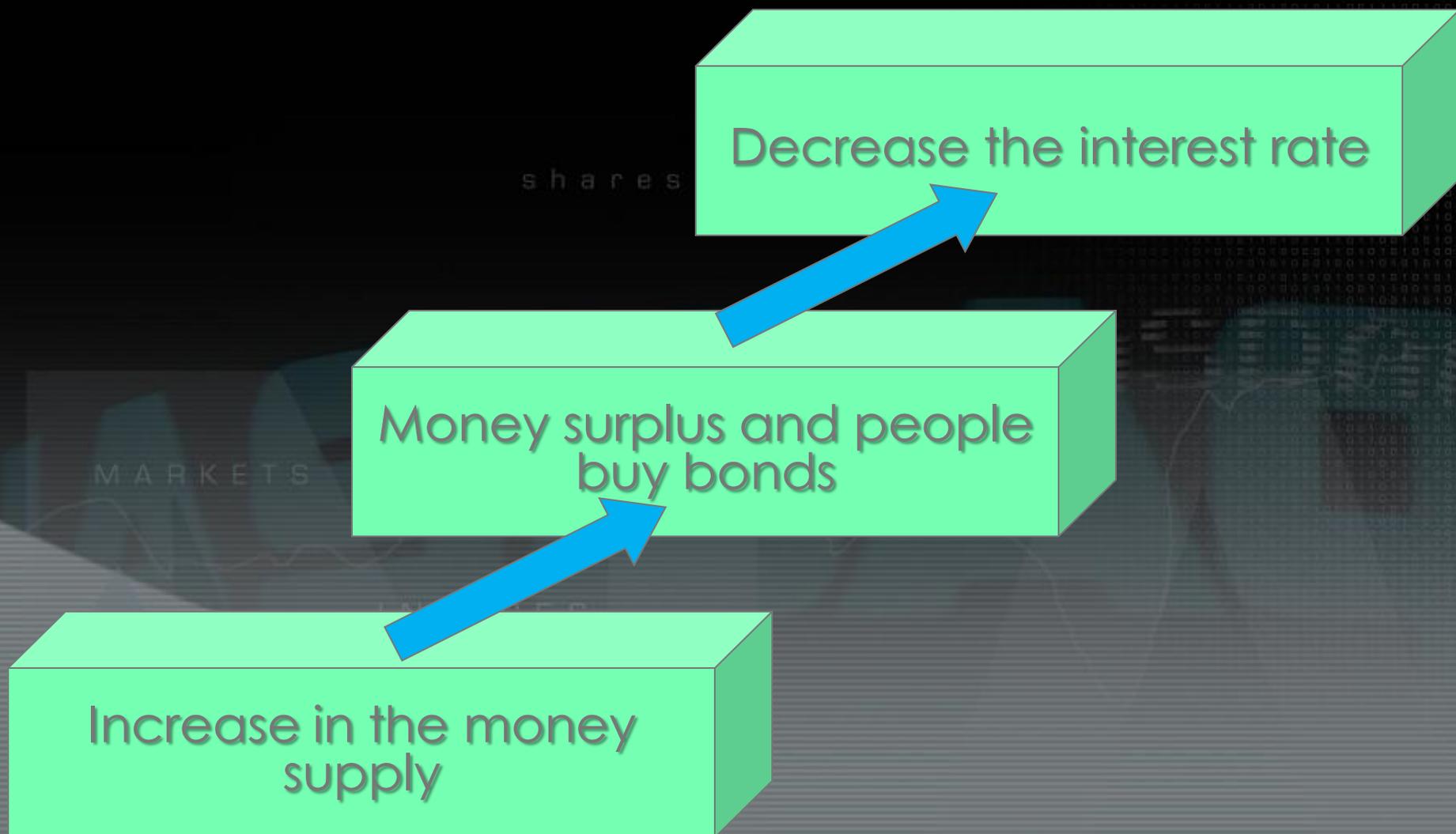
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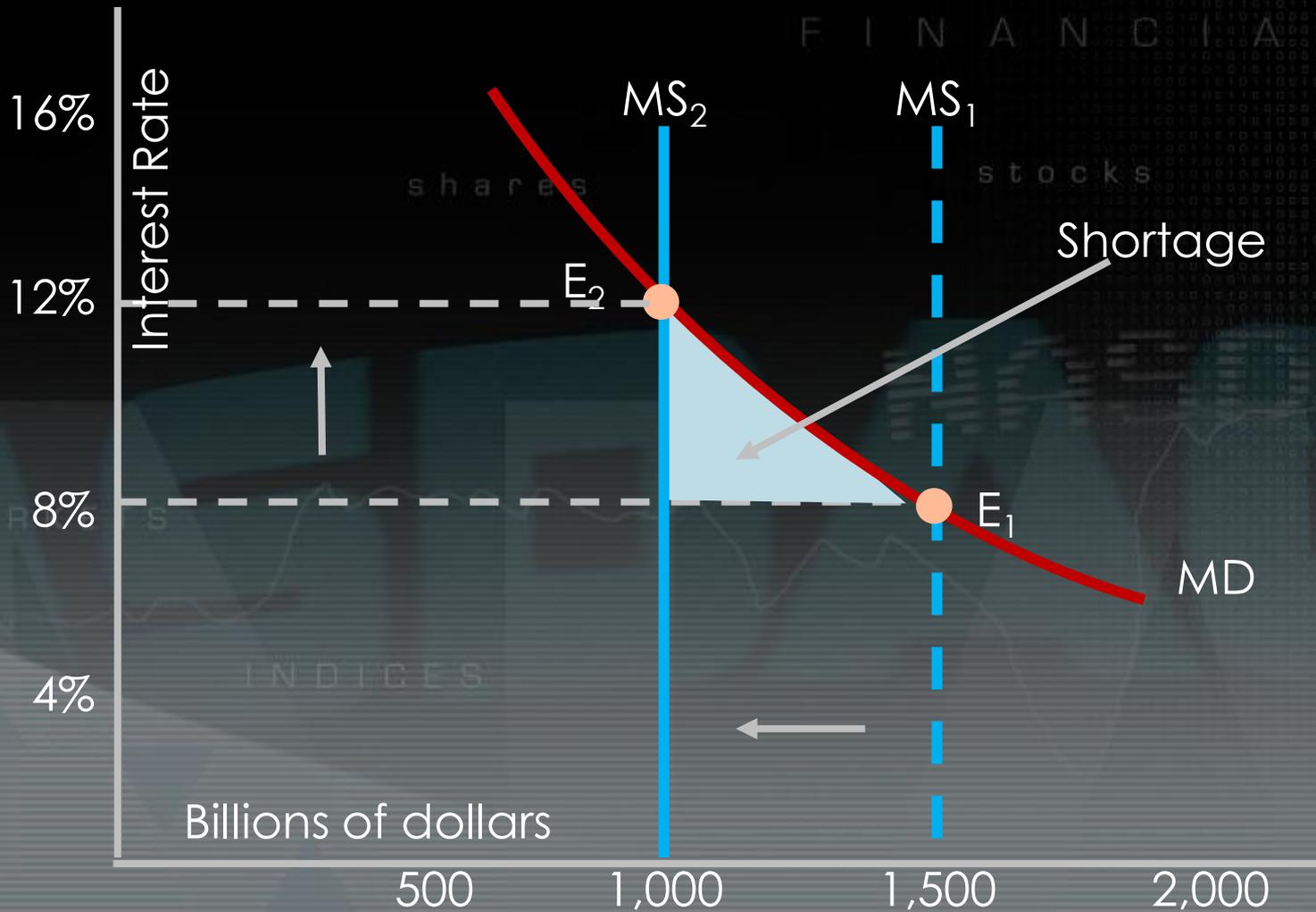
# Increase in the Money Supply



# Increase in the Money Supply



# Decrease in the Money Supply



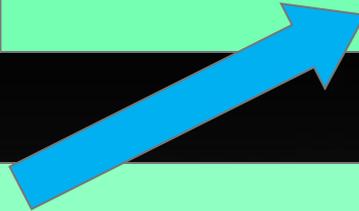
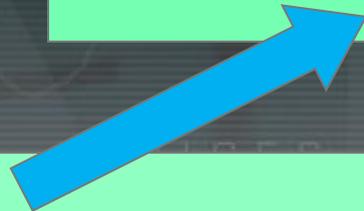
# Decrease in the Money Supply



Increase in the interest rate

Money shortage and  
people sell bonds

Decrease in the money  
supply



# In the Keynesian Model, what do changes in the money supply affect?



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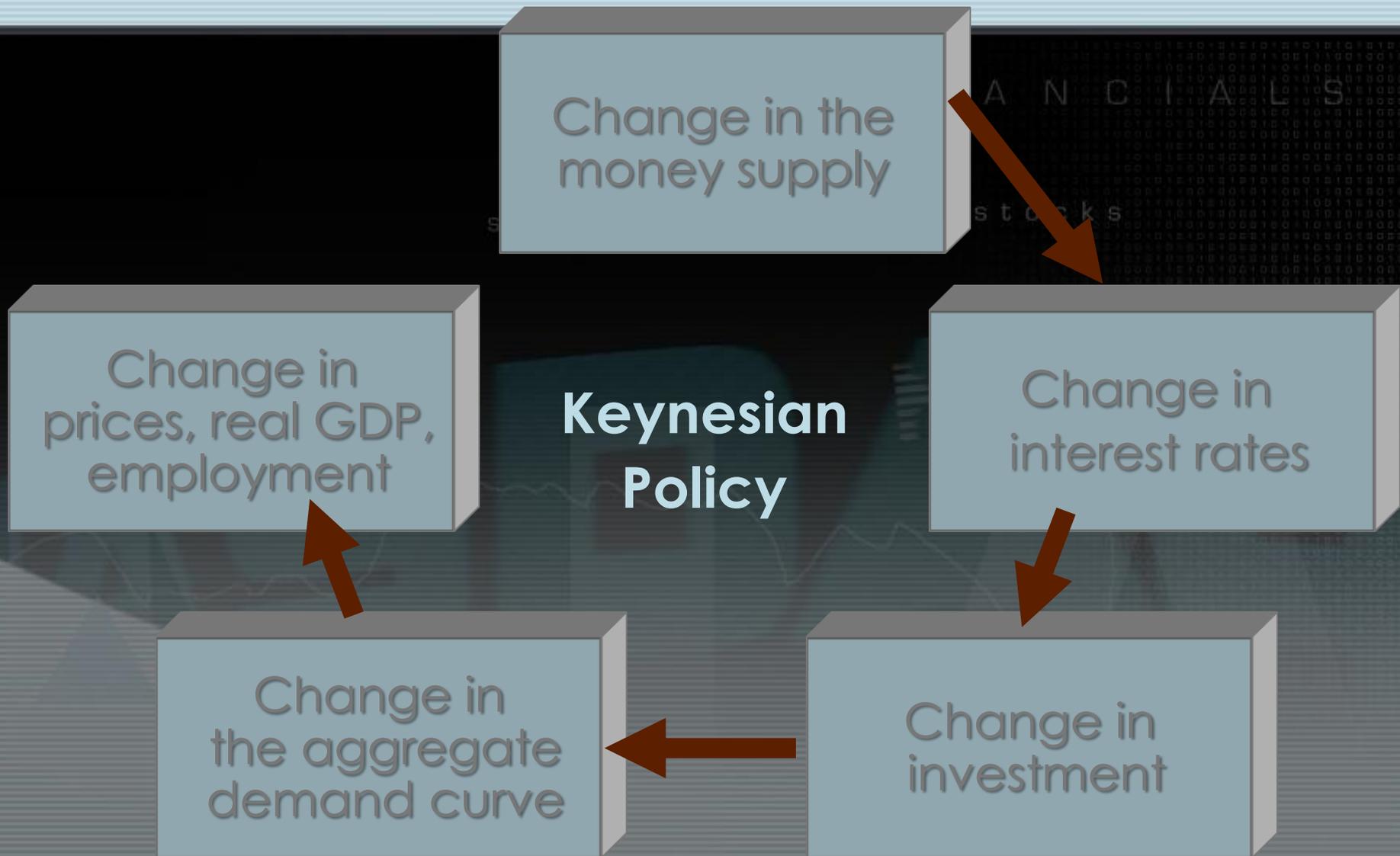
In the Keynesian Model, changes in the money supply affect Interest rates, which in turn affect investment spending, aggregate demand, real GDP, employment and prices.

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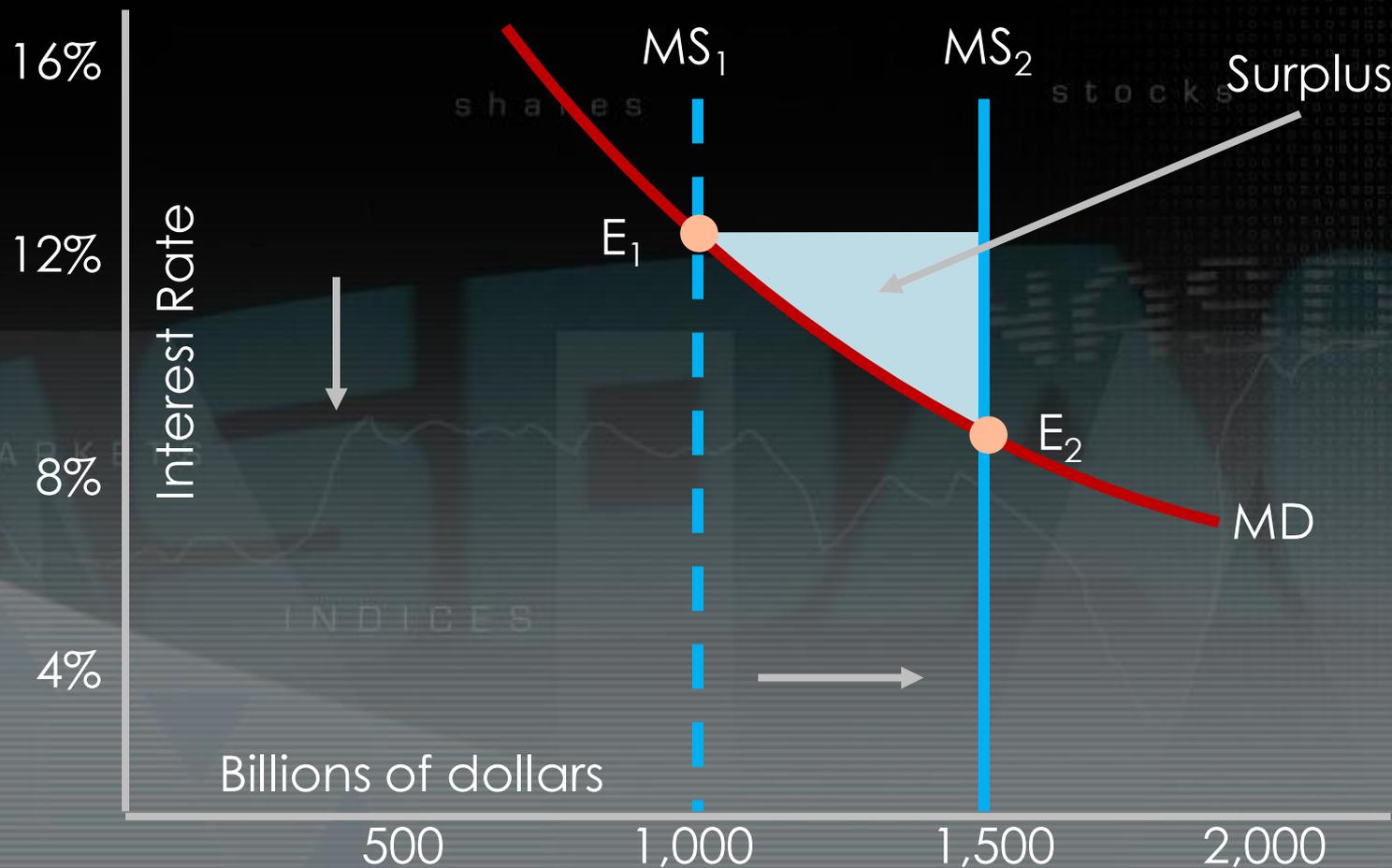
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# Keynesian Policy

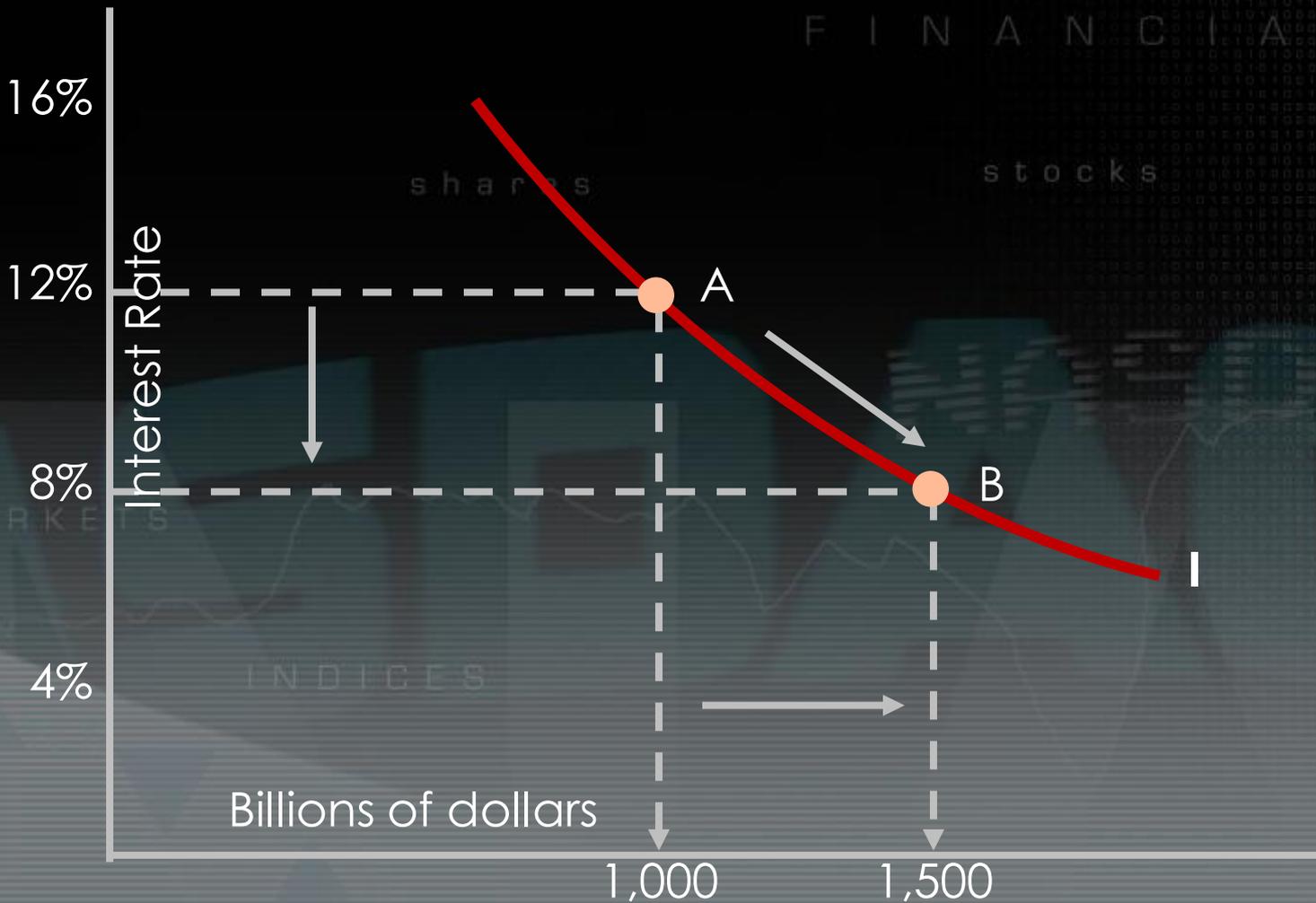


# Expansionary Monetary Policy





# Investment Demand Curve





# When will businesses make an investment?

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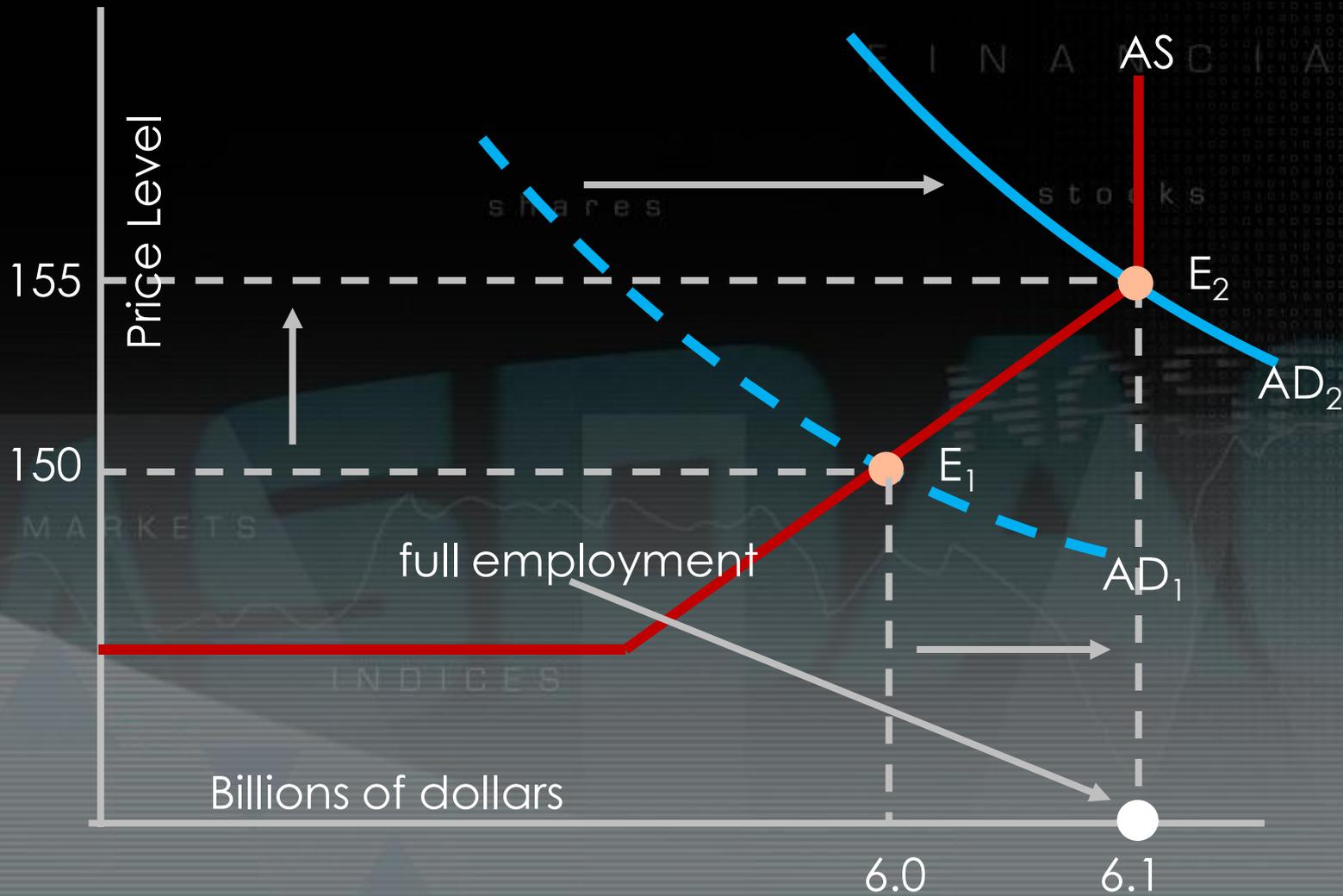


Businesses make investments when there are investment projects for which the expected rate of profit equals or exceeds the interest rate.

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# Product Market





# What is the Classical economic view?

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The Classical economic view is that the economy is stable in the long-run at full employment.

Classical economists' view of the role of money is based on their belief in the equation of exchange.



# What is the equation of exchange?

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The equation of exchange is an accounting identity that states that the money supply times the velocity of money equals total spending.

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# What is the velocity of money?



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The velocity of money is the average number of times per year a dollar in the money supply is spent on final goods and services.

$$MV = PQ$$

$$(\text{money})(\text{velocity}) = (\text{price})(\text{quantity})$$



# What is Monetarism?

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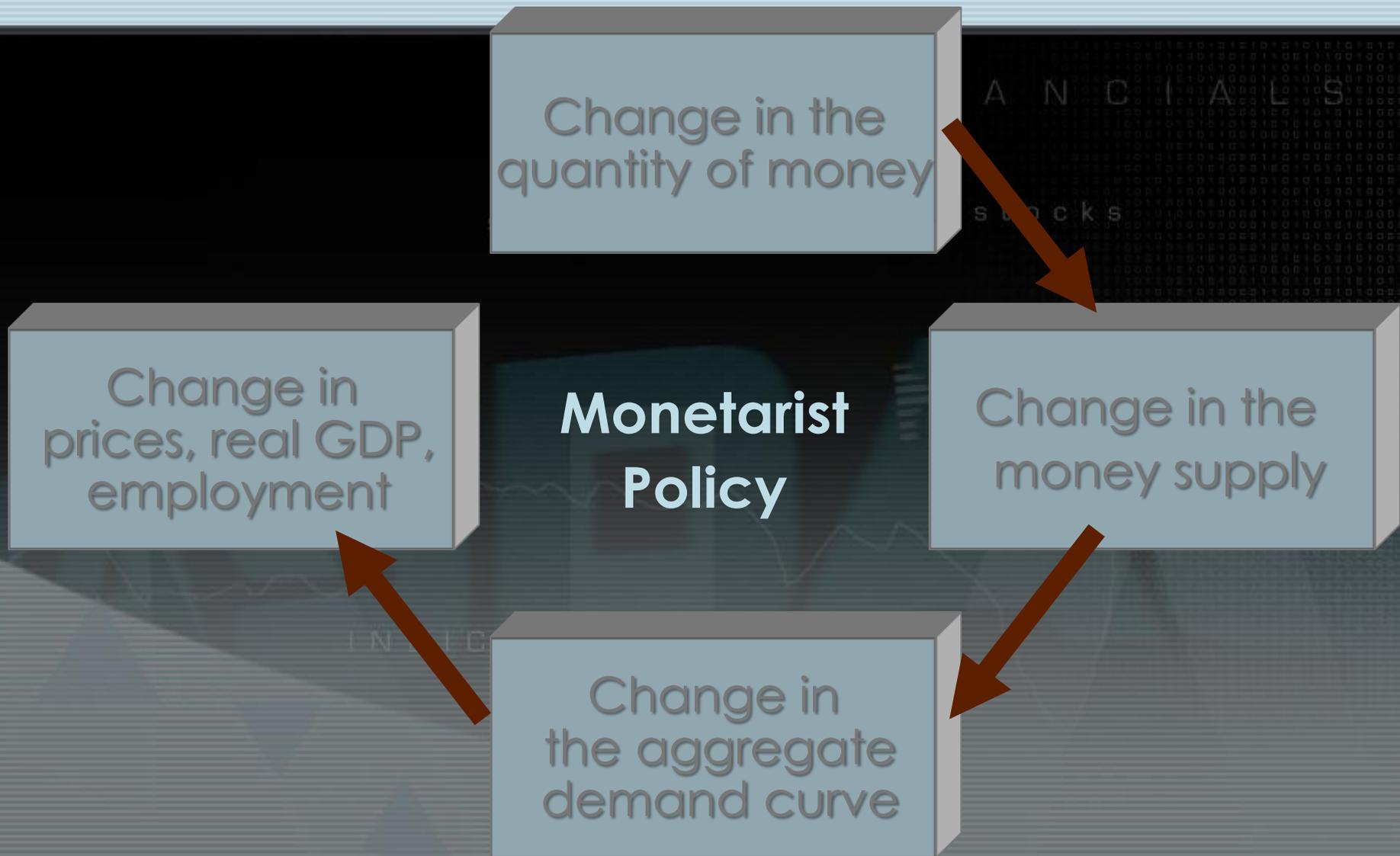
Monetarism is the theory that changes in the money supply directly determine changes in prices, real GDP and employment.

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# Monetarist Policy





# What is the quantity theory of money?

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The quantity theory of money is the theory that changes in the money supply are directly related to changes in the price level.

Therefore, any change in the money supply must lead to a proportional change in the price level.

# Who was Milton Friedman?



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In the 1950s and 1960s, Milton Friedman was a leader in putting forth the ideas of the modern-day monetarists.

Monetarists argue that velocity is not unchanging, but is nevertheless predictable.

Friedman said that the Federal Reserve should increase the money supply by a constant percentage each year to enhance full employment and stable prices.

# According to the Monetarists, how do we avoid inflation and unemployment?



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According to the Monetarists, we avoid inflation and unemployment by making sure that the money supply is at the proper level.

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# How do the Keynesians view the velocity of money?

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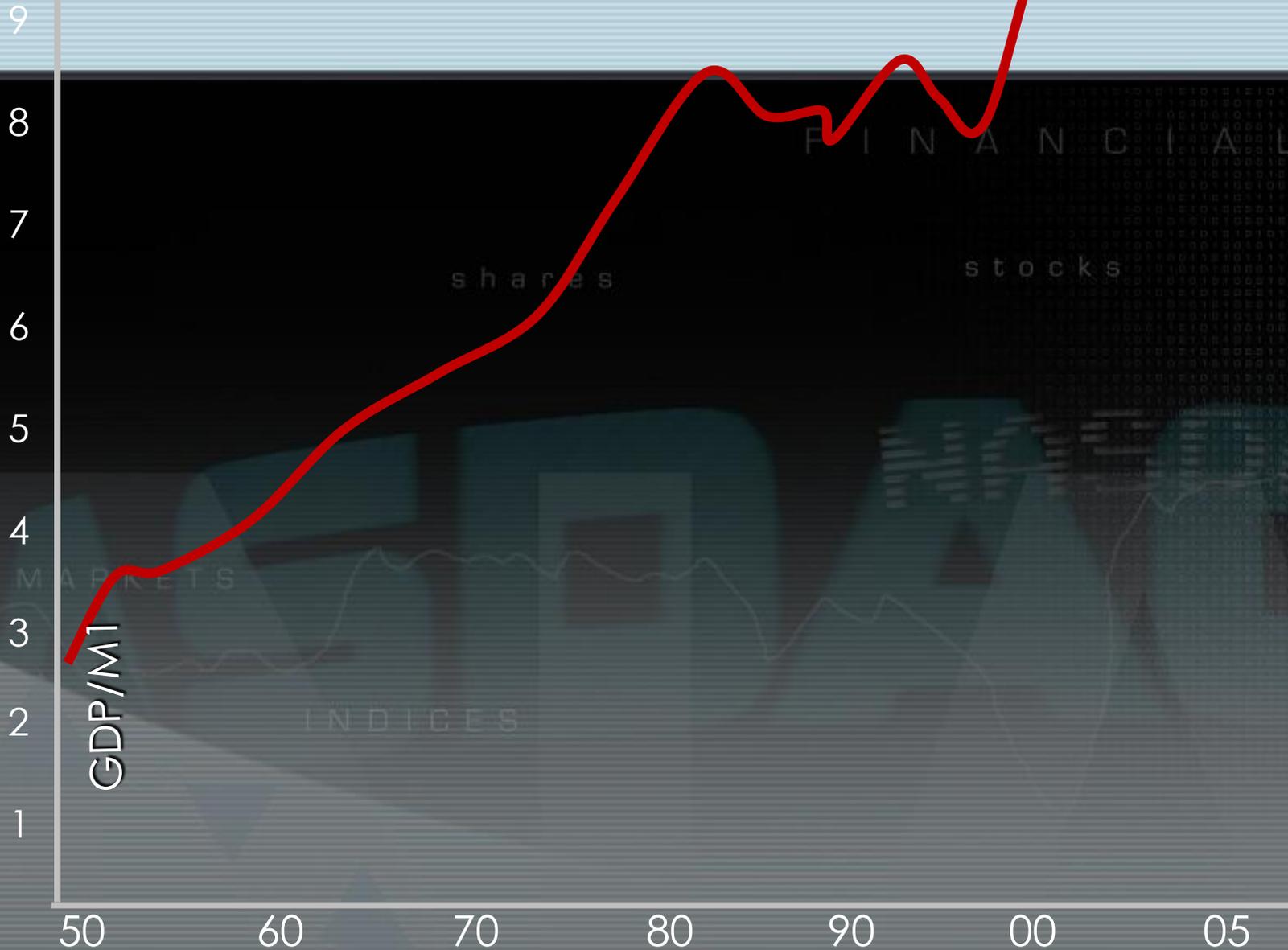
Keynesians believe that, over long periods of time, the velocity of money can be unstable and unpredictable.

Because velocity is unpredictable, a change in the money supply can lead to a much larger or smaller change in GDP than the monetarists would predict.

Again because velocity is unpredictable, a constant money supply may not support full employment and stable prices.

That means the Federal Reserve must be free to change the money supply to offset unexpected changes in the velocity of money.

# The Velocity of Money



# What is the crowding-out effect?



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The crowding-out effect happens when too much government borrowing crowds out consumers and investors from the loanable funds market.

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# What are the main points of Classical economics?

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## The main points of Classical economics:

- The economy tends toward full employment equilibrium.
- Prices and wages are flexible.
- The velocity of money is stable.
- Excess money causes inflation.
- Short-run price and wage adjustments cause unemployment.
- Monetary policy can change aggregate demand and prices.
- Fiscal policies are not necessary.



# What are the main points of Keynesian economics?

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## The main points of Keynesian economics:

- The economy is unstable at less than full employment.
- Prices and wages are inflexible.
- The velocity of money is stable.
- Excess demand causes inflation.
- Inadequate demand causes unemployment.
- Monetary policy can change interest rates and the level of GDP.
- Fiscal policies may be necessary.
- The investment demand curve is rather steep (vertical), so the crowding-out effect is insignificant.

# What are the main points of Monetarist economics?



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## The main points of Monetarist economics:

- The economy tends toward full employment equilibrium.
- Prices and wages are flexible.
- The velocity of money is predictable.
- Excess money causes inflation.
- Short-run price and wage adjustments cause unemployment.
- Monetary policy can change aggregate demand and prices.
- Fiscal policies are not necessary.
- The investment demand curve is flatter (horizontal), so the crowding-out effect is significant.



The End