

MACROECONOMIC AND INDUSTRY ANALYSIS

VALUATION PROCESS

BUSINESS ANALYSIS

INTRODUCTION

To determine a proper price for a firm's stock, security analyst must forecast the dividend & earnings that can be expected from the firm → **FUNDAMENTAL ANALYSIS**

However, fundamental analysis must consider the business environment in which the firm operates

Macroeconomic and industry circumstances might have a greater influence on profits than the firm's relative performance within the industry

VALUATION PROCESS

There two general approaches to the valuation process:

1. **Top down**

Involves three steps

2. **Bottom up**

Stock picking approach

- **Both can be implemented either by fundamentalists or technicians**
- **The difference between the two approaches is the perceived importance of the economy and a firm's industry on the valuation of a firm and its stock**

THE IMPORTANCE OF ANALYZE THE ECONOMY OUTLOOK

You own shares of the strongest and the most successful firm.

- 1. If you own the shares during a strong economic expansion, the sales and earnings of the firm will increase and your RoR should be high**
- 2. If you own the shares during a major economic recession, the sales, earnings, cash flows of the firm would decline, the price of the stock would be stable or decline**

VALUATION PROCESS

Business analysis

Business cycle, monetary-fiscal policy, economic indicators, government policy, world event & foreign trade, public attitude of optimism or pessimism, inflation, GDP growth, unemployment, productivity

Industry analysis

Industry structure, competition, supply-demand relationship, product quality, cost element, government regulation, etc

Company analysis

Earnings forecast, dividend, etc

THREE-STEP VALUATION PROCESS

1. Analysis of alternative economies

Decide how to allocate investment funds among countries to bonds, stocks, and cash

2. Analysis of alternative industries

Based upon the economic & market analysis, determine which industries will prosper and which industries will suffer on a global basis and within countries

3. Analysis of individual companies and stocks

Following the analysis of the industries, determine which companies within these industries will prosper and which stocks are undervalued

KEY ECONOMIC INDICATORS

Government has two broad classes of macroeconomic tools: those that affect the **demand for goods and services**, and those that **affect the supply**

The US postwar history → focused on demand-side policy (government spending, tax levels, monetary policy)

Since 1980s → supply-side economics (enhancing the productive capacity of the economy, the appropriateness of the incentives to work, innovate, national policies on education, infrastructure such communication & transportation systems, research & development)

KEY ECONOMIC INDICATORS

1. Gross Domestic Product (GDP)

- The measure of the economy's total production of goods and services
- Rapidly growing GDP indicates an expanding economy with ample opportunity for a firm to increase sales
- Another economy's output measure is industrial production → a measure of economic activity narrowly focused on the manufacturing side of the economy

KEY ECONOMIC INDICATORS

2. Employment

- Unemployment rate is the percentage of the total labor force (those who are working or seeking employment) to find work
- The rate measures the extent to which the economy is operating at full capacity
- Analysts also look at the factor capacity utilization rate, which is the ratio of actual output from factories to potential output

KEY ECONOMIC INDICATORS

3. Inflation

- Inflation is the rate at which the general level of prices is rising
- High rates of inflation are associated with overheated economies, where demand for goods and services is outstripping productive capacity, which leads to upward pressure on prices
- Government stimulates their economies enough to maintain nearly full employment, but not so much as to bring on inflationary pressure

KEY ECONOMIC INDICATORS

4. Interest rates

- High interest rates reduce the present value of future cash flows, reducing the attractiveness of investment opportunities
- Real interest rate is key determinant of business investment expenditures
- Demand for housing & high-priced consumer durables such as automobiles, is highly sensitive to interest rates because interest rates affect interest payments

KEY ECONOMIC INDICATORS

5. Budget deficit

- Budget deficit of the government is the difference between government spending and revenues
- Any budgetary shortfall must be offset by government borrowing
- Large amounts of government borrowing can force up interest rates by increasing the total demand for credit in the economy
- Economists generally believe excessive government borrowing will crowd out private borrowing and investing by forcing up interest rates and choking off business investment

KEY ECONOMIC INDICATORS

6. Sentiment

- **Consumers' and producers' optimism or pessimism concerning the economy is an important determinant of economic performance**
- **If consumers have confidence in their future income levels, they will be more willing to spend on big-ticket items**
- **Business will increase production and inventory levels if they anticipate higher demand for their products**

CENTRAL GOVERNMENT POLICY

1. Fiscal policy

- It refers to the government's spending & tax actions
- It is part of demand-side management, a direct way to stimulate or slow the economy
- Decrease in government spending deflate the demand for goods and services
- Increase in tax immediately drain off income of consumers and result in rapid decrease in consumption
- It is created slowly because fiscal policy requires large amount of compromise between executive & legislative institutions

CENTRAL GOVERNMENT POLICY

1. Fiscal policy

- To summarize the impact of government fiscal policy → look at the government's budget deficit or surplus (it is simply difference between revenues and expenditures)
- Large deficit = government spends more than it should be taken. The effect is the increasing demands for goods (via spending)

CENTRAL GOVERNMENT POLICY

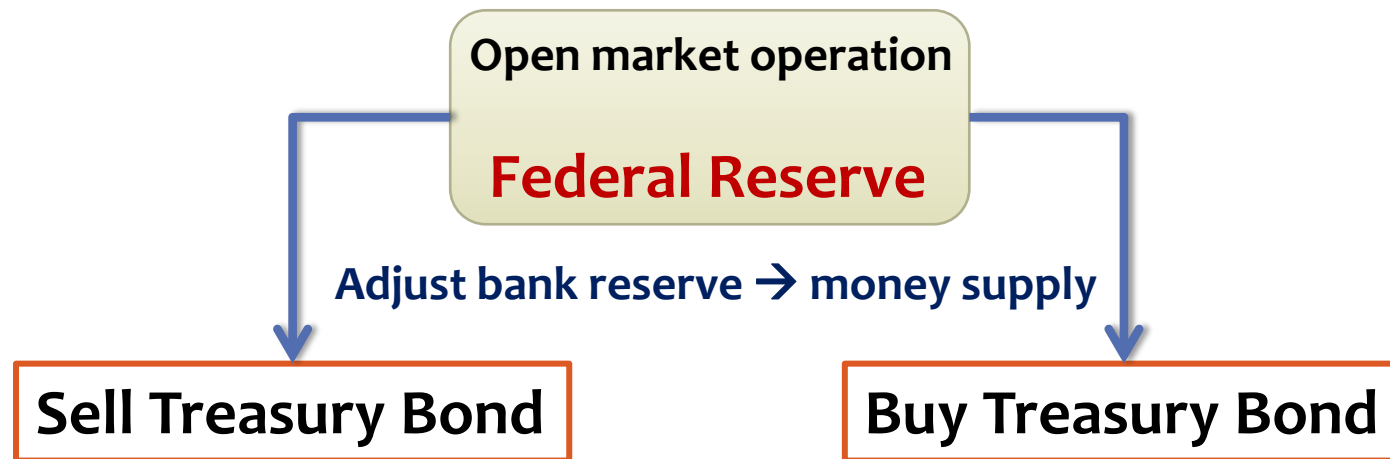
2. Monetary policy

- Refers to the manipulation of the money supply to affect the macro economy
- Works largely through its impact on interest rates
- Increases in money supply lower short-term interest rate, encouraging investment and consumption demand
- However, higher money supply leads to a higher price level, and does not have a permanent effect on economic activity
- other tool is the discount/interest rate that charges banks on short-term loans and the reserve requirement

FACTORS THAT AFFECT MONETARY VARIABLE: MONEY SUPPLY

- **Declines in the rate of growth of the money supply → business contractions**
- **Increases in the growth rate of money supply → business expansions**

FACTORS THAT AFFECT MONETARY VARIABLE: MONEY SUPPLY



- To reduce bank reserve
- To reduce money supply
- To increase interest rate

- Liquidity increases (for those who sold bonds to the Fed)
- The bonds prices rises
- Lower interest rates

- ❑ Filter down corporate bonds
- ❑ Common stock transaction reduces

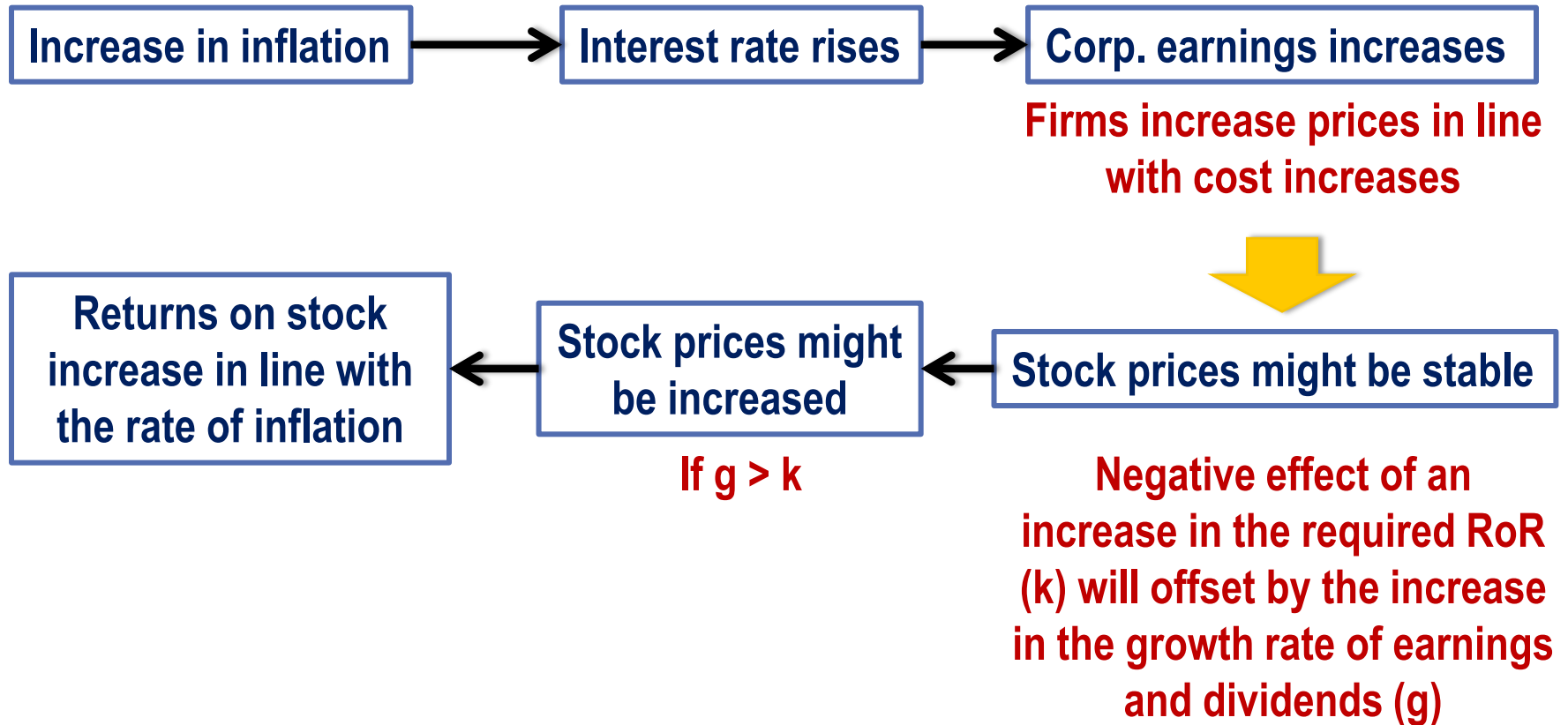
MONEY SUPPLY AND STOCK PRICE RELATIONSHIP

- **Changes in the growth rate of money supply consistently lagged stock returns by about one or three months**
- **Stock price adjusts quickly to unexpected changes in money supply growth**
- **Relationship between the two is determined by forecast unanticipated changes in money supply**

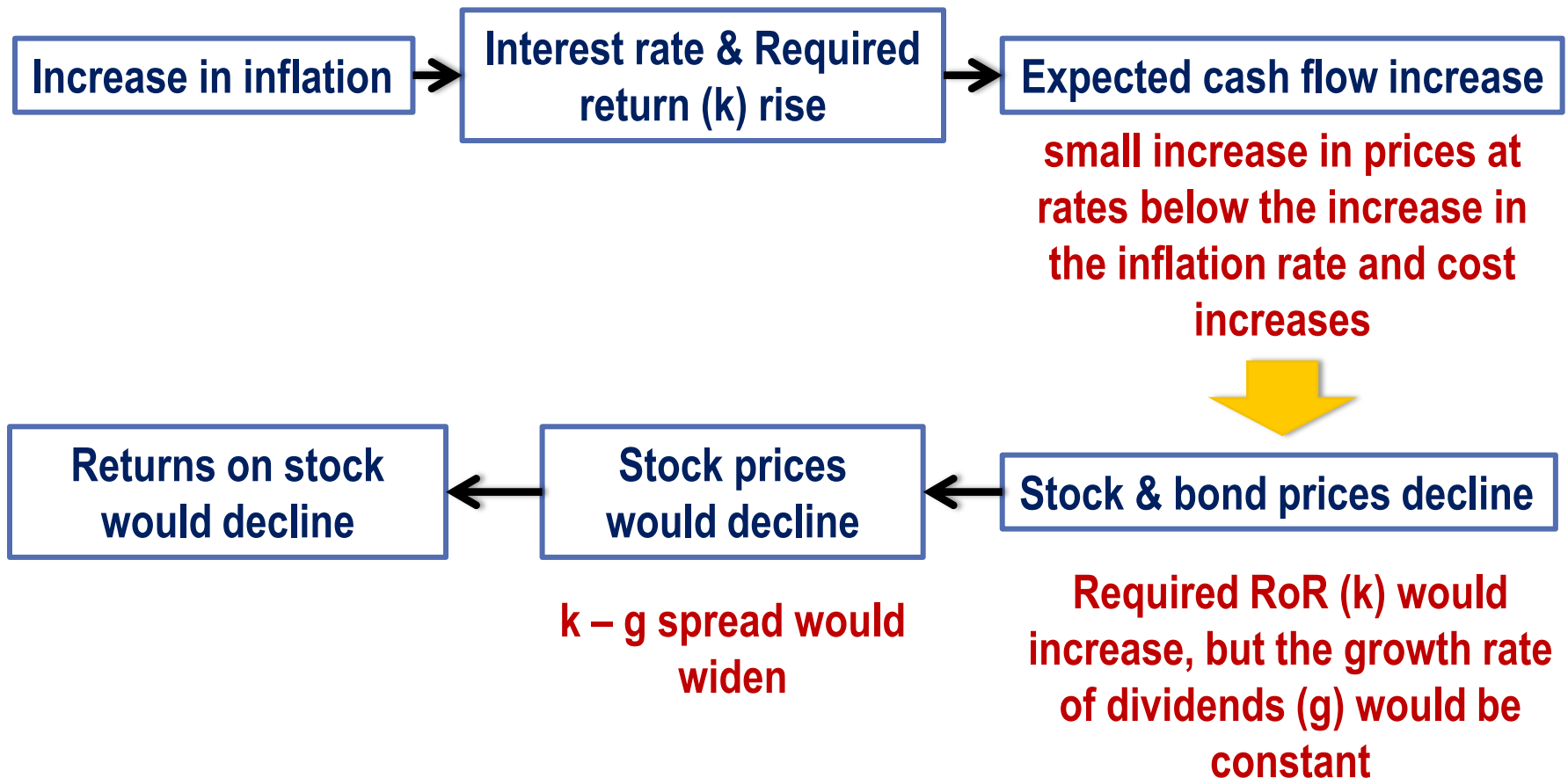
INFLATION, INTEREST RATE, STOCK PRICE RELATIONSHIP

- **The relationship is not direct and consistent**
- **Cash flows from stocks can change along with inflation and interest rates**
- **Investors cannot be certain whether this change in cash flows will offset the changes in interest rate**
- **The point is, the effect of interest rate changes on stock price will depend on what caused the change in interest rate, and the effect of this event on the expected cash flow on common stock**
- **There has been generally a significant negative relation but this is not always true**
- **Even when the negative relationship is true for the overall market, certain industries may have earnings, cash flows, and dividends that react positively to inflation and interest rate changes. In such an instance, their stock prices would be positively correlated with inflation and interest rates**

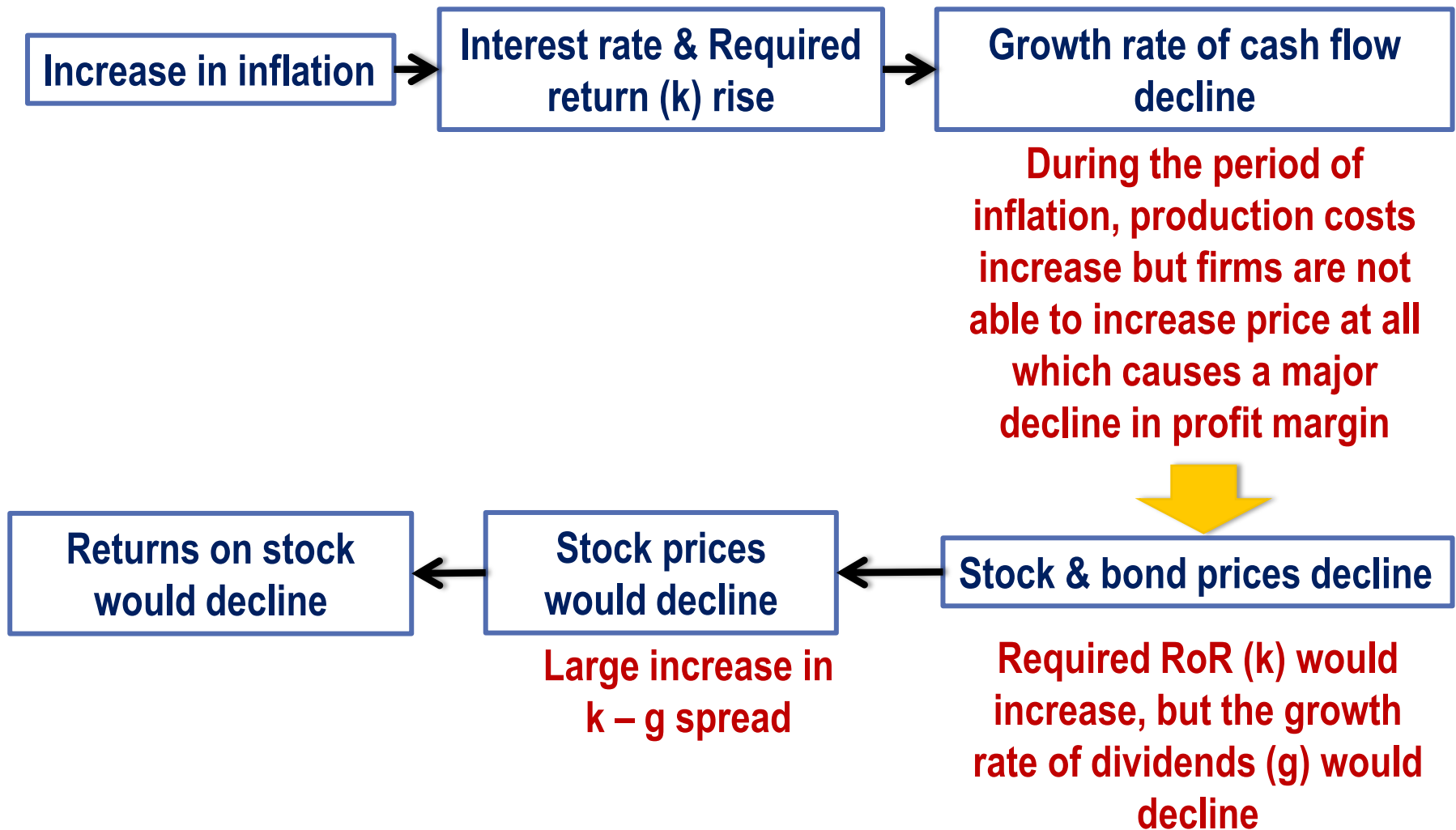
INFLATION, INTEREST RATE, STOCK PRICE RELATIONSHIP – POSITIVE SCENARIO



INFLATION, INTEREST RATE, STOCK PRICE RELATIONSHIP – MILD NEGATIVE SCENARIO



INFLATION, INTEREST RATE, STOCK PRICE RELATIONSHIP – VERY NEGATIVE SCENARIO



INDUSTRY ANALYSIS

INDUSTRY ANALYSIS

- **Economic performance can vary widely across industries**
- **Industry group show more dispersion in their stock market performance**
- **Small investors can take position in industry performance using mutual funds with an industry focus**
- **Government classifies industries through varied tools: US government divides industries into codes or digits for statistical analysis purposes. First two digits denote very broad industry classification, third and fourth digits define the group more narrowly**

SENSITIVITY TO BUSINESS CYCLE

- Analyze the implication of the business cycle in an industry
- Ex.: cigarette industry is independent of the business cycle, as demand for cigarettes does not seem affected by macroeconomic factors. Cigarette consumption is determined largely by habit
- Contrarily, auto industry is highly volatile. In recession, consumers tend to prolong the lives of their cars until their income is higher

SENSITIVITY TO BUSINESS CYCLE

Three factors that determine the sensitivity of a firm's earnings to the business cycle:

- 1 **Sensitivity of sales** → depend on the necessities (ex. Food, drugs, medical services), income that is not a crucial determinant of demand (ex. Tobacco products), high sensitive industries to the economy (machine tools, steel, autos, transportation)
- 2 **Operating leverage** → division between fixed and variable cost. Firms with greater amounts of variable costs will be less sensitive to business conditions, because in economic downturns, the firms can reduce costs as output falls in response to falling sales

SENSITIVITY TO BUSINESS CYCLE

Three factors that determine the sensitivity of a firm's earnings to the business cycle:

2 Operating leverage

Profit for firms with high fixed costs will swing more widely with sales because costs do not move to offset revenue variability → high operating leverage because small swings in business conditions can have large impacts on profitability

3 Financial leverage for borrowing → interest payments on debt must be paid regardless of sales.

Investors should not always prefer industries with lower sensitivity to the business cycle.

Firms in sensitive industries will have high-beta stocks and are riskier, but they swing higher in upturns → the most important issue is the existence of fair compensation for the risks borne

WHY DO INDUSTRY ANALYSIS?

Two reasons for examine macro economy

1. Although the security markets tend to move ahead of the aggregate economy, security markets reflect the strength or weakness of the economy
2. Most of the variables that determine value for the security markets are macro variables such as interest rate, GDP, and corporate earnings.

Therefore, analysis of aggregate equity market contains two components:

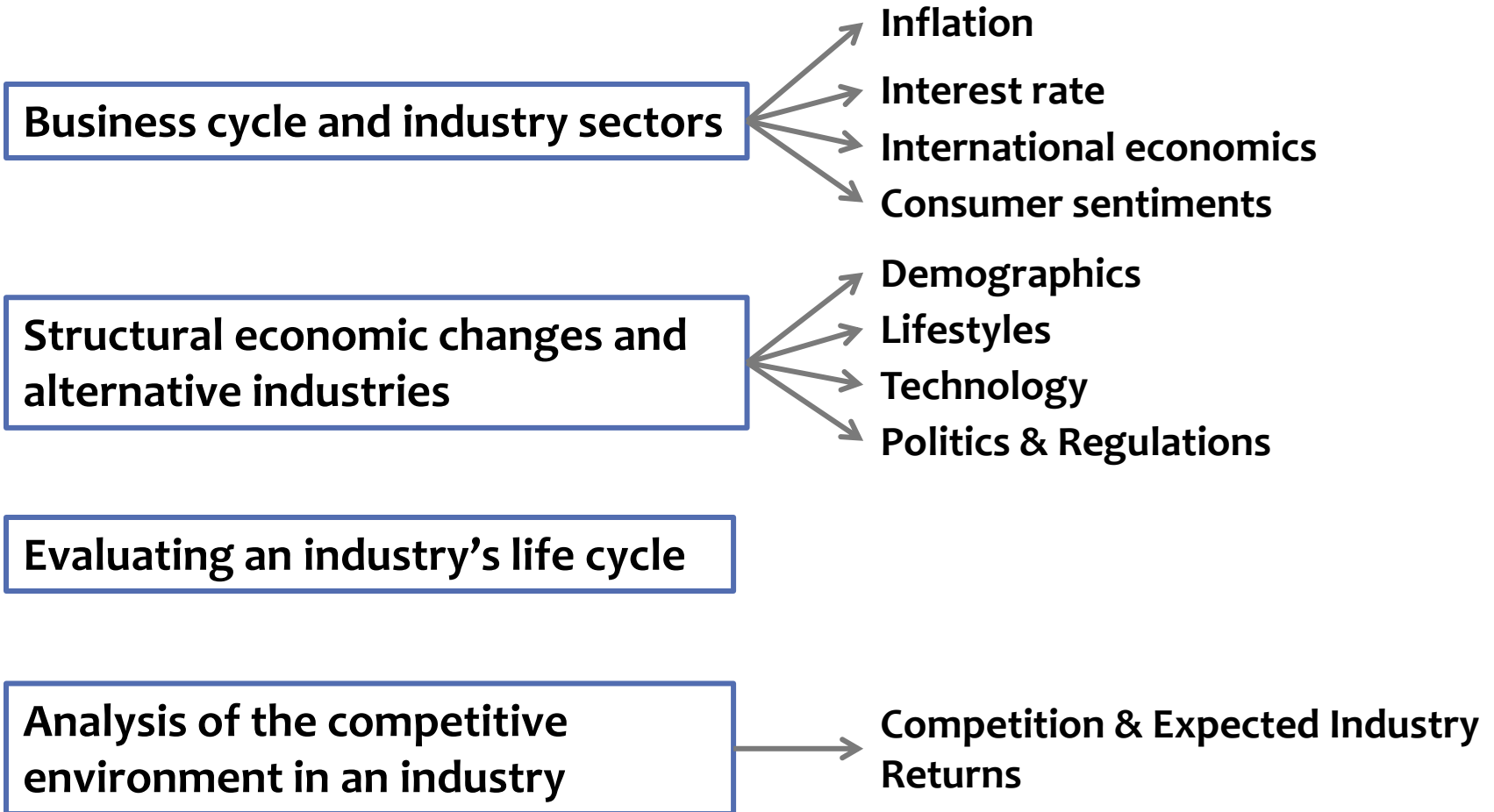
1. Analyzing macro variables (ex. monetary policy)
2. Analyzing micro variables (specific variables that affect valuation)

WHY DO INDUSTRY ANALYSIS?

It provides answers such as:

1. During any time period, the returns for different industries vary within a wide range, which means that industry analysis is an important part of the investment process
2. The rates of return for individual industry vary over time, then we cannot simply extrapolate past industry performance into the future
3. The rates of return of firms within industries also vary, then analysis of individual companies in an industry is a necessary follow up to industry analysis
4. During any time period, different industries' risk levels vary within wide ranges, then we must examine and estimate the risk factors for alternative industries
5. Risk measures for different industries remain fairly constant over time, so the historical risk analysis is useful when estimating future risk

SPECIFIC MACRO ANALYSIS



COMPANY ANALYSIS

WHY DO COMPANY ANALYSIS

After analyzing a company, deriving an understanding of its strength and risks, you need to compute intrinsic value of the firm's stock and compare this to its market value to determine if the company's stock should be purchased

The stock of a wonderful firm with superior management and strong performance measured by sales and earnings growth can be priced so high that the intrinsic value of the stock is below its current market price and should not be acquired

ECONOMIC, INDUSTRY, & STRUCTURAL LINKS TO COMPANY ANALYSIS

Economic and Industry Influence

If economic trends are favorable for an industry, the company analysis should focus on firms in that industry that will benefit from these economic trends

Research analysts should become familiar with the cash flow and risk attributes of the firms

The most attractive firms in the industry will typically have high levels of operating and financial leverage wherein a modest percentage increase in revenue results in a much larger percentage rise in earnings and cash flow

Firms in an industry will have varying sensitivities to economic variables, such as economic growth, interest rates, input costs, and exchange rates

ECONOMIC, INDUSTRY, & STRUCTURAL LINKS TO COMPANY ANALYSIS

Structural influences

Social trends, technology, and political and regulatory influences, can have a major effect on some firms in an industry

Some firms in the industry are able to take advantage of demographic changes or shifts in consumer tastes and lifestyle, or they can invest in technology to lower costs and better serve their customers.

However, although the economy plays a major role in determining overall market trends, and industry groups display sensitivity to economic variables, other structural changes may counterbalance the economic effects, or company management may be able to minimize the impact of economic or industry events on a company. Analysts who are familiar with industry trends and company strategies can issue well-reasoned buy- and sell- recommendations irrespective of the economic forecast.