

# Audit Risk & Fraud Risk

## Audit Risk

- What is Audit Risk
  - Risk that the auditor issues wrong opinion
  - Why audit risk exists
    - only reasonable assurance provided
- What is Material Misstatement
  - Causes: error or fraud
  - Types
    - Factual misstatements
    - Judgmental misstatements
    - Projected misstatements
- ★ Audit Risk Model
  - $AR = RMM * DR$     $AR = IR * CR * DR$
  - Factors indicative of IR and CR
  - Inverse relationship of RMM to DR
  - Auditor can only change DR, not IR and CR

## Fraud Risk

- Fraud vs. Error
  - Intentional or unintentional
- Types of Fraud
  - Fraudulent financial reporting
  - Misappropriation of assets
- ★ Fraud Risk Assessment Process
  - Discuss among the audit team
    - "Brainstorm" how, when, and where fraud may occur
  - Obtain information to identify fraud risk
    - Inquiry
    - Analytical procedures
      - required during planning and final review
    - Identify and assess fraud risk factors
      - Motivation (incentive/pressure):
      - Opportunity
      - Rationalization (attitude)
  - Identify and assess risk due to fraud
    - Presumption of Audit
      - Improper revenue recognition
      - Management override of controls
    - Factors to considered: Type, significance, likelihood, and pervasiveness
  - Respond to assessed risk
    - Three levels of responses
  - Evaluate audit evidence
    - May affect the assessment of fraud
  - Communicate with appropriate parties
    - At least one level above
  - Documentation

每个Topic都会以一张思维导图开始，构建整一块知识点的框架，帮助考生记忆。知识点不再是简单零散的堆叠，而是有逻辑的整合。

整个AUD需要记忆的图谱也就是28张，如果是单独的知识点，考生需要记忆的可能多达上千。

## TOPIC C Audit Risk and Fraud Risk

### I. Audit Risk

Audit risk is the risk that an auditor will issue an unqualified/unmodified opinion on materially misstated financial statements (i.e. issue the wrong opinion).

#### A. Why Audit Risk Exists

Auditors can only provide reasonable assurance, not absolute assurance about whether F/S are free of material misstatements.

#### B. Material Misstatements

##### 1. Causes of Material Misstatements

Misstatements can result from errors or fraud and include:

- Inaccuracy in collecting or processing data
- Inappropriate selections or application of accounting principles
- Departure from GAAP
- Incorrect estimates or judgments
- Omissions

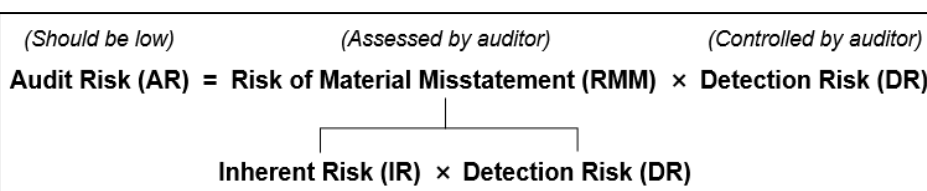
##### 2. Types of Misstatements

- **Factual misstatements:** no doubt.
- **Judgmental misstatements:** management's estimates that auditor considers unreasonable or accounting principles that auditor considers inappropriate.
- **Projected misstatements:** auditor's best estimate of misstatements in populations (sampling).

考点均以Bulldpoint形式呈现，重点更加清晰

#### C. Audit Risk Model ( $AR = IR \times CR \times DR$ )

Audit risk is the combination of these components—that the entity's F/S contain material misstatements (RMM) and that the auditor fails to detect any such misstatements (DR).



**1. Risk of Material Misstatements (RMM = IR × CR)**

Risk of material misstatement consists of two components: inherent risk and control risk.

The **auditor cannot change** these risks. They **exist independently of the audit**. However, the auditor can change the assessment of these risks.

The auditor assesses risk of material misstatement by performing risk assessment procedures and/or tests of controls.

**2. Inherent Risk (IR)**

- The susceptibility of an assertion to a material misstatement before consideration of any related controls.
- Factors Increasing Inherent Risk:
  - Transactions involved high degree of judgment or significant estimates.
  - Complex transactions.
  - External circumstances (e.g. declining industry).
  - Business risk factors (See A2-Topic D).

**3. Control Risk (CR)**

- Risk that client's internal control system will not detect a material misstatement or error.

**4. Detection Risk (DR)**

- Risk that audit will not detect a material misstatement at the assertion level.
- The **auditor can change** detection risk by adjusting nature, extent, and timing of audit procedures.

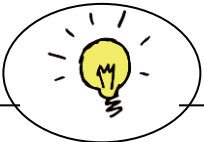
**5. Inverse Relationship of RMM to DR**

Change "NET" of		
RMM	DR	Substantive Tests
High	Set at a low level	More work
Low	Set at a high level	Less work

- When the acceptable level of DR decrease (increase), the assurance provided from substantive procedures should increase (decrease).

**6. Use of Audit Risk Model**

The steps required in assessing audit risk during engagement planning are as follows:



Auditor 不能决定或改变 RMM, IR 或 CR, 但是 auditor 可以改变自己对其评估。

DR 是 Auditor 可以改变的。

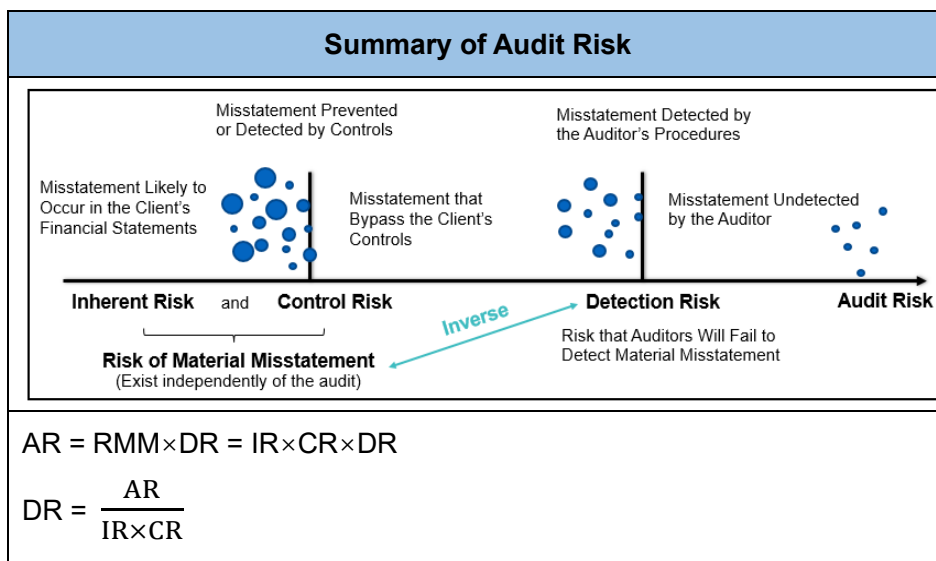
重点、难点均添加了中文的解析, 更加帮助考生理解

**Step 1: Determine Audit Risk:** always be low.

**Step 2: Assess RMM (Inherent Risk and Control Risk)**

**Step 3: Determine Detection Risk**

- Detection risk is set based on assessed level of inherent risk and control risk.
- The auditor uses the planned level of detection risk to design the substantive audit procedures that will reduce audit risk to an acceptably low level.



图表更加形象，方便考生记忆理解知识难点

Midas Touch
<p>When the acceptable level of detection risk increases, the assurance directly provided from ____</p> <p>A. Internal control should increase.            B. Overall review should increase.            C. Tests of controls should decrease.            D. Substantive procedures should decrease.</p> <p><b>Answer:</b></p> <p>Choice "D" is correct. Detection risk is determined on the assessed levels of control risk and inherent risk, and will affect the auditor's substantive procedures. When the acceptable level of DR increases, assurance directly provided by substantive procedures should decrease (Inverse Relationship). Decreased assurance can be obtained by</p>

更多的真题还原考试真实场景，告诉考生知识点在考试中是如何应用的

modifying the nature, timing and/or extent of the substantive procedures.

## II. Fraud Risk

Misstatements can result from errors or fraud. The primary distinction between errors and fraud is whether the misstatement was intentional or unintentional. *Error* refers to unintentional misstatements. *Fraud* refers to an intentional act.

### A. Types of Fraud

- **Fraudulent financial reporting**
- **Misappropriation of assets**

### B. The Fraud Risk Assessment Process

The auditor is responsible for obtaining reasonable assurance about whether F/S are free of material misstatement resulting from error or fraud. Specifically, the auditor should assess risk of material misstatements due to fraud. The auditor should exercise **professional skepticism** (questioning mind) in this assessment. The following are steps to assess fraud risks:

#### 1. Discuss Among the Audit Team – Brainstorming

This discussion is required in an audit planning stage. The engagement team should discuss how, when, and where fraud may occur (especially management override of controls), and how to respond to those risks. The discussion should include all key members and should continue throughout the audit.

#### 2. Obtain Information to Identify Fraud Risk

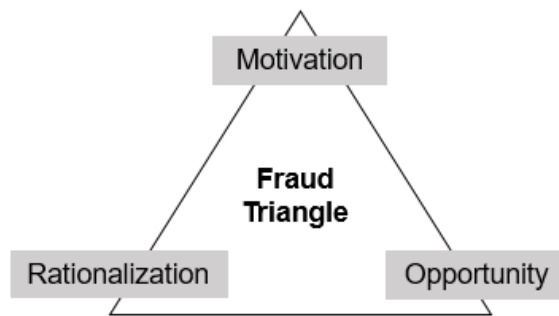
To obtain information in identifying potential fraud, the auditor should perform the following procedures:

- **Inquire** of management, audit committee and others about their views of fraud. (Inconsistent responses need additional evidence)
- Consider the results of **analytical procedures** in planning the audit.
- Identify and assess **fraud risk factors**

Three conditions generally are present when fraud occurs.



Analytical procedures are required during the planning stage and final review stage.



- Motivation (incentive/pressure): reason to commit fraud (e.g. financial or emotional force).
- Opportunity: ability to commit fraud. (e.g. ineffective controls)
- Rationalization (attitude): personal justification of fraud.



有这些 fraud risk factors 不代表一定有 fraud，没有这些 factors 也不代表一定没有 fraud。

#### Risk Factors Relating to Fraudulent Financial Reporting

##### **Motivation/incentives/pressures:**

- High degree of competition or market saturation.
- Significant declines in customer demand.
- Operating losses.
- Rapid growth or unusual profitability.
- New accounting, statutory, or regulatory requirements
- Excessive pressure exists for management to meet financial targets
- Management has significant financial interest in the entity.

##### **Opportunities:**

- Significant related party transactions.
- Significant, unusual, or highly complex transactions.
- Ineffective monitoring of management.
- Complex or unstable organizational structure (high turnover of senior management).

##### **Attitudes/rationalizations:**

- Excessive interest by management in maintaining or increasing the entity's earnings trend.
- Management sets aggressive or unrealistic forecasts.
- Management ineffectively communicate the entity's values or ethical standards.

更多总结性质的表格和内容，节约考生自己归纳总结的时间，提高备考效率

Risk Factors Relating to Misappropriation of Assets
<p><b>Motivation/incentives/pressures:</b></p> <ul style="list-style-type: none"> <li>• Personal financial obligations.</li> <li>• Adverse relationships between the entity and employees.</li> <li>• Compensations inconsistent with expectations</li> </ul> <p><b>Opportunities:</b></p> <ul style="list-style-type: none"> <li>• Large amounts of liquid assets easily converted to cash.</li> <li>• Lack of independent checks.</li> <li>• Large amounts of cash on hand or processed.</li> </ul> <p><b>Attitudes/rationalizations:</b></p> <ul style="list-style-type: none"> <li>• Disregard for the need for monitoring or reducing risks related to misappropriations of assets.</li> <li>• Disregard for internal control over misappropriation of assets.</li> <li>• Changes in behavior or lifestyle that may indicate assets have been misappropriated.</li> </ul>

### 3. Identify and Assess Risk of Material Misstatement Due to Fraud

- **Presumption of Audit:**  
In every audit, the auditor should assume risks of 1) **improper revenue recognition** and 2) **management override of controls** exist.
- Factors Considered in Analyzing Risk: type, significance, likelihood, and pervasiveness.

### 4. Respond to Assessed Fraud Risk

The auditor is required to respond to three levels:

- Overall, general response at F/S level
  - Assign experienced personnel and supervise properly/
  - Evaluate management's selection and application of accounting principles
  - Incorporate unpredictability in selection of audit procedures.
- At assertion level by adjusting "NET" of audit procedures
- Related to management override
  - Test appropriateness of journal entries and other adjustments
  - Review accounting estimates for biases
  - Evaluate significant usual transactions

### 5. Evaluate Audit Evidence

The auditor should determine whether conditions identified

during fieldwork and results of any of the audit procedures during the overall review stage affect the assessment of fraud risk.

## 6. Communicate with Appropriate Parties

- Management and Those Charged with Governance  
The auditor should communicate all indication of fraud, even immaterial fraud, to appropriate level of management **at least one level above** those involved.
- Parties Outside the Entity  
Generally, disclosure of fraud to outside parties is not auditor's responsibility. However, the auditor must communicate to the outside in the following circumstances:
  - To comply with certain legal and regulatory requirements.
  - To respond to subpoena.
  - To a successor auditor when the successor makes inquiries of the predecessor.
  - To authorities when management and those charged with governance fail to take corrective action.

## 7. Documentation

Documentation regarding the assessment of fraud risk is required. The auditor should document:

- A description of the planning discussion among engagement team.
- Procedures performed to assess fraud risk
- Procedures to address improper revenue recognition and risk of management override of controls. (If no improper revenue recognition, need proof)
- Communications made.

Midas Touch
<p>1. An auditor will heighten his/her concern about the risk of material misstatement due to fraudulent financial reporting if:</p> <p>A. The client's managers frequently dispute with the auditor on accounting matters.</p> <p>B. There are usually several large checks outstanding in the client's monthly bank reconciliations.</p> <p>C. The client often sells assets at a loss before the assets fully</p>



depreciated.

- D. The client's managers are not interested in maintaining an earnings trend.

**Answer:**

Choice "A" is correct. If the client's managers frequently dispute with the auditor on accounting matters, the auditor should carefully consider the reasons why managers do not agree with the auditor. It is highly possible that the managers may be involved in fraudulent financial reporting.

Choice "B" is incorrect. It is normal for companies to have large checks outstanding.

Choice "C" is incorrect. Depreciation does not adjust an equipment to its market value. Thus, selling an equipment that not being fully depreciated is not unusual and would not heighten the concern about fraud risk.

Choice "D" is incorrect. If the client's managers are not interested in maintaining an earnings trend, the client is less likely to represent fraudulent financial reporting. On the contrary, if the client's managers are extremely interested in maintaining an earnings trend, the client will have more motivations to represent fraudulent financial reporting.

2. Which of the followings will contribute to the misappropriation of assets?

- A. The company's organizational structure is very complex with numerous legal entities.
- B. The company cannot generate positive cash flows.
- C. Transactions of the company are generally cash sales.
- D. The management is extremely concerned with maintaining an earnings trend.

**Answer:**

Choice "C" is correct. Misappropriation of assets, or defalcation, involves theft of an entity's assets when the effect of the theft causes the financial statements not to be presented in conformity with GAAP. If transactions of the company are generally cash sales, staffs will be much easier to steal cash without discoveries. Stealing cash is a typical example of misappropriation of assets.

Choice "A", "B" and "D" are incorrect. They are more likely to relate to fraudulent financial reporting, not misappropriation of assets.

### Midas Touch

When planning a financial statement audit, a CPA must understand audit risk and its components. The firm of Pack & Peck evaluates the risk of material misstatement (RMM) by disaggregating RMM into its two components: inherent risk and control risk.

#### Required:

For each illustration, select the component of audit risk that is most directly illustrated and the effect on risk.

Components of Audit Risk:

- a. Control risk
- b. Detection risk
- c. Inherent risk

Effect on Risk:

- a. Increase risk
- b. Decrease risk

<i>Illustration</i>	<i>Component of Audit Risk</i>	<i>Effect on Risk</i>
1. A client fails to discover employee fraud on a timely basis because bank accounts are not reconciled monthly.		
2. Cash is more susceptible to theft than an inventory of coal.		
3. Confirmation of receivables by an auditor fails to detect a material misstatement.		
4. Disbursements always have occurred with proper approval.		
5. There is appropriate segregation of duties.		
6. A necessary substantive audit procedure is omitted.		
7. Technological developments make a major product obsolete.		
8. The client is very close to violating debt covenants.		
9. XYZ Company, a client, has sufficient working capital to maintain its profitability.		
10. Notes receivable are susceptible to material misstatement, assuming there are no related internal controls.		

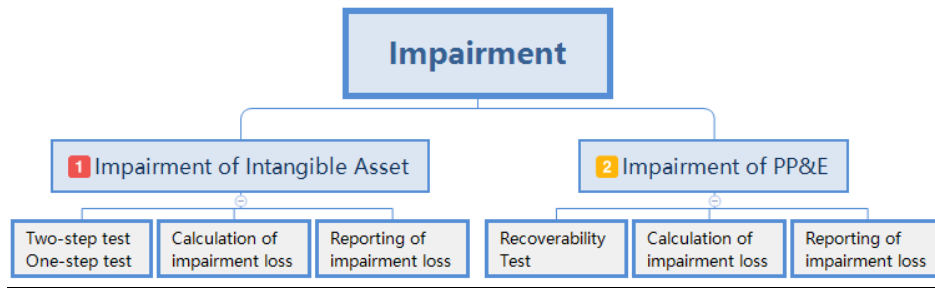
添加了Simulation综合案例题，考察学员对知识点的整体掌握情况

**Solution:**

- |                      |                       |                      |    |
|----------------------|-----------------------|----------------------|----|
| 1. CR; Increase Risk | 2. IR; Increase Risk  | 3. DR; Increase Risk | 4. |
| CR; Decrease Risk    | 5. CR; Decrease Risk  | 6. DR; Increase Risk |    |
| 7. IR; Increase Risk | 8. IR; Increase Risk  |                      |    |
| 9. IR; Decrease Risk | 10. IR; Increase Risk |                      |    |

## TOPIC E

## Impairment



## I. Impairment of Intangible Asset (except Goodwill)

Under U.S. GAAP, the asset's life determines the impairment test applied to an intangible asset.

If the intangible asset has a finite life, **two-step** impairment test is used

If the intangible asset has an indefinite life, **one-step** impairment test is used

### A. Two tests for impairment of intangible asset

U.S.GAAP		
Asset's life	Finite life	Indefinite life
characteristics	Limited useful life	Unlimited useful life
Amortization	Over useful economic life	N/A
Impairment test	Two-step test:  <b>Step 1</b> (recoverability test):  Compare <b>carrying value</b> and the <b>sum of undiscounted cash flow</b>  ➤ If CV is higher, enter step 2.  <b>Step 2:</b>  Compare <b>carrying value</b> and <b>total discounted future cash flows</b> .	One-step test:  <b>Step 1:</b>  Compare <b>carrying value</b> of intangible asset (including the goodwill) and its <b>fair value cost</b> If CV is higher, impairment loss.



Intangible asset with indefinite life 应该一年至少做一次减值测试，而 intangible asset with finite life 应该每当有迹象表明账面价值可能收不回来时就要减值测试。



掌握 intangible asset 的 2 种减值测试: two-step test 和 one-step test, 会分析是否减值, 减值的金额是多少。常出现在 MCQ 中。

	If CV is higher, impairment loss	
Impairment amount	carrying value – fair value(or discounted cash flow)	Carrying value of asset – fair value

## B. Calculation of Impairment Loss

### 1. U.S.GAAP:

Indefinite life	Finite life
Qualitative test for impairment = FV-CV	Recoverability test for impairment

If the result above is:

Positive	No impairment	
	Assets held for use	Assets held for disposal
Negative	Fair value < Net carrying value	Fair value < Net carrying value>
	Impairment loss	Impairment loss + cost of disposal
		Total impairment loss
	1. Write asset down 2. Depreciate new cost 3. Restoration Not allowed	1. Write asset down 2. No depreciation taken 3. Restoration is permitted

Note: For the finite-life intangible assets, the discounted cash flows can be used to instead of fair value of assets in above.

### 2. IFRS:

- The impairment loss = carrying value - recoverable amount
- recoverable amount = greater of (fair value-costs to sell, value in use)
- Value in use = PV of future cash flows expected

## C. Reporting an Impairment Loss

- The **impairment loss** should be reported as a component of income from **continuing operation** before income taxes.
- Under U.S.GAAP, Restoration of previous recognized impairment losses is allowed **only when** the asset is held for disposal.
- Under IFRS, reversal of impairment loss is allowed.

### Midas Touch

Golden Corp. uses the cost model for intangible assets. On March 1, year 1, Golden acquired intangible assets with an indefinite life for \$100,000. On December 31, year 1, it was determined that the recoverable amount for these intangible assets was \$90,000. On December 31, year 2, it was determined that the intangible assets had a

掌握 U.S. GAAP 和 IFRS 下 impairment loss 的计算, 以及是否允许 reverse 之前的 impairment loss。U.S.GAAP 只在 held for sale 的情况下允许, 而 IFRS 都允许。

recoverable amount of \$94,000. What is the impairment gain or loss recognized in year 1 and year 2 on the income statement?

	Year1	Year2
A.	\$10,000 loss	\$6,000 loss
B.	\$10,000 loss	\$4,000 gain
C.	\$10,000 loss	\$0
D.	\$0	\$0

**Answer:**

The correct answer is B. Under cost model, which is only for IFRS, reversal of previous impairment loss is allowed. For year 1, the impairment loss is the difference of the carrying value of the intangible asset and the recoverable value, which should be \$10,000 loss. While, for year 2, the \$4,000 increase in recoverable value can be recognized as gain to reverse the previous impairment loss.

## II. Impairment of Fixed Asset

The entity should review the carrying amounts of fixed assets held for use and to be disposed at least **annually** or whenever events indicate that the carrying amount may not be recoverable.

### A. Recoverability Test

- Compare the **sum of undiscounted expected(future) cash flows** and the **carrying value** of assets.
- If the carrying value is higher, there is impairment loss (similar to intangible asset with finite life)

### B. Calculation of Impairment Loss

#### 1. U.S.GAAP:



Impairment loss 需要知道的是如何计算, 以及 U.S.GAAP 和 IFRS 的 calculation, 以及是否允许 reverse 之前的 impairment loss

## PP&amp;E (fixed assets)

Recoverability test for impairment  
Undiscounted future net cash flow – net carrying value

If the result above is:

Positive		No impairment	
Negative	Impairment	Assets held for use	Assets held for disposal
		FV or PV future net cash flow < Net carrying value	FV or PV future net cash flow < Net carrying value>
		Impairment loss	Impairment loss + cost of disposal
		1. Write asset down 2. Depreciate new cost 3. Restoration Not allowed	Total impairment loss 1. Write asset down 2. No depreciation taken 3. Restoration is permitted

## 2. IFRS:

- The impairment loss = carrying value - recoverable amount
- Recoverable amount = greater of (fair value-costs to sell, value in use)
- Value in use = PV of future cash flows expected

## C. Reporting the Impairment Loss

- Impairment loss for PP&E should be reported as a component of income from continuing operations before income taxes.
- U.S. GAAP does **not allow** the restoration of previously recognized impairment losses unless asset is held for disposal.
- IFRS allows reversal of previous impairment losses

## Midas Touch

A fixed asset on the Golden Company's books had the following associated values for the current year:

Carrying value	\$12,500
Fair value	11,200
Costs to sell	600
Present value of future cash flows	10,950

What amount will Golden's Controller book as an impairment loss under IFRS for the current year?

- A. \$1,550
- B. \$1,900
- C. \$1,300
- D. \$250



类似 intangible asset, fixed asset 也需要掌握 U.S.GAAP 和 IFRS 下 Impairment loss 的计算以及是否允许 reverse 之前的 impairment loss。

**Answer:**

The correct answer is A.

Under IFRS:

Value in use = PV of future cash flows expected= 10950

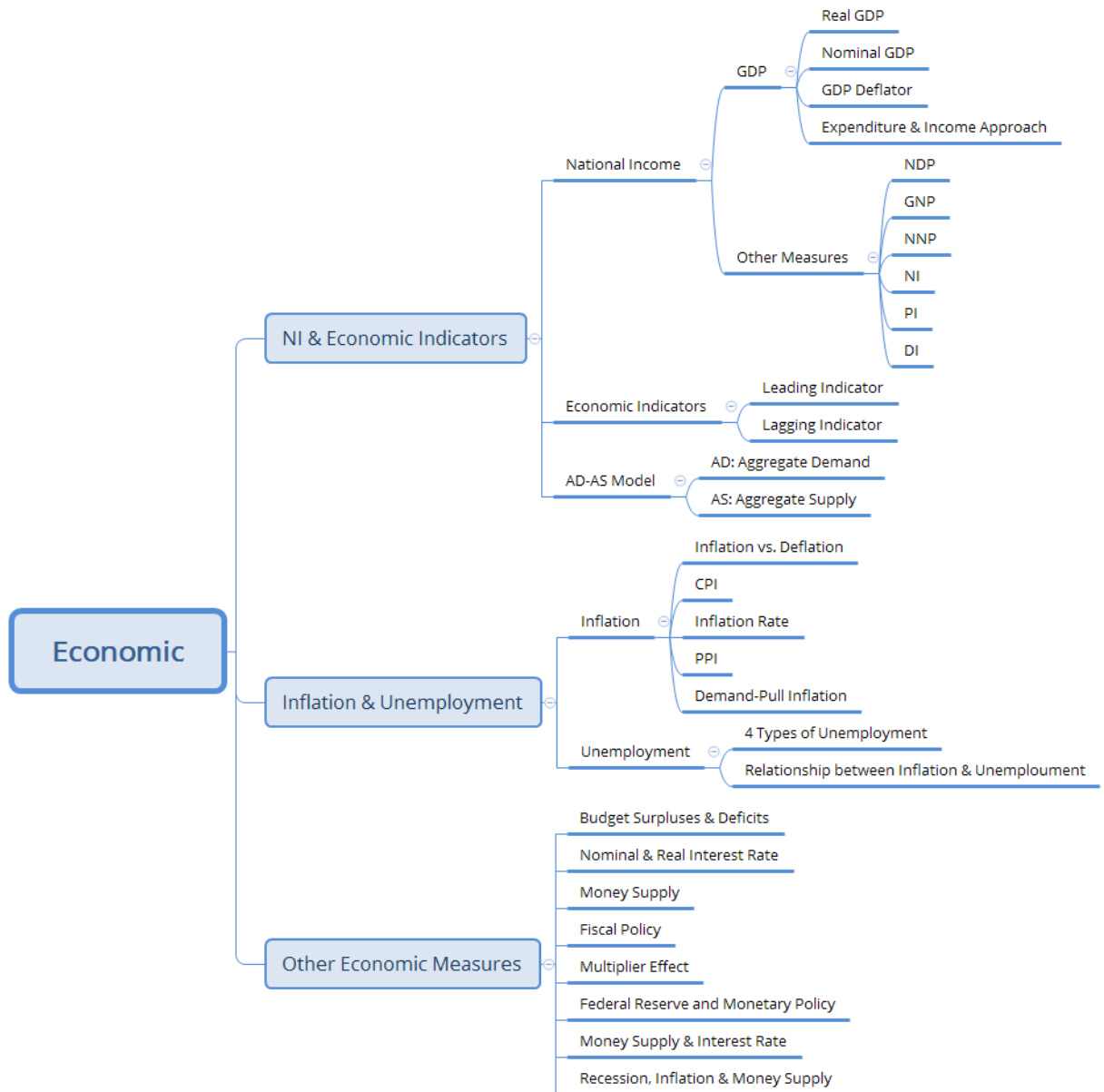
recoverable amount = greater of (fair value-costs to sell, value in use)  
= greater of (11200-600, 10950)  
=10950

The impairment loss = carrying value - recoverable amount  
= 12500-10950  
=1550



# TOPIC A

# Economic



# I. National Income and Economic Indicators

## A. Gross Domestic Product (GDP)

- A monetary measure of the market value of all the final goods and services produced within a country in a specific time period.
- Nominal GDP**
    - Nominal GDP uses current prices to place a value on the economy's production of goods and services.
  - Real GDP**
    - Uses constant base-year prices to place a value on the economy's production of goods and services.
  - GDP Deflator**
    - The price index used to calculate real GDP is called the GDP deflator.

Measuring Economic Activity – (GDP)	GDP is the total market value of all final goods and services produced <u>within the borders of a nation</u> in a particular time period.		
<u>Nominal</u> GDP	Unadjusted – measures in current prices		
<u>Real</u> GDP	<u>Adjusted</u> – measures in constant prices		
In constant prices	Price index (GDP deflator)		
	Real GDP =	Nominal GDP	x
		GDP Deflator	100
Real GDP/Capita	Compare standards of living across countries or across time		
Economic Growth	Increase in <u>real GDP per capita</u> over time		

#### 4. Expenditure and Income Approach

<b><u>Expenditure</u></b> Approach: sum of	Government purchases <u>(government)</u>
	Gross private investment <u>(business)</u>
	Personal consumption expenditures <u>(household)</u>
	Net exports (exports – imports) <u>(foreign)</u>
<b><u>Income</u></b> Approach: sum of	Income of proprietors
	Profits of corporations
	Interest
	Rental income
	Adjustments for net foreign income and miscellaneous
	Taxes
	Employee compensation
	<b><u>Depreciation</u></b>



$$\text{GDP} = C + I + G + (X - M)$$



Don't forget to add **depreciation**. Why?  
E.g. if some people are running a fruit stand, their capital will endure some wear and tear. As a result, some of their income is implicitly a compensation for this wear and tear, which is depreciation.

#### Midas Touch

Which one of the following terms often used to compare standards of living across countries or across time?

- A. Real GDP
- B. Net Domestic Product
- C. National Income
- D. Real GDP per capita

#### Answer:

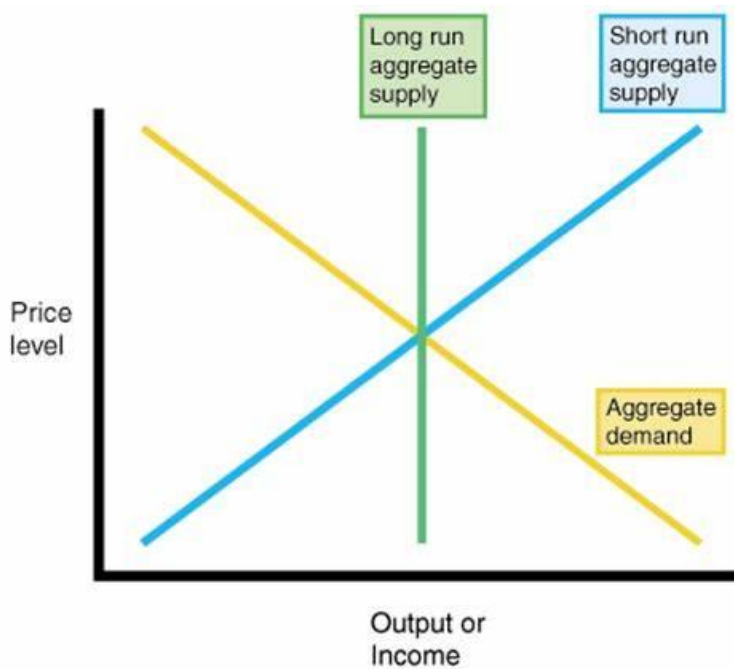
Choice "D" is correct. Real GDP per capita equals to real GDP divide population. It is often used to compare standards of living across countries or time. Since it is divided by the population, real GDP per capita adjusts for differences in the country size and for differences in population over time.

## B. Economic Indicators

<b><u>Leading</u></b>	Leading indicators tend to <b><u>predict</u></b> economic activity.
Indicators	·Average new unemployment claims
<b><u>Lagging</u></b>	Lagging indicator tend to <b><u>follow</u></b> economic activity.
Indicators	·Prime rate charged by banks
<b><u>Coincident</u></b>	Coincident indicators change at approximately <b><u>the same time as</u></b> the whole economy.
Indicators	·Industrial production

## C. AD-AS Model

Aggregate Demand Curve (AD) 总需求	the maximum quantity of all goods and services that households, firms, and the government are <b><u>willing and able to</u></b> purchase at any given price level. – downward sloping
	<b><u>Inversely</u></b> related to price level, $P \uparrow$ , $QD \downarrow$
Aggregate Supply Curve (AS) 总供给	The maximum quantity of all goods and services producers <b><u>are willing and able to</u></b> produce at any given price level.
	Directly related to price level, $P \uparrow$ , $QS \uparrow$
	Short-run aggregate supply curve – <b><u>upward sloping</u></b>
	Long-run aggregate supply curve = potential GDP <b><u>Vertical</u></b> ·Real GDP below potential GDP, <b><u>recession</u></b> ·Real GDP above potential GDP, <b><u>expansion</u></b>



## **II. Inflation and Unemployment**

### **A. Inflation**

#### **1. Inflation vs. Deflation**

- Inflation: A general increase in prices of goods and services
- Deflation: A general reduction of prices of goods and services

#### **2. Consumer Price Index (CPI)**

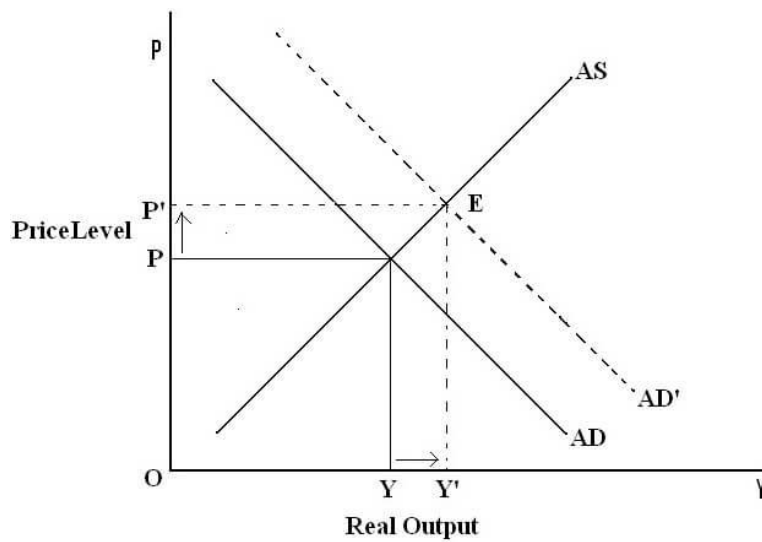
- Measure the average change in prices over time that households pay for a basket of goods and services.

- $$\text{CPI} = \frac{\text{Current cost of market basket}}{\text{Base Year cost of market basket}} * 100$$

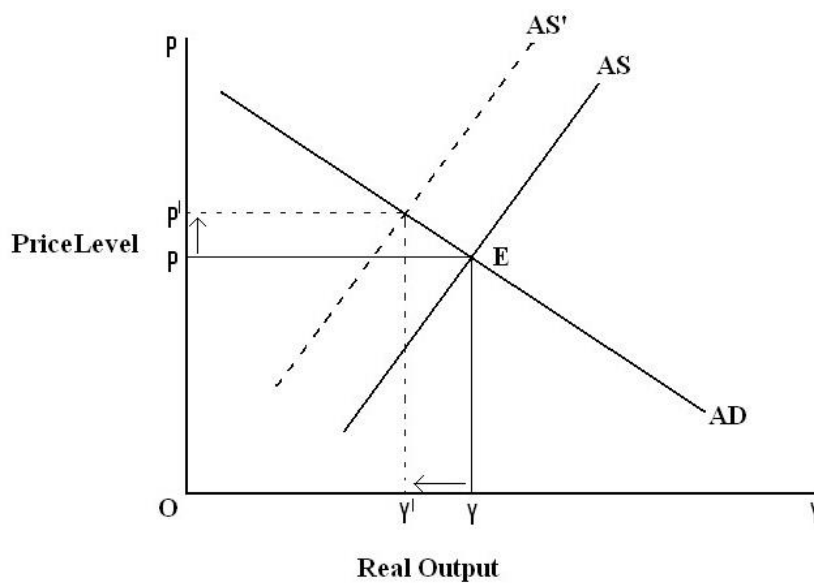
### 3. Reasons cause Inflation and Deflation

<b><u>Demand-Pull</u></b> Inflation	Shift Right In AD	Government spending $\uparrow$
		Taxes $\downarrow$
		Wealth $\uparrow$
		Money supply $\uparrow$
<b><u>Cost-push</u></b> Inflation	Shift Left in SRAS	Oil prices $\uparrow$ , profits $\downarrow$ , AS $\downarrow$
		Nominal wages $\uparrow$ , profits $\downarrow$ , AS $\downarrow$
Deflation	Shift left in AD	
	Shift right in SRAS	

Demand-Pull



Cost-Push



## B. Unemployment

### 1. Types of Unemployment

- **Frictional unemployment:** people become unemployed voluntarily due to change jobs
- **Structural unemployment:** mismatch of job available and skills
- **Cyclical unemployment:** due to declining in total GDP, typically happen in the recession
- **Natural Rate of Unemployment:** Frictional unemployment + Structural unemployment

Frictional Unemployment 摩擦性失业	Temporarily transitioning between jobs, temporarily laid off
	Fresh out of college
Structural Unemployment 结构性失业	Jobs available in the market do not correspond to the skills of the workforce
	Skill obsolete, job will eventually disappear
Seasonal Unemployment 季节性失业	Result of seasonal changes in the demand and supply of labor
Cyclical Unemployment 周期性失业	Declines in real GDP during periods of contraction or recession or in any period when the economy fails to operate at its potential

### 2. Relationship Between Inflation and Unemployment

- Inverse relationship: high unemployment rate → low inflation rate

### **III. Other Economic Measurements**

#### **A. Budget Surpluses and Deficits**

- 1. Budget surplus = government revenue > spending**
- 2. Budget deficits = government revenue < spending; usually financed by government borrowing**
  - Cyclical budget deficit: occurs at temporarily low economic activity
  - Structural budget deficit: deficit remains across a business cycle, imbalance between government costs and revenue

#### **B. Interest Rate**

- 1. Nominal Interest Rate**
  - Interest earned or paid before taking inflation into account
- 2. Real Interest Rate**
  - Interest earned or paid after allowing for inflation;

#### **C. Money Supply**

- M1: Coins, currency, checkable deposits(money and checking accounts), traveler's checks (does not include savings accounts or certificates of deposit CDs) (high liquidity)
- M2: M1 + certificates of deposit(time deposits) less than \$100,000 + money market deposit accounts + mutual fund accounts + savings accounts
- M3: M2 + certificates of deposit in excess of \$100,000

#### **D. Fiscal Policy**

- 1. Fiscal Policy**
  - Refers to the government's choices regarding level of government purchases and taxes.
  - Its effect on interest rates could impact the investments of firms.



## E. Multiplier Effect

- An increase in spending produces an increase in national income and consumption greater than the initial amount spent. (real estate – steel - iron)
- The size of this ripple effect depends on how much people spend or save.
- $MPS(\text{marginal propensity to save}) = 1 - MPC$
- If MPC is 0.8, means if I have \$100, I will spend \$80, and save \$20, thus  $MPS = 0.2$



In exam we assume everyone in the economy has the same propensity to save and consume.

Definition	The multiplier effect results from the <u>marginal propensity to consume (MPC)</u> (when you have \$100, how much would you spend)		
Formula	Multiplier =	$\frac{1}{(1 - MPC)}$	<u><math>MPS = 1 - MPC</math></u>
	Change in real GDP = multiplier = change in spending		
Example	Suppose the MPC is 0.8, if spending increases by \$100, then		
	Change in real GDP =	$\frac{1}{(1 - 0.8)}$	$\times 100 = \$500$

## F. Federal Reserve 美联储 and Monetary Policy 货币政策

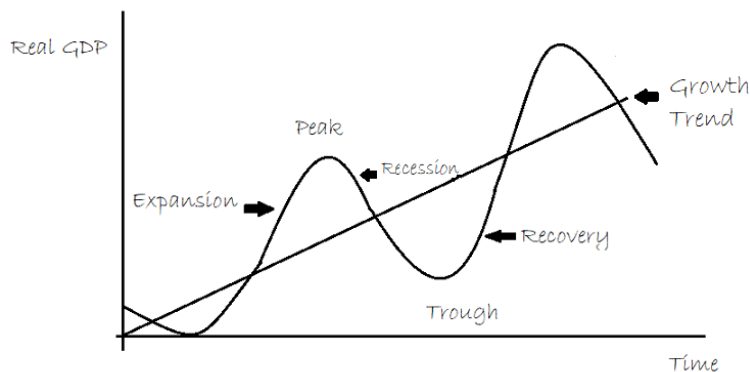
Tools:		
Open Market Operations (OMO)	Purchase and sale of government securities (treasury bills and bonds) in the open market	
	<u>Purchase</u>	<u>Money supply</u> ↑, IR ↓, <u>AD</u> ↑
	Sell	Money supply ↓, IR ↑, AD ↓
Changes in the Discount Rate	Interest rate the Fed charges member banks	
	<u>Discount rate</u> ↑	money supply ↓, IR ↑, <u>AD</u> ↓
	Discount rate ↓	money supply ↑, IR ↓, AD ↑
Changes in the Required Reserve Ratio 存款准备金率	fraction of total deposits banks must hold in reserve	
	<u>Reserve requirement</u> ↑	<u>money supply</u> ↓
	Reserve requirement ↓	money supply ↑

## G. Business Cycles



熟记 Business Cycles  
每个环节的 term.

Expansionary phase	Rising economic activity (real GDP) and growth GDP ↑, profit ↑, unemployment ↓, P↑
Peak	A high point of economic activity, the end of an expansionary phase and the beginning of a contractionary phase Firms face capacity constraints and input shortages
Contractionary phase	Falling economic activity and growth GDP ↓, profit ↓, unemployment ↑
Trough	A low point of economic activity Experience significant excess production capacity
Recovery phase	Economic activity begins to increase and return to its long-term growth trend GDP ↑, Profit ↑, P↑
Recession	Economy experiences negative real economic growth – two consecutive quarters of falling GDP Contractionary phase: GDP ↓, profits ↓, unemployment ↑
Depression	A very severe recession – relatively long period Excess capacity↑, demand ↓, bankruptcy ↑



Midas Touch
<p>Which of the following best describe the sequence of a business cycle?</p> <p>A. Recession, peak, recovery, trough</p> <p>B. Trough, recession, recovery, peak</p> <p>C. Peak, recession, trough, recovery</p> <p>D. Peak, recovery, trough, recession</p>
<p><b>Answer:</b></p> <p>Choice “C” is correct. Peak is the highest point of economic activity. Trough refers to the lowest point of economic activity. Business cycle reflect the natural fall and rise of economic activity. So the correct order is peak, recession, trough, recovery, and return to peak again.</p>

# Taxable and Nontaxable Disposition Gain or Loss

## Disposition Gains

1 Sale of principal residence

2 out 5 years ownership and residence

★ Exception

- MFJ, ownership is not required for both spouses
- Nonqualified usage-pro rata excluded
- Hardship due to health, work, etc

2 Involuntary Conversion

General - No gain recognized

Recognize gain to extent proceeds are not reinvested

Recognize loss immediately

3 Like-kind Exchange

Real property exchange only

Recognize gain when boot or property other than exchange received

Lesser of realized gain or boot received

No loss recognition

4 Divorce Settlement

rollover basis from former spouse

5 Installment Sale

Defer gain when cash received

6 Treasury Stock Transaction

No gain or loss in treasury stock transactions

Wash sale loss

Buy back the same stock 30 days before or after the sale

## Disposition Loss

Related Party Transaction

Definition

COConstructive Ownership

no double allocation

Basis rule

same

Gifted property basis rule

Personal Loss

exception

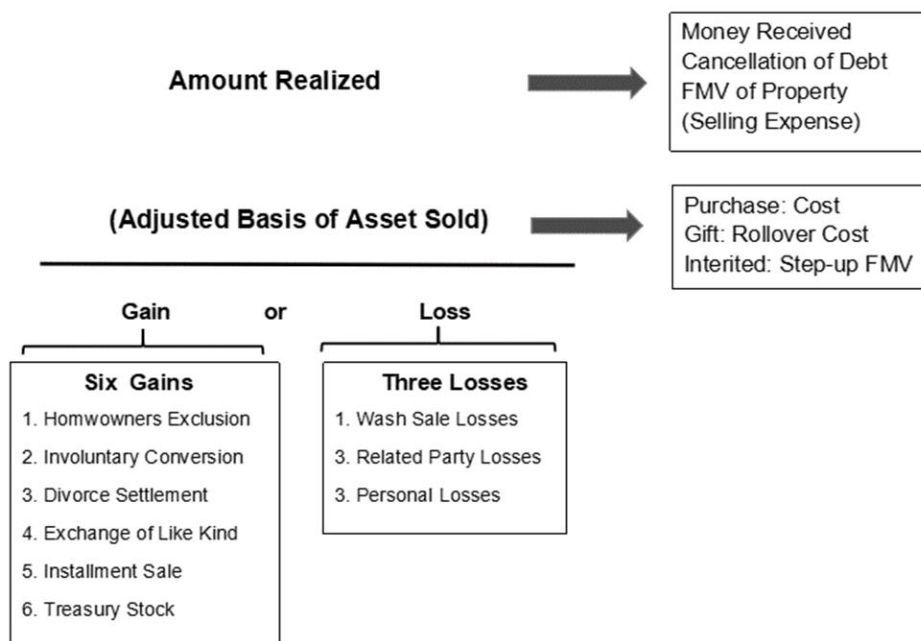
Mom and pop exception

Casualty theft

Below-Market Loan

## TOPIC B Taxable and Nontaxable Disposition Gain or Loss

### I. Summary



### II. Disposition Gains

#### A. Exclusion Gain on Sale of Home

##### 1. Sales of Principal Residence

Homeowner can exclude up to \$500,000(MFJ, qualifying widow) and \$250,000(others) gain of selling the principal residence from gross income.

##### 2. Qualification

- The taxpayer must own and use it as residence for at least two years out of the last five years leading up to the date of sale. For married taxpayer, either spouse meets the ownership requirement is qualified but both spouses must

meet residence requirement.

- Each taxpayer can only take the exclusion once during a two-year period.

### 3. Exceptions

- **Hardship-exception for 2 out 5 years rule:** if the dissatisfaction is within two years and due to either of change of employment, health or other unforeseen circumstance. Portion of gain from sale can be excluded.

Formula
<p><i>Hardship Gain Exclusion</i></p> $= \$500,000(MFJ) \times \frac{\text{Months of qualifying ownership}}{24 \text{ months}}$

- **Nonqualified use:** any use of the home other than use as a principal residence. The gain allocated for nonqualified use will be recognized as a capital gain by the taxpayer. The term of “period of nonqualified use” does not include any portion of the 5-year period which is after the last date that such property is used as the principal residence of the taxpayer. This provision allows taxpayer to take full gain exclusion without having to count the period the home is empty or rented as a nonqualified period.

Formula
<p><i>Gain allocated to nonqualified use</i></p> $= \text{Total gain realized from sale} \times \frac{\text{Period of nonqualifying use}}{\text{Period of use}}$ <p><i>Gain exclusion under nonqualified use</i></p> $= \$500,000(MFJ) - \text{Gain allocated to nonqualified use}$

Midas Touch
<p>Jack Baker buys a principal residence on Jan. 1, 2009 and moves out on Jan. 1, 2017. On Dec. 1, 2020, he sells the property and realizes a \$200,000 gain, all of which will be excluded from gross income. The property's use following Baker's departure from the property (e.g., as rental property, or vacant and held for sale) is immaterial.</p>



Similarity test standard under involuntary conversion is narrower than standard of like-kind exchange.

## B. Involuntary Conversions

- Involuntary conversion exclusion is based on reimbursement from the conversion and whether reinvestment occurs within time limitation.
- Time limitation: personal property must reinvest two years; business property must reinvest three years after the end of the taxable year in which the gain was realized.
- New property must have similar function of old property.

General Rule of Gain Recognition and Basis Determination			
	Situations	Gain	Basis of new property
<b>Gain Rules:</b>  Reimbursement > Adjusted Basis of Old Property	Reimbursement equal or less than the cost of replacement	No gain recognized	Rollover old property basis or increased by any additional amounts invested
	Reimbursement exceed the cost of replacement	Recognized gain to extend that not reinvested	FMV of new property =deferred gain + deferred loss;  Deferred gain= realized gain-recognized gain
<b>Loss Rule:</b>  Reimbursement < Adjusted Basis of Old Property	N/A	Recognize loss immediately	Replacement cost of new property

### Midas Touch

A building owned by Golden Corp. was destroyed by fire. The maximum fire insurance coverage for the building is \$500,000. Other information at time of destroy show as follows:

Building, carrying amount \$510,000

Building, fair market value \$540,000

Removal and cleanup cost \$15,000

Later Golden received insurance proceeds of \$500,000. On what amount should Golden base the determination of its loss on involuntary conversion?

A. \$525,000

B. \$530,000

C. \$550,000

D. \$565,000

#### Answer:

Choice "A" is correct. \$525,000 basis of involuntary converted building.

Building carrying amount \$510,000

Removal and cleanup cost 15,000

Basis of involuntary conversion 525,000

Insurance proceeds (500,000)

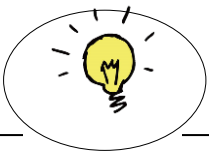
Loss on involuntary conversion \$25,000

### C. Like-kind Exchange

- Real property used in a trade or business or held for investment only. Not including real property in different country.
- Time limitation: identify new property within 45 days of giving up old property; received new property by earlier of 180 days of giving up old property or the due date of taxpayer income tax return.

#### General Rule and Basis Determination

Situations	Gain	Basis of new property
Not boot received or	No gain	Rollover old property basis



只有 received boot or non like-kind property 才会引发收入的确  
认。Paid boot or non  
like-kind property 不  
会触发收入确认。



## Topic B Specific Incomes Items and Exclusion

other non like-kind property received	recognized	
Property other than like-kind property or boot received	Recognized gain is lesser of realized gain or boot received	$\text{FMV of new property} = \text{deferred gain} + \text{deferred loss};$ $\text{Deferred gain} = \text{realized gain} - \text{recognized gain}$
FMV of property received is less than adjusted basis of giving up property	No loss recognition (defer all loss)	$\text{FMV of new property} - \text{deferred gain} + \text{deferred loss};$ $\text{Deferred loss} = \text{realized loss} - \$0 \text{ (recognized loss)}$

### Midas Touch

Chris is trading real property used solely for business purposes for new real property to be used in his business. According to book record, the originally cost is \$38,000, the current fair market value is \$22,000 and he has taken \$18,000 in depreciation. Chris agreed to pay \$2,000 cash in addition to the traded real property at worth of \$24,000. What is the Chris's basis in the new real property received?

- A. \$17,000
- B. \$19,000
- C. \$20,000
- D. \$22,000

**Answer:**

Choice "D" is correct.

Gain realized = (Fair market value of real property received – Boot paid)  
 - Adjusted basis of real property given up =  $\$24,000 - \$2,000 - (\$38,000 - \$18,000) = \$2,000$  gain

Gain recognized  
 = \$0 (lesser of realized gain of \$3,000 or boot received of \$0)

Basis of new property = FMV new property – deferred gain =  $\$24,000 - \$2,000 = \$22,000$

## D. Divorce Settlement

- Property settlement received from a divorce agreement is non-taxable for the recipient spouse and non-deductible for the transferor spouse.
- One spouse roll over the basis of the transfer property from a form spouse.

## E. Installment Sale

- Gain on installment sale is deferred to the year when cash received rather recognize all realized gain from installment sale at once.
- Portion of gain recognized:

Formula
$  \begin{aligned}  \text{Recognized gain} \\  &= \text{Cash collect} \\  &\times \frac{\text{Gross profit from installment sale}}{\text{Sale price}}  \end{aligned}  $

- Installment method does not apply to loss.

## F. Treasury Stock Transaction

- Issuing corporation doesn't recognize gain or loss in treasury stock transactions.
- Treasury stock transaction includes selling or repurchasing of its own stock and reissuing of treasury stock.

## III. Disposition Losses

Following three type of losses are not recognized by taxpayers.

### A. Wash Sale Loss

- A wash sale occurs when a taxpayer sells or trades a security at a loss and, within 30 days before or after this sale, buys a "substantially identical" stock or security.
- Wash sale loss is not recognized.
- Basis of repurchased stock= Reacquisition price +Disallowed loss from wash sale.

### Midas Touch

In 2019, Jannie had the following transactions in Golden, Inc. common stock. On Jan 1, 2019, purchased 500 shares of common stock in the G Company for \$25/share and on May 12, 2019, sold 500 share of G Company stock for \$23/share. On May 28, she purchased an additional 250 shares of G Company stock for \$22/share. On Oct 15, 2019, she sold the 100 shares of G Company stock purchased for \$18/share. What is Jannie's deductible capital loss?

- A. \$400
- B. \$700
- C. \$1,100
- D. \$1,400

**Answer:**

Choice "C" is correct. The wash sale rules apply to 250 shares that were sold on May 12, because they were repurchased within 30 days of the sale. The computation of Jannie's total deductible capital loss is as follows:

May 12 sale of 250 shares that were not repurchased within 30 days:

250 shares × sale price of \$23/share	\$5,750
250 shares × purchase price of \$25/share	(\$6,250)
Loss on May 12 sale	\$500

October 15 sale of 100 shares:

100 shares × sale price of \$18/share	\$1,800
100 shares × basis of \$24/share*	(\$2,400)
Loss on October 15 sale	\$600

## B. Related Party Sale Loss

- Related party transactions include trading within family members (linear relationship, excluding step relationship or in law relationship), entity that are more than 50% owned, member of controlled group etc.
- A taxpayer's overall ownership with certain stock should be determined by applying constructive ownership rule.
- Avoiding double attribution with family members when applying constructive ownership rule. The same share of stock should not attribute to other family members through both direct ownership

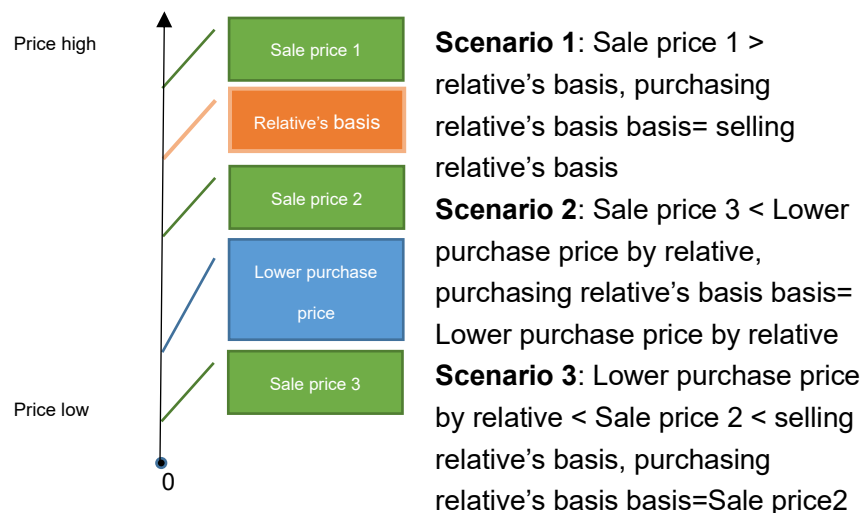
and constructive ownership.

### Midas Touch

Stock of Golden Corp. is owned 30% by Tony, 20% by Tony's wife, 40% by Tony's mother, and 10% by Tony's nephew. Tony directly and indirectly owns 90% of Golden Corporation with 30% actual ownership and 60% constructive ownership from his family members. Be careful that nephew is not considered as a family member, therefore the 10% ownership of nephew is not constructively owned by Tony. Assume Tony has a sister, only the 30% of Tony's direct ownership of Golden Corp. can be attributed to Tony's sister. The 60% ownership of Golden Corp. that constructive owned by Tony from his family members cannot be attributed to Tony's sister repetitively.

- **Arm-length** transaction, even though sale between related parties qualifies for arm-length transaction, loss is still not recognized.
- **Basis rule** of relative party loss sales. See chart below.

### Illustration-Purchasing relative's basis rules



## C. Personal Loss

No deduction is allowed for the loss resulted from disposing assets held for personal use. An itemized deduction may be available in the category of casualty and theft.

Midas Touch
<p>Kate and Brandon abandoned their principal residence that they purchased six years ago for \$550,000. The house had a current fair market value of \$450,000. What is the maximum loss, if any, that they are allowed to deduct on the current-year's tax return for the abandoned property?</p> <p>A. \$0</p> <p>B. \$50,000</p> <p>C. \$300,000</p> <p>D. \$350,000</p>
<p><b>Answer:</b></p> <p>Choice "A" is correct. No deduction is allowed for the loss on disposal of a personal-use asset.</p>

## IV. Other Disposition Gains or Losses

Below-market loans (loans with interest rates lower than the applicable federal rate) should be subject to the Section 7872 provision where lender must report foregone interest as interest income and borrower may deduct the foregone interest as long as it is not personal interest.