Enterprise Risk Management

Risk: the possibility that events will occur and affect the achievement of strategy
ERM: the culture, capabilities, and practices integrated with strategy setting

Management Decisions that Affect Value (CPER)

C - Created when benefits of value exceed the cost of resources used
P - Preserved when ongoing operations efficiently and effectively sustain benefits
E - Eroded when faulty strategy and inefficient/ineffective operation cause negative NPV
R - Realized when benefits created are received by stakeholders

Types of Risk

Interest Rate Risk (or Yield Risk)
- exposure of financial instrument to fluctuations due to interest rate changes
- if the security pays a higher rate, the value will fall

Market/Systematic/Non Diversifiable Risk
- exposure of a firm to fluctuations due to operating in an economy
- can be due to war, inflation, international incidents, or political events

Unsystematic/Firm-Specific/Diversifiable/Non Market Risk
- represents portion of firm risk that is associated with random causes
- can be eliminated through diversification
Events: strikes, lawsuits, regulatory issues, loss of key accounts, change in taste

Credit Risk (only affects borrowers)
- includes a company's inability to secure financing due to low capital or poor credit

Default Risk (affects lenders)
- due to possibility that debtors may default on their debts

Liquidity Risk (affects lenders)
- when there is a desire to sell but are unable to do so

Price Risk
- the exposure that investors have to a decline in value of their portfolio

Mitigating Financial Risk

Mitigating Interest Rate Risk (or Yield Risk)
- invest in floating securities (they don't change in value with rate changes)
- derivatives (Forward Rate Agreement or Interest rate swaps)

Mitigating Market/Systematic/Non Diversifiable Risk
- invest in derivatives that provide gains when the market declines
- short selling when there are thoughts of market declining

Mitigating Unsystematic/Firm-Specific/Diversifiable/Non Market Risk
- can be minimized through diversification

Mitigating Credit Risk
- trying to get better improvements in credit rating

Mitigating Default Risk
- lend only to borrowers with a low risk of default
- adjust interest rates to give more risky borrowers higher rates

Mitigating Liquidity Risk
- allocate a higher % of capital to investments on the active market

Mitigating Price Risk
- can be minimized through diversification
- can also be mitigated through short selling or derivatives

Factors Influencing Exchange Rates

1) Relative Inflation Rates (Trade Factor)
If inflation ↑ the purchasing power ↓ and currency value ↓
2) Relative Income Levels (Trade Factor)
If domestic income ↑ then the ability to buy ↑ and currency value ↑
3) Government Controls (Trade Factor)
- various trade and exchange barriers suppress natural forces of markets
4) Relative Interest Rates/Capital Flow (Financial Factors)
- a country with higher interest rates attract more investment and increase value

Currency Exchange Rate Risk Exposure Categories

Transaction Exposure: risk that orgs can gain/loss upon settlement of transactions

FX ↑, Asset ↑	Gain		FX ↑, Liabilities ↑	Loss	
FX ↓, Asset ↓	Loss		FX ↓, Liabilities ↓	Gain	

Economic Exposure: defined through local currency appreciation/depreciation
- is measured in relation to organization earnings and cash flows
As Domestic Currency ↓, FX ↑: domestic goods cheaper + foreign sales ↑
As Domestic Currency ↑, FX ↓: domestic goods cost more + foreign sales ↓

Translation Exposure: risk that A/Ls, equity, or income of a consolidated org will change
When the Dollar Price of the Euro Rises:
1) the euro is more expensive (appreciates)
2) the dollar is less expensive (depreciates)
3) dollar will buy less euro goods; euro will buy more US goods

Factors that Shift Demand Curves (Causes Change in Demand)

W - Change in Wealth: a positive/negative change in wealth
R - Change in Price of Related Goods
Price of Substitute Goods ↑ → demand curve shifts right
Price of Complementary Goods ↓ → demand curve shifts right
I - Change in Consumer Income: increase in income will shift curve to the right
T - Change in Consumer Tastes or Preferences
E - Change in Consumer Expectations: for prices into the future
N - Change in Number of Buyers served by the Market

Factors that Shift Supply Curves (Causes Change in Supply)

E - Change in Price Expectations of the Supplying Firm
Profit ↑, Supply ↑ → Shift Right
Profit ↓ Supply ↓ → Shift Left
C - Change in Production Costs
Production Costs ↑ → Shift Left
Production Costs ↓ → Shift Right
O - Change in the Price or Demand for Other Goods
I - Change in Subsidies or Taxes
- a decrease in taxes or increase in subsidies shift the curve to the right
T - Change in Production Technology: improvements shift it to the right

Changes of both Supply and Demand

Same Change: P is change in demand; P is indeterminate
Different Change: P is change in demand; Q is indeterminate

Change in Demand	Change in Supply	Effect on EQ	Effect on EP
Increase	Increase	Increase	Indeterminate
Increase	Decrease	Indeterminate	Increase
Decrease	Decrease	Decrease	Indeterminate
Decrease	Increase	Indeterminate	Decrease

Price Elasticity of Demand

Price Elasticity of Demand = % change in quantity demanded / % change in Price

Negative price elasticity reflects the downward sloping demand curve

% Change = (New - Old) / Old

Inelastic (price elasticity < 1) → **SP ↑ QD ↓ Revenue ↑**
Elastic (price elasticity > 1) → **SP ↑ QD ↓ Revenue ↓**
Unit Elastic (price elasticity = 1) → **SP ↑ QD ↓ No change to Revenue**
Factors Affecting Price Elasticity of Demand
1) demand is more elastic with more substitutes available
2) the longer the time period the more elastic it becomes

Price Elasticity of Supply

Price Elasticity of Supply = % change in quantity supplied / % change in Price

Positive price elasticity reflects the upward sloping supply curve

% Change = (New - Old) / Old

Inelastic (price elasticity < 1) → **P ↑ < QS ↑**
Elastic (price elasticity > 1) → **P ↑ > QS ↑**
Unit Elastic (price elasticity = 1) → **P ↑ = QS ↑**
Factors Affecting Price Elasticity of Supply
1) feasibility of producing storing the product
2) time to produce and supply the good will affect the elasticity of supply

Competitive Advantage

Cost Leadership Advantage: sells a lot of volume at low costs compared to others
Need: large company with economies of scale

Works Well When:	Fails When:
- buyers have bargaining power/low switch - cost cutting is excessive	
- elasticity is greater than 1	- buyers won't sacrifice quality for cost

Product Differentiation: sells a higher price for a more unique item

Works Well When:	Fails When:
- see the value in the products	- firms don't assess customer reqs
- are willing to pay for the uniqueness	- fail to create value exceeding cost
- are superior or expensive goods	- people would rather pay for generic

Best Cost Strategies: good quality at a reasonable price

Works Well When:	Fails When:
- buyers are sensitive to price	- won't appeal to people who want either low cost or differentiated products
- generic products are unacceptable	

Niche/Focus Strategies: focusing on a small group with niches

Works Well When:	Fails When:
- the niche has a large demand	- competitors enter the market
- there are very competitors	- firms are not responsive to needs

Methods of International Operations

International Trade: companies export/import products or services
Licensing: provide right to use processes or technologies in exchange for a fee
Franchising: marketing or delivery strategy provide training in exchange for a fee
Joint Venture: using comparative advantages to deliver a product
Direct Foreign Investment: establishing international operation with a subsidiary
Global Sourcing: worldwide supply chain using the different methods

Four types of Business Combinations

Horizontal: companies join the same industry join together (competitors)
benefits: reduced competition, economies of scale, expertise, maximized profits
Vertical: companies at different stages of the production process
Circular: different business units with remote connection come together with manager
Diagonal: entities that provide ancillary support

Transaction Types

Merger: 2+ entities combine to form a single new corporation
Acquisition: acquisition of one company without involving a new company
Tender Offer: make offer directly to shareholders (hostile takeover)
Purchase of Asset: transactions where buying just the assets of the firm

Concept of Value

For Profit → value is shaped by strategies that balance market opportunities againts the risks of pursuing them
Not-for-Profit → value is shaped by delivering G/Ss that balance opportunity to serve the community with risks

Enterprise Risk Management and Strategy

Mission → the core purpose of the entity
Vision → the aspirations of the entity
Core Values → the beliefs/ideals in the org

Types of Risk

Risk Appetite: types and amt willing to accept
Risk Capacity: max risk for a firm
Risk Profile: composite risk at each performance level
Risk Inventory: listing of all risks faced by the firm

Risk & Return

Risk: willingness and ability to assume risk
Return: gain or loss experienced from owning an asset

Three Risk Preferences

1) Risk Indifferent (Rare): increase in risk does not increase required rate of return
2) Risk Averse (General): increase in risk results in increase in required rate of return
3) Risk Seeking (Rarest): increase in risk results in decrease in required rate of return

Stated Interest Rate (Nominal)

the rate of interest charged before any adjustment for compounding or market factors
Computation: rate shown in the agreement

Effective Interest Rate (compounded)

the actual finance charge associated with borrowing after reducing loan proceeds for charges and fees

Computation

1) Payment Per Period =	Principal * SAR / Number of Periods
2) Effective Periodic Rate =	Payment per Period / Net Proceeds of Loan
3) Effective Annualized Rate =	((1+EPR)^n)-1

Annual Percentage Rate (non compounded)

a non compounded version of the effective annual percentage rate, required for disclosure
Computation: effective periodic interest rate * # of periods

Effective Annual Percentage Rate

the stated interest rate adjusted for the number of compounding period per year
Computation: [1 + (i/n)]^n - 1
i = stated interest rate
n = compounding periods per year

Simple Interest

amount represented by interest paid only on the original amount of principal without regard to compounding
Computation: P * I * n
P = original Principle
i = interest rate per time period
n = number of time periods

Compound Interest

Step 1: Total # of Periods = #years * Periods per year
Step 2: Effective Periodic Rate = APR/n
Step 3: Amt of Interest = P (1+i) ^n
P = original Principle
i = interest rate
n = number of periods

Required Rate of Return

Step 1: Nominal Risk Free Rate
= Real Risk Free Rate + Expected Inflation
Step 2: Required Rate of Return
= Nominal Risk Free Rate + Risk Premiums

Maturity Risk Premium (MRP): the compensation that investors demand for exposure to interest rate risk over time
Inflation Premium (IP): the compensation investors require to bear the risk of changing price levels or purchasing power
Liquidity Risk Premium (LP): compensation lenders need for the risk that an investment can not be sold on short notice
Default Risk Premium (DRP): compensation lenders need for the risk that the issuer of debt will default

Demand - downward sloping; P↑Q are inverse

Change in Quantity Demanded
- change in price cause movements along the curve
Change in Demand (WRITTEN)
- shift in curve caused by external influences
If Demand Shifts Right → Demand ↑ Prices ↑
If Demand Shifts Left → Demand ↓ Prices ↓
Quality Demanded is inverse due to
Substitution effect: consumers tend to purchase more of a good when the price falls in relation to others
Income effect: as prices are lowered with income staying the same, people will purchase more of the low priced

Supply - upward sloping; P↑Q are directly related

Change in Quantity Supplied
- change in price cause movements along the curve
Change in Supply (ECOST)
- shift in curve caused by external influences

Market Equilibrium

Price Floor → Surplus (like a minimum wage)
- min price above the EQ price
Price Ceiling → Shortage (like rent control)
- max price below the EQ price

Rightward Shift in Demand
price ↑; market clearing quantity ↑
Leftward Shift in Demand
price ↓; market clearing quantity ↓
Rightward Shift in Supply
price ↓; market clearing quantity ↑
Leftward Shift in Supply
price ↑; market clearing quantity ↓

Cross Elasticity

% Change in Number of Units of X Demanded (Supplied) / % Change in Price of Y

Positive = Substitutes Negative = Complement

Income Elasticity of Demand

- Measures % change given a change in income
% Change in Number of Units of X Demanded (Supplied) / % Change in Income

Positive = Normal Good Negative = Inferior Good

Inflation: sustained increase in the general prices of G/Ss
Real Rate = Nominal Rate - Inflation Rate

Inflation's Effect on Investment

Variable Rate vary with inflation, value is stable
Fixed Rate stays the same, value will change

Slow Economy → lower rates
High Inflation → Raise rates

Inflation's Effect on Debt

Borrower thinks rates are increasing → borrow @ fixed rate
Borrower thinks rates are decreasing → borrow @ variable
Interest should be compensated for:
a) real risk-free rate
b) rate of inflation
c) credit rating

Motivation for International Business Operations

1) Comparative Advantage: specialization in production that provide advantage in relation to other traders
2) Imperfect Markets: resource markets are imperfect so to get more resources as firm must trade outside the borders
3) Product Cycle: domestic success will result in domestic competition which engages the export of products

Risk of International Business Operations

C - Currency/Exchange Rate Risk
P - Foreign Economies
P - Political Risk

Effect from opening markets to investment
- become more integrated with world markets
- becomes less volatile
- decreases their cost of capital
- increases their investment growth rates

Divestiture Transactions

1) Sell-off: outright sale of subsidiary
2) Spin-off: creates new company by separating sub
3) Equity carve-out: sub is made public through IPO

Enterprise Risk Management Framework

- Sequential yet intertwined components that drive an organization toward enhanced value
Key Concept of ERM: alignment between risk management and strategy is critical
3 Interrelated Components (GOPRO)
G - Governance and Culture (DOVES)
O - Strategy and Objective Setting (SOAR)
P - Performance (VAPIR)
R - Review and Revision (SIR)
O - Information, Communication and Reporting (Ongoing) (TIP)

G - Governance and Culture (DOVES)

Governance sets the tone at the top, serves to endorse the importance of ERM and establishes oversight for ERM
Culture is reflected in decision making
D - Defines Desired Culture
- the organization defines the desired behaviors that characterize the desired culture
- influences risk tolerance between Risk-Averse, Risk Neutral, and Risk Aggressive
O - Exercises Board Oversight
- the BOD provides oversight for strategy
- the board is expected to have the skills, experience, and business knowledge t
V - Demonstrates Commitment to Core Values
- the organization demonstrates a commitment to the entity's core values
E - Attracts, Develops, and Retains Capable Individuals (Employees)
- Commitment to building human capital in alignment with strategy and business objectives
- requires an emphasis on training, mentoring, and evaluating talent and ensuring succession plans
S - Establish Operating Structure
- established to pursue strategy and business Objectives
- describe how an entity organizes and carries out its day-to-day operations

G - Strategy and Objective Setting (SOAR)

- Setting strategy and Objectives that consider internal & external factors and their effect on risk
S - Evaluate Alternative Strategies
Strategy is evaluated from two perspectives
1) the possibility that the strategy does not align with the mission, vision, and core values
2) the implication from the chosen strategy (ex: debt v. equity, fixed v. variable costs)
- mission, risk appetite and strategy must be aligned
O - Formulates Business Objectives
- business objectives are measurable steps that an org makes to achieve its strategy
A - Analyzes Business Context
Business context: trends, events, relationships, and factors that may change or influence strategy or objectives
R - Defines Risk Appetite
- the org defines risk appetite in the context of creating, preserving, and realizing value
best approach: is the one that aligns with analyses used to assess risk in general

P - Performance (VAPIR)

- Identification and assessment of risks that may affect an entity's ability to achieve its strategy
V - Develops Portfolio View
- composite view of risk the entity faces that positions management to consider risks
A - Assesses Severity of Risk
- severity of risk relates to impact and likelihood of risk
Inherent Risk: risk to an entity in the absence of any direct actions by management
Target Residual Risk: amt of risk an entity prefers to assume in the pursuit of strategy
Actual Residual Risk: risk remaining after management has taken action
P - Prioritizes Risk
- risk severity, importance of related objective, risk appetite, and probability are considered when prioritizing
I - Identifies Risk
- listing of risks is required where new/emerging risks are identified and current risks are evaluated
I - Implements Risk Responses
Pursue: action is taken that accepts increased risk to achieve improved performance
Avoid: action is taken to remove the risk (leaving a business line)
Reduce: action is taken to reduce the severity of the risk through risk mitigation
Transfer/share: action is taken to reduce risk by outsourcing and insurance
Self Insure/Accept: no action is taken to change the severity of risk
Best Practice Depends on: *High Probability* — Avoid / Transfer; *Low Probability* — Reduce / Self Insure; *High Impact*; *Low Impact*

R - Review and Revision (SIR)

- Entities must continuously evaluate their strategies and business objectives as contexts shift and change
S - Assesses Substantial Change
- the entity identifies and assesses both internal and external changes that might substantially affect strat
R - Pursues Improvement in Enterprise Risk Management
- the organization pursues improvement of ERM through new tech, changes to org structure
R - Reviews Risk and Performance
- organizations should evaluate the entity's performance in context of the achievement of target

O - Information, Communication and Reporting (Ongoing) (TIP)

- Communication is the continual, iterative process of obtaining info and sharing it throughout the entity
T - Leverage Information and Technology
- the org leverage info and tech systems to support the org with relevant info
Relevant Info: helps an org be more agile in decision making and provides a competitive advantage
Effective Data Management Considered 3 Elements
1) data governance promote standardization of high-quality data
2) process and controls promote data reliability
3) data management architure is driven by value defined by management's needs
I - Communicates Risk Information
- the org uses communication channels to support enterprise risk management
P - Reports on Risk, Culture, and Performance
- the org reports on relationships among risk, culture, and performance at multiple levels throughout

Mitigating Transaction Exposure

for FX ↓, Asset ↓ Loss — FX ↑, Liabilities ↑ Loss

Netting Transaction Exposure: first net out transactions to make net exposure
Hedging: process of reducing uncertainty of future value by actively engaging in derivatives
FX ↓, Net A/R ↓ → Sell Forward/ Future OR Buy Put Option
FX ↑, Net A/P ↑ → Buy Forward/ Future OR Buy Call Option
Futures: standard; exchange-traded; entities owner to buy/sell a number of units on a stated date; hedge specific
Accounts Payable (Imports > Exports)
FX ↑ → profit on future offsets the loss on A/P
FX ↓ → gain on reduction of A/P offsets the loss on futures
Accounts Receivables (Exports > Imports)
FX ↓ → profit on futures offset the loss on A/R
FX ↑ → gain on increase in A/R offsets the loss on the futures
Forwards: customized; privately traded; entities owner to buy/sell currency units for a price; large groups
Payables: Buy the FX
Recivables: Sell the FX
Money Market Hedge: use domestic currency at current rate to invest in securities timed at the same point
Money Market Hedge Payables with Excess Cash
1) Find required investment in FX at FX rates; (AP Value)/(1+interest rate)
2) Purchase needed FX with USD
3) Invest FX at interest rates to satisfy payable upon maturity
Money Market Hedge Payables with Borrowed Cash
1) Find required investment in FX at FX rates; (AP Value)/(1+interest rate)
Currency Option Hedge: use domestic currency at current rate to invest in securities timed at the same point
FX ↑, Net A/P ↑ → Buy Call Option
FX ↑ → profit on call offsets the increase on A/P
FX ↓ → use transaction gain to offset cost of the call
FX ↓, Net A/R ↓ → Buy Put Option
FX ↓ → profit on put offset the transaction loss
FX ↑ → gain on transaction to offset put costs

Internal Factors (Strengths and Weaknesses)

- Innovation of Product Lines	- Leadership in R+D
- Competence of Management	- Cohesiveness of the values of the org
- Core Competencies (Outstanding Skills)	- Marketing Effectiveness (Brand Loyalty)
- Influence of High-Level Managers	- Effectiveness of communication
- Capital Improvements	- Clarity of the strategic mission

External Factors (Opportunities and Threats)

Factors Impacting the Industry	Factors Impacting the Firm
- the economy	- Barriers to market entry
- regulation and laws	- market competitiveness
- demographics of the population	- existence of substitute products
- technological advances and existing tech	- bargaining power of customers
- social values and political issues	- bargaining power of suppliers

Porter's Five Forces

1) Barriers to Entry: Treats of new firms entering the market in which it operates
If Barriers are High: a) new competition is low b) selling price is high c) profit margin is high
Examples of Barriers: gov regulations, supplier access, high capital requirements, customer preferences, economies of scale, learning curve issues, patents, trade barriers
New Companies will Enter When: a) barriers to entry are low b) potential high profits exist in the market c) the risk of retaliation by other firms is low
2) Market Competitiveness: existence of competition of rivals
If rivals are low: a) costs are low b) selling price is high c) profit margin is stable
Competition is increased when
- rival firms can respond to changes in input costs or tech changes
- rival firms spend significantly on advertising or R&D
- there are strong alliances between rivals and suppliers
- market growth has slowed and increased market share is the only way for profits
- cost to exit the market exceeds the cost of staying in the market
3) Substitute Products:
Few Substitutes: a) profit margin is high b) selling price is high
Few Substitutes → Demand Inelastic Close Substitutes → Demand Elastic
4) Bargaining Power of Customers
Low Bargaining Power a) profit margin is high b) selling price is high
- may be price sensitive and change products based on price
- have brand loyalty if there are high switching costs of differentiated products
Consumer bargaining power is increased when:
- high buyer concentration
- information is readily available
- there is a low cost to the buyer of switching costs
- high number of comparable substitutes
5) Bargaining Power of Suppliers is increased when
Low Bargaining Power a) profit margin is high b) COGS is low
a) a firm is unable to change suppliers (few substitutes or high switching costs)
b) supplier has an excellent reputation

Debt Financing

Commercial Paper: unsecured debt issued by corp that matures in 270 days or less
Debentures: unsecured debt issued by corp with a higher cost of borrowing
Subordinated Debentures: unsecured debt ranking behind senior creditors
Income Bonds: pays interest upon achievement of income targets
Junk Bonds: non investment grade bonds with high default risk and high returns
Mortgage Bonds: loans secured by real property

Debt vs Equity Financing

Comparing Debt v Equity	Debt	Equity
Flexibility	No	Yes
Tax Deductibility	Yes	No
EPS Dilution	No	Yes
Increased Financial Risk	Yes	No
Security Insurance Cost	Low	High
Investor Return	Fixed	Variable

Value of a Levered Firm

Levered Firm: company that has debt in its capital structure
Value of Levered Firm = Value of unlevered firm + PV of interest tax savings

$$PV of Tax Savings = \frac{T * (r * D)}{r}$$

T = Tax Rate
r = interest rate
D = amt of debt

Motives for Holding Cash

Transaction Motive: to meet payments in the ordinary course of business
Speculative Motive: to take advantages of temporary opportunities
Transaction Motive: to meet payments in the ordinary course of business

Disadvantages of High Cash Levels

- the negative arbitrage effect
- increased attractiveness as a takeover target
- investor dissatisfaction with the allocation of assets

Methods to Speed Collections

Customer Screening: choosing to extend credit to more responsible customers
Prompt Billing: timely billing of charges serves to speed up collections
Payment Discount: offering discounts may influence customers to pay faster
Expedite Deposits: ensure that funds are deposited and credit quickly
Concentration Banking: designation of a single bank as a central depository

Working Capital = Current Assets - Current Liabilities

Relative Valuation Models

Price to Earnings Ratio: changes in P/E are tied to long-run stock performance

Forward P/E Ratio = Stock Price Today / EPS in one year
Trailing P/E Ratio = Stock Price Today / EPS for prior year

Forward P/E Based on Gordon Growth = Dividend Payout / r - g

PEG Ratio: shows that lower PEGs are more attractive than higher PEGs
PEG Ratio = [P(0) / E(1)] / G
Price to Sales Ratio: is not as volatile, can be used when negative
disadventures: ingonores expenses and profit

Forward P/S Ratio = Stock Price Today / Sales in 1 Year
Trailing P/S Ratio = Stock Price Today / Sales for prior year

Price to Cash Flows Ratio:

Forward P/CF Ratio = Stock Price Today / CFs in one year
Trailing P/CF Ratio = Stock Price Today / CFs for prior year

Price to Book Ratio:

Price to Book = Stock Price Today / Book Value of Common Equity

Net Present Value

Step 1: After Tax Cash Flows = Annual Net CFs * (1 - Tax Rate)
Step 2: Depreciation Tax Shield = Depreciation * Tax Rate
Step 3: Multiply by the appropriate Present Value Factor
Step 4: Subtract initial cash outflow

Profitability Index (Excess Present Value Index)

- measures cash-flow return per dollar invested
- the higher the index, the more desirable the. project is

Profitability Index = Present Value of CFs / Cost (PV) of the initial value

Economic Value Added

EVA = Net Operating Profit After Taxes (NOPAT) - Required Return (Investment * WACC)
NOPAT = EBIT * (1 - tax rate)

Special Order Decision

Excess Capacity:
Compare incremental costs to incremental revenue
No Excess Capacity:
Compare incremental costs to incremental revenue and include opportunity costs

Optimal Capital Structure

Optimal Structure is the ratio of D/E with lowest WACC
Initially As D/E ↑ then WACC ↓
Eventually As D/E ↑ then WACC ↑

Growth Rate

Growth Rate = ROE * (1 - Payout Rate)
Retention Rate = (1 - Payout Rate)

$$g = \frac{ROA * Retention}{1 - (ROA * Retention)}$$

Profitability Measures

Return on Sales = Income before interest and taxes / Sales (net)
Return on Investment = Net Income / Average Invested Capital (Debt + Equity)
Return on Assets = Net Income / Average Total Assets
Return on Equity = Net Income / Average Total Equity

Operating Leverage

- degree to which a firm uses fixed costs rather than variable
- when sales decline = high OL may struggle with fixed costs

% Change in EBIT / % Change in Sales

Financial Leverage

- degree to which a firm uses debt over equity

% Change in EBIT (or NI or EPS) / % Change in EBIT

SCOR Model (Supply Chain Operations Reference)

1) Plan
2) Source
3) Make
4) Deliver

Methods to Delay Disbursement

1. Defer payments
2. Drafts
3. Drafts
4. Line of Credit

Zero Growth Stock Valuation

$$StockPrice = \frac{Dividend}{RequiredReturn}$$

Gordon Growth Dividend Discount Model

$$P = \frac{D * (1 + g)}{(r - g)}$$

P = Current Price
D = Current Dividend
r = required rate
g = growth rate

Options

American Option → exercised at any point
Euro Option → exercised only at expiration

Debt Instruments Valuation

Value of Bond: PV of its future cash flows

Intangible Asset Valuation (MIC)

Market Approach- use price from market transaction comps
Income Approach- Discounted Cash Flow Model
Cost Approach- Current Replace Cost

Marginal Analysis

Prime Costs = Direct Materials + Direct Labor
Discretionary Costs: relevant decisions made by management
Sunk costs are not Relevant Costs

Sell or Process Further

Joint Costs: involved in producing single product
Separable Costs: costs to process it further
Incremental Rev > Incremental Cost → process further
Incremental Rev < Incremental Cost → just sell it

Weighted Average Cost of Capital

$$WACC = \frac{E}{V} * Rate_E + \frac{P}{V} * Rate_P + \frac{D}{V} * (Rate_D * (1 - t))$$

* Use FMV

Cost of Debt

- carries the lowest cost of capital and the interest is tax deductible, the higher the rate the better it is to use debt

$$WeightedAverageInterestRate = \frac{Effective Annual Interest Payments}{Debt Outstanding}$$

After Tax Cost of Debt = Pretax cost of debt * (1 - Tax Rate)

Cost of Preferred Stock

Cost of Preferred Stock = Preferred Stock Dividends / Proceeds Net of the flotation (issuance) costs

Cost of Common Equity

1. Capital Asset Pricing CAPM
Cost of Equity = Risk-Free Rate + Beta * (Market Return - Risk-Free Rate)
Market Risk Premium

2. Discounted Cash Flow

$$= \frac{D_1}{P_0} + g$$

P(0) = current market value or price of the outstanding common stock
D(1) = dividend per share expected at the end of year one [D(0) * (1+g)]
g = constant rate of growth in dividends

3. Bond Yield Plus Risk Premium
Cost of Equity = Pretax cost of long-term debt + Market Risk Premium

Inventory Management Strategies

Safety Stock: stock to ensure that customer supply requirements are met
Reorder Point: the inventory level at which a firm should order additional inventory
Reorder Point = Safety Stock + (Lead Time * Sales During Lead Time)
Economic Order Quantity

$$EOQ = \sqrt{\frac{2SO}{C}}$$

S = Annual Sales (in units)
O = Cost per Order
C = Annual Carrying Cost per unit

Payment Discount Calculations (annual Cost of Credit)

$$APR = \frac{360}{PayPeriod - DiscountPeriod} \times \frac{Discount\%}{100\% - Discount\%}$$

Short Term Financing: current and matures within one year; rates tend to be lower than long term rates

Advantages	Disadvantages
- decreased financing costs	- Increased Interest Rate Risk
- Increased profitability	- Decreased capital availability

Long Term Financing: noncurrent and matures longer than 1 year; rates tend to be higher than short term rates
- has no effect on working capital

Advantages	Disadvantages
- decreased Interest Rate Risk	- Increased Financing Costs
- Increased capital availability	- Decreased profitability

Line of Credit: loan with a bank that is for a defined term and renewable prior to or upon expiration
Letter of Credit: 3rd-party guarantee of obligations incurred by a company; type of external credit enhancement

Tangible Asset Valuation (CALM)

Cost Method: NRV = AD - Cost
Appraisal Method: professional appraiser determines the value of the asset
Liquidation Method: the amount that the company would get upon sale in an active market
Market Value Method: NRV = Selling Price - Cost to Sell
replacement cost method: what it would cost to replace the asset
NRV method: price that an asset could be sold in a market place with any costs to sell

Lease vs Buy Decisions (has 2 decision)

Investment Decision use WACC
- discount the after-tax operating CF's at the WACC

Financing Decision use after tax cost of debt
- discount the CFs for financing at the cost of debt

Relevant Buying CFs: purchase cost, tax savings from depreciation (D * t), scrap proceeds net of tax
Relevant Lease CFs: lease payments, tax savings gs on lease payments

Payback Period Method

Payback Period: time required for the net after-tax operating cash inflows to recover the initial investment
- focuses decisions on both liquidity and risk

Payback Period = Net Initial Investment / Average Incremental Cash Flow

Cost Objectives
Prime Costs = **Direct Materials + Direct Labor**
Conversion Costs = **Direct Labor + Overhead Applied**
Product Costs: all costs related to the manufacturing of the product
includes: direct materials, direct labor, and manufacturing overhead applied
Period Costs: expenses as incurred such as SG&A or interest

Cost Accumulation Systems
Job Costing: for custom orders
Process Costing: for mass-produced, homogeneous product
Operation Costing: component of both job/process costing
Backflush Costing: work backwards to find process
Life-Cycle Costing: monitor costs throughout the life cycle

Process Costing: FIFO
Step 1: Find Equivalent Units (sum of the next three)
a) Beginning WIP * % to be completed
b) Units Started and Completed (units completed - Beginning WIP)
c) Ending WIP * % completed
Step 2: FIFO Cost per Equivalent Unit = Current Cost Only / Equivalent Units

Process Costing: Weighted Average
Step 1: Find Equivalent Units (sum of the next two)
a) units completed (Beginning WIP + units started/completed)
b) Ending WIP * % completed
Step 2: Weighted Avg per Equivalent Unit = Beginning Cost + Current Cost / Equivalent Units

Activity Based Costing
Cost Driver (demonstrate): activity correlated with the incurrence of overhead
Cost Pool (numerator): group of costs in which the costs are grouped

ABC Costing: Service Costs
Direct Method: each service department's cost are allocated to the department
Step-Down Method: service department's cost are allocated to other service as well

Joint Costs
Joint Cost Terminology
Joint products: 2+ products are generated from the same input
by-products: minor products of small value from the result of the main product
Split-off Point: point in production when the split products are individual products
Joint Costs: costs incured **before** the split off point
Seperable Costs: costs incured **after** the split off point

Performance Measures
Productivity: measure of efficiency; the higher the better
Total Factor Productivity = Output Quantity / Input Cost
Partial Productivity Ratio = Output Quantity / Specific Input Quantity
Internal Benchmarks (QC): techniques to find and analyze problems
Control Chart: comparison of actual results by batch
Pareto Diagram: histogram of defects from high to low
Fishbone Diagram: cause and effect to analyse defects

Nonfinancial Measures
Customer Retention Rate (the higher the number, the more retention of customers)
(# of total customers @ end of period) - (# of new customers within the period) / # of existing customers to start a period
Churn Rate = 1 - CRR
Employee Turnover Rate
total # of employees who leave within a time period / average number of employees who work within the time period
Labor Productivity Rate (the higher the number, the greater implied productivity)
Total Output / Total Hours worked

Financial Scorecards
Strategic Business Units 4 Financial Measures
Cost SBU: managers held responsible for controlling costs
Revenue SBU: managers held responsible for generating revenues
Profit SBU: managers held responsible for producing a profit target
Investment SBU: managers held responsible for ROA to produce earnings
Managers should be responsible only for what they can control

Standards and Benchmarking
Ideal Standards: costs that are perfectly efficient and effective
Advantage: emphasis on continuous quality improvement
Disadvantage: demotivation of employees
Currently Attainable Standards: not perfectly efficient or effective
Advantage: fosters perception that standards are reasonable
Disadvantage: requires judgement calls
Authoritative Standards: set exclusively by management
Advantage: quick implementation, no debate, includes all costs
Disadvantage: workers might not accept standards
Participative Standards: set by both managers and individuals
Advantage: workers are more likely to accept
Disadvantage: slower to implement and takes more effort

Profitability Ratios: measures success over a period of time

Gross Profit Margin	Sales (Net) - COGS / Sales (Net)	Profit Margin	Net Income / Sales (Net)
Return On Assets	Net Income / Average Total Assets	Return On Equity	Net Income / Average Total Equity
Dupont Return on Asset			Profit Margin x Asset Turnover
Operating Cash Flow Ratio	CFs from Operations / Current Liabilities	Return On Sales	EBIT / Sales (net)

Liquidity Ratios: measures firm's short term ability to pay

ability to meet short term obligations	Current Ratio	Current Assets / Current Liabilities
Quick Ratio		Cash + ST MS + AR (Net) / Current Liabilities
success of collecting outstanding A/Rs	A/R Turnover	Sales (net) / Average A/R (net)
average # of days to collect A/R	Days Sales in A/R	Ending A/R / Sales (net) / 365
How quickly inventory is sold. Higher is better	Inventory Turnover	COGS / Average Inventory
average # of days to sell inventory	Days in Inventory	Ending Inventory / COGS / 365
# of times trade payable turnover during a period	A/P Turnover	COGS / Average A/P
average # of days to collect A/R	Days in Payable Outstandings	Ending A/R / Sales (net) / 365
Cash Conversion Cycle		Days Sales in A/R+ Days in Inventory - Days in Payable Outstandings

Data Types
Structured Data: consistent data types that is easily searchable
ex: spreadsheets, tables, databases, datacubes, data marts, data warehouses
Unstructured Data: inconsistent data types that is not easily searchable
ex: social media, interviews, IOT, videos, images

Direct Materials Variance
DM Price Variance = Actual Quantity Bought * (Actual Price - Standard Price)
DM Quantity Usage Variance = Standard Price * (Actual Q Used - Standard Q Allowed)

Direct Labor Variance
DL Rate Variance = Actual Hours Worked * (Actual Rate - Standard Rate)
DL Efficiency Variance = Standard Rate * (Actual Hours Worked - Standard Hours)

Variable Overhead Variance
VOH Rate (Spending) Variance = Actual Hours * (Actual Rate - Standard Rate)
VOH Efficiency Variance = Standard Rate * (Actual Hours - Standard Hours for act prod)

Fixed Overhead Variance
FOH Budget (Spending) Variance = Actual FOH - Budgeted FOH
FOH Volume Variance = Budgeted FOH - (Actual Production * Standard Rate)

Types of Overhead
Manufacturing: indirect material/labor, factory
Admin: SG&A, office building

Flow of Inventory: Process Costing
Raw Materials Inventory
Beginning Raw Materials
+ Purchases of Raw Materials
- Raw Material Used
Ending Inventory of Raw Materials
Work-in-Process Inventory
Beginning WIP Inventory
+ Raw Materials Used + DL and OH
- Inventory transferred to Finished goods
Ending Inventory of WIP
Finished Goods Inventory
Beginning Finished Goods
+ Inventory transferred from WIP
- COGS
Ending Inventory of Finished Goods

Spoilage
Normal Spoilage → capitalized as inventory costs
Abnormal Spoilage → expenses as incurred

Contribution Margin = Revenue - Variable Costs
COGS = Begin Finished Goods + COGM - End Finished Goods

Balanced Scorecard
F - Financial (CRM)
I - Internal Business Processes
C - Customer satisfaction
A - Advancement of innovation and HR development

Projection Techniques
Sensitivity (what if): using different assumptions in a model
Scenario: EV calculation

High-Low Method
Variable Cost per Unit = (High $ - Low $) / (High Q - Low Q)

Flexible Budget Formula
Total Cost = FC + (VC * # of Units)

Absorption Approach (US GAAP)
Revenue
(Cost of Goods Sold)
Gross Margin
(Operating Expenses)
Operating Income

Contribution Approach (variable/direct costing)
Revenue
(Variable Costs)
Contribution Margin
(Fixed Costs)
Operating Income

Difference between approach is Fixed Overhead
Absorption → treated as product cost; include in inventory
Contribution → treated as period cost; expensed

Sales Budget (Operating Budget)
- represents sales in units and dollars

Cash Budgets (Financing Budget)
1) Cash Available: cash balances and cash collections from sales
2) Cash Disbursements: cash outlays associated with purchases and operating expenses
3) Financing: involves using a line of credit to maintain cash balances

Flexible Budgets
- keeps everything constant except the actual sales
Total Variance = Actual Budget - Master Budget
Volume Variance = Flexible Budget - Master Budget
Flex Budget Variance = Actual Budget - Flexible Budget

Solvency Ratios: measures for long term creditors

Debt-to-Equity =	Total Liabilities / Total Equity
Total Debt Ratio =	Total Liabilities / Total Assets
Equity Multiplier =	Total Assets / Total Equity
Times Interest Earned =	EBIT / Interest Expense

Types of Analysis
Horizontal → change over a period of time
Vertical → common size statements with %

Structured Data Components
Tables: object in file like a spreadsheet
Attributes: columns in table; characteristics to describe
Records: rows in table; info about single object
Fields: cell in spreadsheet where data in entered
Database Keys: attributes to identify relationship for tables
Primary Key: required in every table
Foreign Key: attribute in one table from a dif table
Normalize: reduce data redundancy with tables

Categories of Data Analytics
Descriptive Analytics: explain what has occurred
Diagnostic Analytics: explain why it happened
Predictive Analytics: predict what will happen
Prescriptive Analytics: prescribe what could happen

Keys for Good Data Visualizations
1) Choose the right type of visualization
2) apply the correct scaling
3) utilise the appropriate colors
4) emphasize focus areas

Direct Costs
Direct Raw Materials: cost of materials purchased to be used in production
includes: freight in, allowance for normal scrap
Normal Scrap → Product Cost
Abnormal Scrap → Period Cost
Direct Labor: can be easily traced to the final product
Normal Cost → Product Cost
Abnormal Cost → Period Cost

Indirect Costs (overhead) - cannot be easily traced and are difficult to identify
Traditional Cost Accounting System
Step 1: Overhead Rate = Budgeted Overhead Costs / Estimated Cost Drivers
Step 2: Applied Overhead = Actual Cost Driver * Overhead Rate

Manufacturing Costs
COG Manufactured = Begin WIP + Manufacturing Costs - End WIP
Manufacturing Costs = direct labor + direct materials + overhead applied
COG Sold = Begin Finished Goods + COGM - And Finished Goods

Job Costing T-Account

Raw Materials		Work In Process	
Beginning Balance	Indirect Materials	Beginning Balance	Cost of Goods Manufactured
Purchases	Direct Materials	Manufacturing Costs	
Ending Balance		Ending Balance	
Finished Goods		**COGS**	
Beginning Balance	Cost of Goods Sold	COGS	Finished Goods
Cost of Goods Manu			
Ending Balance			

Cost of Quality (inverse relationship between the two costs)
Conformance Costs: cost of ensuring conformance with quality standards
A - Appraisal Costs: costs incurred to discover and remover defective parts before they are shipped
ex: statistical quality checks, testing, inspection for completed products, maintence of the lab
P - Prevention Costs: costs incurred to prevent the production of defective units
ex: Employee training, material inspection, redesign of product/process, preventive maintence
Nonconformance Costs: cost of correcting non conformance with quality standards
I - Internal Failure: costs incurred to cure a defect discovered before the product is sent
ex: rework, scrap, tooling, disposal, downtime, amd cost of lost unit
E - External failure: costs incurred to cure a defect discovered after the product is sent
ex: Warranty, Returns, Lost Customers, Liabilities claims

Absorption/Contribution Approach
Absorption Cost
Product Costs: direct materials/labor, variable and fixed overhead
Period Costs: variable and fixed SG&A
Contribution Cost
Product Costs: direct materials/labor, variable overhead
Period Costs: variable and fixed SG&A, fixed overhead

Absorption/Contribution Approach Effect on Income
Step 1) Fixed Cost per Unit = Fixed Manufacturing Overhead / Units Produced
Step 2) Change in Income = Change in inventory units * Fixed Cost per unit
Step 3) Determine the impact in the change in income
no change in inventory: absorption = variable
increase in inventory: absorption > variable
decrease in inventory: absorption < variable

Break Even Analysis

Break Even Point in Units	Total Fixed Costs / CM per Unit	Break Even Point in $	Total Fixed Costs / CM Ratio
Sales in Units for Target Profit	Fixed Cost + Pretax Profit / CM per Unit		
Sales in $ for Target Profit	Fixed Cost + Pretax Profit / CM Ratio		

Margin of Safety: excess of sales over breakeven sales
Margin of Safety (in $) = Total Sales in $ - Breakeven Sales in $
Margin of Safety % = Margin of Safety in $ / Total Sales

Master Budget (static budget/annual business plan/profit planning/targeting budgets)
Purpose: provide comprehensive and coordinated budget guidance for an organization
Includes 2 Types of Budgets
Operating: describes the resources needed and how those resources will be acquired
Financial: outlines the sources of funds and detailed plans for expenditures (pro forma)
Master budgets are. confined for a single year of activity

Production Budget (Operating Budget)
Budgeted Production = Budgeted Sales + Desired Ending Inventory - Beginning Inventory
Production Budget is made up of a) direct materials b) direct labor c) factory overhead
Direct Material Budget
Units of DM needed for production period
+ Desired ending inventory
- Beginning Inventory
Units of DM to be Purchases for the Period
x Cost per unit
Cost of DM to be purchases
Beginning Inventory at Cost
+ Purchases at cost
- Ending Inventory at cost
Direct Material Usage
Direct Labor Budget
Total Hours needed = Budgeted Production in units * Hours required for each unit
x hourly rate
Total Wages

Selling and Admin Budget (Operating) are all period costs
Variable Selling Expenses: sales commission, delivery expenses, bad-debt expenses
Fixed Selling Expenses: sales salaries, advertising, depreciation
General and Admin Expenses (All fixed): admin salaries, accounting/data processing, depreciation

Performance Metrics: evaluate operating performance

Top Down EBITDA	Sales - COGS - Operating Expense	Bottom Up EBITDA	Net Income + Income Tax/Interest Exp +D/A Expenses
Price to Earnings Ratio	Price Per Share / Basic EPS	Dividend Payout	Cash Dividends / Net Income
Asset Turnover	Sales (net) / Average Total Assets		

Data Transformation
Purpose: ensure that data is complete, clean, current, encrypted, and user-friendly
Ensuring Completeness and Integrity of Data: must ensure that data is complete and has integrity
Data Integration: design the data architecture to ensure that data pipeline is integrated
Cleaning/Scrubbing Data: four steps of cleaning:
1) remove unnecessary heading and subtotals
2) clean leading zeros and non printable characters
3) format negative numbers to ensure consistency
4) identify and correct inconsistencies in the data
Data Encryption: the entire process requires encryptions to protect it

Overhead Variance Interpretation

Overapplied Overhead	Underapplied Overhead
- favorable variance	- unfavorable variance
- reduction/credit to COGS	- increase/debit to COGS
- reduction in expenses/increase in profits	- increase in expenses/decrease in profits

Sales Variance
Sales Price Variance = Actual Quantity Sold - (Actual Price - Standard Price)
Sales Volume Variance = Standard Price - (Actual Quantity - Standard Quantity)
Sales Mix Variance = (Actual Sales for Mix - Budgeted Sales For Mix) * # of units of all units * budgeted CM

Computer Software Amortization

Greater of

1) Percentage of Revenue: Total Capitalized Amount * (Current Gross Revenue for the period / Total Projected Gross Revenue period)

2) Straight Line: Total Capitalized Amount / Estimated Economic Life

Five Step Revenue Recognition

1) **Identify** the contract with the customer
2) **Separate** the performance obligations
3) **Transaction** price determination
4) **Allocate** the transaction price to separate obligations
5) **Recognize** the revenue when the PO is satisfied

Bill and Hold Arrangement: entity bills customer that has not been delivered yet

- revenue cannot be recognized until the customer obtains control of the product

Customers will get control when all:

a) there is a substantive reason for the arrangement
b) product has been separately identified as belonging to the customer
c) product is currently ready for transfer
d) entity cannot use the product or direct it to another one

Employee Stock Options

Noncompensatory → no expense / JE — Compensatory → expense

Noncompensatory if it meets all of the requirements

a) substantially all full time employees may participate
b) excluded are officers and employees with specific ownership
c) stock is offered equally but with limits
d) the time permitted to exercise is limited within a reasonable period
e) any discount is no greater than reasonable

Compensatory Stock Option Journal Entries

To Allocate Compensation at Year End
DR) Compensation Expense
CR) APIC - Stock Options

To Record the Exercise of an Option
DR) Cash
DR) APIC - Stock Options
CR) Common Stock
CR) APIC in excess of par

Expiration of Options
DR) APIC - Stock Option
CR) APIC - Expired Stock Options

Vesting Conditions

Service condition: requires the employee to provide services for a stated time
Performance condition: requires the performance of services or goods
Market condition: requires the entity to achieve a certain market price per share

Consolidation Adjustments

C - **Common** Stock are eliminated
A - **APIC** are eliminated
R - **Retained** Earnings are eliminated
I - **Investment** in sub is eliminated
N - **Non Controlling** Interest is created
B - **Balance Sheet** of sub is adjusted to FV
I - **Identifiable Intangibles** are recorded at FV
G - **Goodwill** is required as a plug/ Gain if not there

Balance Sheet Adjustments for Consolidation

Identifiable Intangibles	Finite Life	Indefinite Life
Amortization	Over remaining life	Do not Amort
Impairment Test	2 Step Test	1 Step Test

In-Process R&D: has "probable economic benefit"
Project Succeeds → Amortize the in-process R&D
Project Fails → Write-off the in-process R&D

Foreign Currency Accounting

FX Transactions: one transaction event generating an A/R or A/P
- a single transaction needs to be converted back to USD

FX Translations: subsidiary of US Company if in a foreign country
- a sub's entire F/S needs to be converted to USD

Direct Method → Domestic price of one unit of another currency
Indirect Method → foreign price of one unit of the domestic currency

Foreign Currency Remeasurement (used in case of dysfunctional currency)

- the balance sheet is converted based on monetary determination

Monetary Items → fixed items that will not change regardless of the economy
Non-Monetary Items → non-fixed items that will fluctuate in value

Derivative Risks

Market Risk: risk that the entity will incur a loss; every derivative has a winner/loser
Credit Risk: risk that the other party will not perform the terms of the contract
- credit risk is the lowest with futures contracts because it is exchange traded

Qualification for Hedge Accounting

To qualify for hedge accounting, the following must be documented:

a) the hedging relationship
b) the entity's risk management objectives and strategy including identification of:
i) the hedging instrument
ii) the hedged item or transaction
iii) the nature of the risk being hedged
iii) the method that will be used to assess the effectiveness of the hedge

Accounting for Changes in Fair Value for the Types of Hedge Instruments

No hedge designation: included in current earnings
Fair Value Hedge: included in current earnings as an offset to gain/loss of hedged item
Cash Flow Hedge: included in other comprehensive income until the it impacts earnings

Fair Value Hedge

Fair Value Hedges is designed as a hedge:

1) of the exposure to changes in FV that is attributable to a particular risk
2) of an unrecognized firm commitment that is attributable to a particular risk

Cash Flow Hedge

Fair Value Hedges is designed to hedge variability in expected future cash flows
Are reported as a component of OCI until the hedge affects earnings
if inventory → AOCI is reclassified to earnings when inventory is sold
if fixed asset → AOCI is reclassified to earnings when asset is depreciated
if existing asset/liab → AOCI is reclassified to earnings when A/L impact earnings

Accounting for Changes for Foreign Currency Hedges

Fair Value Hedge: included in current earnings as an offset to gain/loss of hedged item
Cash Flow Hedge: included in other comprehensive income until the it impacts earnings
Net Investment Hedge: included in OCI as cumulative translation adjustment

Sales-Type Lease: lessee will gain control of the underlying asset

Lessor will: derecognize the asset and recognize the net investment in the lease

At the lease inception:	*Each period recognition*
DR) Lease receivable	DR) Cash (lease payment)
DR/CR) (Loss)/Gain	CR) Interest Income
CR) Fixed Asset	CR) Lease receivable

Direct Financing Lease: lessee does not gain control of the underlying asset

Lessor will: derecognize the asset and recognize the net investment (lease Receive/residual)

At the lease inception:	*Each period recognition*
DR) Lease receivable, net	DR) Cash (lease payment)
CR) Fixed Asset	CR) Interest Income
	CR) Lease receivable, net

Operating Lease: lessor keeps the asset on the balance sheet

Lessor will: depreciate it and recognize any impairment charges
- lease income will be recognized on a straight line basis

To record rental income	*To record depreciation*
DR) Cash	DR) Depreciation Expense
CR) Rental Income	CR) Accumulated Depreciation

Regulation S-X: sets the form and content of interim and annual financial statements

Interim Financial Statements

Review Requirement: interim F/S filed with the SEC must be reviewed by a CPA

Financial Statements

Balance Sheets:
Must: as of the end of the most recent fiscal quarter
Must: as of the end of the preceding fiscal year
May: as of end of the corresponding fiscal quarter as of the preceding year

Income Statements and Statement of Cash Flows:
Must: for the most recent fiscal quarter
Must: for the period between the end of the prior year and end of the recent quarter
Must: the same as the first two, but one year back
May: for the cumulative 12-month periods ending during the most recent fiscal quarter

Annual Financial Statements

Review Requirement: annual F/S filed with the SEC must be audited by a CPA

Financial Statements

Balance Sheets: for the two most recent fiscal years
Income Statements: for each of the 3 years preceding the date of the audited B/S
Statement of Cash Flows: for each of the 3 years preceding the date of the audited B/S
Changes in owners' equity: for each of the 3 years preceding the date of the audited B/S

Goodwill From Business Combinations

Internally Developed → expensed
Acquisitions → Capitalized

R+D Costs

- are treated as an expense

Exemptions (R+D that gets capitalized)

1) materials have alternative future uses
2) R+D costs are on behalf of a contract
3) In Process R&D with a firm purchase

Items not Considered R+D

- routine periodic design changes to old product
- troubleshooting and market research
- quality control and reformation of chemical

Computer Software Development Costs

Expense → incurred until technological feasibility
- planning, design, coding, and testing

Capitalize → incurred after technological feasibility
- coding, testing, and producing product masters

Technological Feasibility is Established with:

a) detailed program model
b) working model

Revenue Recognition Over Time Criteria

1) creates or enhances an asset that the customer controls
2) customer receives and consumes the benefit same time
3) Does not create an asset with alternative use

Long Term Construction Balance Sheet

Construction in Process > Process Billings → Current Asset
Construction in Process < Process Billings → Current Liab
CIP Over time includes cost incurred and gross profit earned
CIP at a point in time includes cost incurred

Incremental Costs: wouldn't be incurred if no contract

Capitalize → if it was incremental costs
Expense → costs that would be incurred regardless of K

Repurchase Agreements

Forward: obligation to repurchase the asset
Call: right to repurchase the asset
Put: obligation to repurchase the asset at customer request

For Forwards and Calls:

Repurchase < Original Price → lease
Repurchase > Original Price → financing arrangement

For Puts with Repurchase < Original Price

no incentive to exercise → sale with right of return
has significant economic incentive to exercise → lease

For Puts with Repurchase > Original Price

Repurchase > Market Value → financing arrangement
Repurchase < Market Value → sale with right of return

Stock Appreciation Rights

- receive an amount equal to excess in market price

SAR Yearly Journal Entry
DR) Compensation Expense
CR) Liability for SAR Plan

Variable Interest Entity Requirements

1) Must have a Variable Interest in a Business Entity
2) Business Entity is a Variable Interest Entity
3) Primary Beneficiary is the firm

VIE Requirement 3: Primary Beneficiary for VIE

Has the power to significantly influence and:

a) absorbs the expected VIE losses
b) receives the expected VIE residual returns

Functional Currency

- usually the local currency or the reporting currency
- used for the translation method

3 Conditions for functional currency

a) they use the resident country's currency
b) they do their own banking
c) they are not hyperinflationary

Remeasurement Exchange Rates (Gain/Loss is Net Income)

Balance Sheet

Monetary Items → current exchange rate
Nonmonetary Items → historical rate

Income Statement

Balance Sheet Related → historical rate
Non-Balance Sheet → weighted average

Translation Exchange Rates (Gain/Loss is OCI)

All Income Statement = Weighted average rate

Balance Sheet

Assets/Liabilities → current/year-end rate
Common Stock/APIC → Historical rate
Retained Earnings → Roll Forward

Derivative Instrument

Has All Three Characteristics

a) 1+ underlyings and 1+ notional amount
b) requires no initial net investment
c) terms require or permit a net settlement

Underlying: specific price, rate or other variable
Notional Amounts: specific unit of measure

All derivative instruments are measured at Fair Value

Cash Flows for Derivatives

Make Payment → outflow — Get Payment → inflow
- Speculation/No Hedging should be in investing
- hedging designation should be the same category as item

The discount rate for lease payment is the implicit rate

Segment Reporting (only applies to public companies)

Objective: provide info on the actives and economic status
- Helps for better understanding of the entity performance
- helps to better asses prospects for FCFs
- Helps make more informed judgement of the entity

Required Disclosures

a) segment assets (like B/S)
b) segment profit/loss (like I/S)
c) certain related item — CFs are not required

Five Required Disclosures for All Public Entities

1) operating segments (annual and interim)
2) products and services
3) geographic areas
4) major customers
5) title and position of the chief operating decision maker

Operating Segments

Has all of the following characteristics

a) engages in business activities
b) operating results are regularly reviewed by the CODM
c) discrete financial information is available

- Pension Plans and HQs are often not operating segments

Segment Profit/Loss

Revenues
Less: Directly Traceable Costs
Less: Reasonable Allocated Costs
Operating Profit (or Loss)

Items Normally excluded from Segment Profit/Loss

- General Corporate revenue/expenses
- interest expenses (except for financial institutions)
- income taxes
- equity in earnings and losses of unconsolidated sub
- gains or losses from discontinued operations
- minority interest

Entity-Wide Disclosures

Impairment for Indefinite Intangibles

Qualitative test: determine if there a 50% that the asset is impaired
Quantitative test: Fair Value - Net Carrying Value
if negative: a) write asset down b) amortize new costs c) restoration not permitted

Impairment for Goodwill (tested annually at each reporting unit)

- Impairment charge cannot exceed the value of goodwill that is allocated to that reporting unit

Quantitative test: when the carrying value of the reporting unit exceeds its FV

Private Company Alternatives

1) amortize goodwill on a straight-line basis for 10 years
2) make an accounting policy election to test goodwill when a triggering event occurs

Long Term Construction Contracts: Over Time

Step 1: Gross Profit of Completed Contract = Contract Price - Estimated Total Cost
Step 2: % of Completion = Total Cost to Date / Total Estimated Cost of Contract
Step 3: Profit to Date (Gross Profit Earned) = Step 1* Step 2
Step 4: Gross Profit Earned for the CY = PTD at current FYE -PTD at beginning of period

Losses should be recognized immediately in the year they are discovered

Long Term Construction Contracts: At Point in Time

At completion of the contract, gross profit/loss should be recognized
Gross Profit / Loss = Contract Price - Total Costs

Losses should be recognized in the year they are discovered
Expected loss = (Advances + Expected additional payments) - (Recorded Costs + Estimated cost to complete)

Costs to Fulfill a Contract (ex: raw materials, direct labor, factory overhead)

Costs that are incurred that are not within the scope of another standard will be recognized as an asset if all:

a) related directly to a contract
b) they generate or enhance the resources of the entity
c) they are expected to be recovered

Cost to be Expensed → SGA costs, wasted labor and materials, and costs tied to satisfied PO

Principal vs Agent

Principal: the entity controls the good/service before it is transferred to the customer
Revenue recognized is the gross consideration expected to receive
Agent: the entity arrange for the other party to provide goods/services
Revenue recognized is the fees/commision for performing the agent function

Long-Term Construction Journal Entries (or both types)

To Record the costs incurred	*To Record the billings on contract*
DR) Construction in progress	DR) Construction in progress
CR) Materials, Cash, etc	CR) Progress billings on construction contract
To Record the payments received	
DR) Cash	
CR) Accounts receivable	

Long-Term Construction Journal Entries for each type

Over Time Journal Entries	At a Point in time Journal Entries
To Record the estimated gross profit during construction:	*To close billings to revenue:*
DR) Cost of long term contracts	DR) Progress Billings
DR) Construction in progress	CR) Revenue
CR) Revenue from LT contracts	*To close construction in progress to expense:*
To Close construction accounts:	DR) Cost of LT Contract
DR) Progress Billings	CR) Construction in progress
CR) Construction in progress	

VIE Requirement 1: Variable Interest in Entity (all of the following conditions are met)

1) **The company and business entity have an agreement** (one of the four)
a) the company or related party significantly participated in the entity's design
b) substantially all of the business entity's activities are conducted on behalf on company
c) Half of total equity, subordinated debt, and other financial support is provided by the firm
d) Securitizations or other forms of asset-backed financing agreements or single lessee leasing are the source
2) **Business Entity is a Legal Entity:** includes corps, partnerships, LLCs, trusts, and majority owned subs
3) **Falls to Qualify for Exclusions:** Non-Profits, Employee benefit, investment, life insurance,
4) **Interest is More than Insignificant:** unlikely to be considered the primary beneficiary
5) **Has explicit or implicit variable interest in the Entity:** absorbs losses or receives returns

VIE Requirement 2: Business Entity is a Variable Interest Entity (any of the following conditions are met)

1) **Insufficient Level of Equity Investment at Risk:** cannot operate on its own without variable interest
An entity has a sufficient level of equity (and no VIE) if:
a) the entity can finance its own activities
b) the equity investment at risk is at least as much as the investment as non-VIE investments
c) facts indicate that risk is sufficient; or FV of equity investment is greater than losses
2) **Inability to Make Decisions or Direct Activities:** holders of the equity do not have power to direct activities
3) **No Obligation to Absorb Entity's Losses or receive returns**
4) **Disproportionately Few Voting Rights:** has fewer voting rights compared to their economic interest.
An entity is autonomically deemed to be a VIE if all three:
a) substantially of the activities are conducted on behalf of an equity investor
b) the voting rights of that equity investor are small in comparison with the focus of the entity
c) the voting rights of the equity investors are out of line with their obligations

Acquisition Method: Investment in Sub

Investment is valued at the FV on the date the acquisition is complete of either the consideration given/received
Direct out-of-pocket costs/indirect costs → Debit Expense
Stock Registration/Issuance Cost → Debit APIC (reduction of stock value)

Use Cash or Equity method for internal accounting purposes after the acquisition date
Cost Method: investment account does not change, no adjustments are made for income
Equity Method: investment acts like R/E, increases with share of income, decreases with share of dividends

NonControlling Interest

Balance Sheet- Acquisition Date Computation
Noncontrolling Interest = FV of Subsidiary * Noncontrolling Interest %

Balance Sheet- After the Acquisition Date Computation
Ending NCI = Beginning NCI + NCI share of sub's net income - NCI share of sub s dividends

Income Statement: Net Income Attributable to NCI
Net Income Attributable to NCI = *Sub's Net Income* * Noncontrolling Interest %

Common Derivatives

Option Contracts: gives one party the right to buy or sell something at a price
Call Option: In the money when Price > Strike Price — *breakeven* = strike rate + cost
Put Option: In the money when Price < Strike Price — *breakeven* = strike rate - cost

Futures Contracts: exchange traded, where both parties are obligated to perform the terms
Buy/Long: *profit when* Price > Strike Price
Sell/Short: *profit when* Price < Strike Price

Forward Contracts: privately negotiated, over-the-counter, and customized

Swap Contracts: private agreement between two parties to exchange future cash payments

Lessor Criteria

If any of the criteria is met, it will be classified as a sales-type lease

O - **Ownership** of asset transfers to lessee by end of term
W - Lessee has **written option** to buy asset with reasonably certain
N - **NPV** of all lease payments + residual value exceeds 90% of FV
E - term of lease represents 75% of the **economic life** remaining
S - asset is **specialized** so there is not expected alternative use

If name of OWNES is met, the classification depends on if both PC are met

P - FV of sum of lease payments, guaranteed residual not included in lease, and 3rd party residuals is > FV
C - collection of lease payments and any amount necessary to satisfy residual guarantees is probable

Lessor Classification

Sales-Type Lease: at least one of the OWNES criteria is met; all risk and rewards are transfered
Direct Financing Lease: none of OWNES are met but both PC are met; most risk and rewards are transfered
Operating Lease: neither of OWNES or PC criteria; some risk and rewards are transfered

Sales-Leaseback: sales of assets to lease them after the sale

Sales Criteria: when 1) a contract exists, 2) control has been transfered to the buyer
Repurchase Option: to meet the criteria of a sale it must meet the following:
1) option exercise price is the same as the underlying asset FV at the time of exercise
2) alternative assets that are substantially equivlanent to the underlying asset are availalbe in the market
Residual Value Guarantee: a sale cannot take place if control has not transfered

Sales Criteria Met

Step 1: determine which set of info is more determinable	**Annuity Due** → Beginning of each period
a) asset sales price and fair value	**Ordinary Annuity** → End of each period
b) FV of lease payments and FV of market rental payments	

Step 2: determine the difference between the two
if increase → treated as prepaid rent via adjustment to ROU asset
if decrease → treated as additional financing provided to the seller

Reportable Segment

Operating Segments may be aggregated if they have the same basic characteristic as:

- nature of products/services,
- nature of production process
- type or class of customers
- methods used to distribute
- nature of the regulatory environment

Quantitative Thresholds for Reportable Segments (must disclose if it meets any of the tests)

10 Percent "Sine" Test: must report if a segment if 10% of:
a) combined revnues (intersegment or unaffliatied); b) operating profits/loss; c)identifiable assets

75 Percent Reporting Sufficiency Test: if breakout is less than 75% of external revenue than reporting is required

Regulation S-X Disclosure Requirements

- Dividends per share and in total for each class of shares
- defaults with respect to any issues of securities
- large changes in bonds, mortgages, or other debt
- Financials of subs no consolidated
- warrants or rights outstanding
- related party transactions that affect the F/S
- accounting policies for derivative instruments
- Principles of consolidation or combination
- assets subject to lien
- preferred share disclosure
- restrictions that limit the payment of dividends
- Income tax expense
- repurchase and reverse purchase agreements

Regulation S-K: outlines how significant qualitative descriptions should be disclosed

Business (Items 101-105): descriptions of business, property, legal proceedings, mine safety, and risk factors
Registrant Securities (Items 201-202): info on market price and dividend of common equity
Financial Information (Items 301-308): beyond the F/S, supplementary, MD&A, internal controls

Defined Benefit Plan: provide benefits as a % of the employee's salary; risk is on the employer

4 Required Financial Statements: - statement of CFs is not required but can be presented
1) Statement of Net Assets Available for Benefits (similar to asset section of B/S)
2) Statement of Changes in Net Assets Available for Benefits (similar to income statement)
3) Statement of Accumulated Plan Benefits (similar to liabilities section of B/S)
4) Statement of Changes in Accumulated Plan Benefit (change in liabilities)

Net Assets Available for Plan Benefits = **Plan Benefits - Plan Liabilities**

Defined Contribution Plan: employee need to save on their own; risk is on the employee

2 Required Financial Statements:
1) Statement of Net Assets Available for Benefits (similar to asset section of B/S)
2) Statement of Changes in Net Assets Available for Benefits (similar to income statement)

Budgetary Journal Entries

Beginning of Year
DR) Estimated Revenue Control
DR) Budgetary Control (When negative/deficit)
CR) Appropriations Control
DR) Budgetary Control (When positive/surplus)
End of Year
DR) Appropriations
DR) Budgetary Control (Positive)
CR) Estimated Revenue Control
DR) Budgetary Control (Negative)

Expenditure Recognition Methods (for use of supplies, prepaid assets and inventory)

Purchase Method: record an expenditure when purchased
JE for Buying Item
DR) Expenditure — There is no JE during the use of the item
CR) Vouchers Payable
On-Hand at Year End
DR) Supplies Inventory
CR) Nonspendable fund balance - inventory
Consumption Method: record a current asset when purchased
JE for Buying Item
DR) Supplies Inventory — There is no JE for an end of year adjustment
CR) Vouchers Payable
JE for Use of the Item
DR) Expenditure
CR) Supplies Inventory

Encumbrances Journal Entry

To Set up Encumbrance in the General Fund — When Encumbrances is reversed
DR) Encumbrances — DR) Budgetary Control
CR) Budgetary Control — CR) Encumbrances
After Reversal, record the actual expenditure
DR) Expenditure
CR) Vouchers Payables

Closing Outstanding Encumbrances at YE

Step 1) Close out the encumbrances
DR) Budgetary Control
CR) Encumbrances
Step 2) Close out budgetary accounts
DR) Unassigned Fund Balance
CR) Fund Balance, Committed

Interfund Activity

Reciprocal Interfund
Interfund Loans: expected to be repaid and are interfund receivable/payable
Interfund Services Provided: sales/purchases between funds at external pricing
Non-Reciprocal Interfund
Interfund Transfer: flow of assets without the exchange of value
Interfund Reimbursements: payments made by one fund on behalf of another

Closing Entries

To Close the budget at year end
DR) Budgetary Control (When negative/deficit)
DR) Appropriations Control
CR) Estimated revenues control

Internal Service Funds provided exclusively to other governmental units

Revenue Sources
Restricted Grant Revenues: recognized as revenues in years when spent
Operating Revenues: recognized when earned

Enterprise Fund used when the gov charges fees to externals

Required in any of the criteria:
a) activity is financed solely from fees and charges
b) laws/regs require that cost of services be recovered though fees
c) pricing policies establish fees designed to recover its cost

Fiduciary Funds

Must have the following characteristics
a) assets associated with the activity **are controlled by the government**
b) assets **are not derived from revenues that are generated** by a government itself
c) the asset must have one of the following characteristics
1) administered through a trust where the government is not a beneficiary
2) dedicated to providing benefits to recipients in according with terms
3) legally protected from the creditors of the government
d) assets are for the benefit of individuals, free from admin involvement

Custodial Fund

- catch-all fund used when activities are not required to be reported in other funds
Tax Collection Funds: one local govt collects taxes for an overlapping government
Clearance Funds: accumulate revenues and apportion them according to statute
ex: food stamps, pass through grants, traffic citation

Investment Trust Funds: entity sponsors 1+ external investment pools
- the plan's net assets (investments) are reported on fair value basis

Private Purpose Trust Funds

Designated fund for reporting all other trust arrangements where the benefit is for:
a) specific individuals b) private organizations c) other governments
Escheat Property: property that reverts to an entity in absence of legal claimant

Annual Comprehensive Financial Report (ACFR)

Introductory Section (unaudited)
- letter of transmittal, organizational chart, and list of principal officers
Basic Financial Statements and Required Supplementary Info (Audited)
- MD&A, Gov-Wide F/S, Fund F/S, Notes and RSI
Statistical Section (Unaudited)
- 10 years of selected financial data and economic data

Capitalization of Assets (Gov-Wide)

Capital assets (including infrastructure) must be included in the gov-wide F/S
Required Approach (not actually required): all capitalized assets must be depreciated
Modified Approach: infrastructure are not required to be depreciated
The modified approach can be used if both:
1) the asset management system meets certain conditions
2) documentation includes data on asset preservation
Two required schedules for RSI for Modified Approach:
1) schedule reporting the condition of government's infrastructure
2) comparison schedule of needed/actual expenditures to maintain the infrastructure

Artwork and Historical Treasures

General Rule: governments should capitalize art at their cost or FV at date of donation
Govs may elect to not capitalize when all three are met:
a) collection is held for public exhibition, education, or research rather than $ gain
b) collection is protected, kept unencumbered, cared for, and preserved
c) the collection has a policy that proceed from sales will be used for more items

Components of Program Revenues

S: **Charges for Services:** revs based on exchange transactions
O: **Operating Grants/Contributions**: grant revenue in support of a specific program
C: **Capital Grants/Contributions**: grant revenue in support of a specific cap program

Major Fund Rules (must pass both tests)

10 Percent Test: Governmental funds are compared to all govt funds, 10% of factors
5 Percent Test: Gov/Enterprise funds are compared to all funds, 5% of factors
the general fund is always a major fund

Statement of Cash Flow differences from Commercial

1) the direct method is required
2) a reconciliation of operating income to net cash is required
3) there are four categories of Cash Flows
Operating, capital and relating financing, noncapital financing, investing activities
4) the financing section is listed before the investing section
5) interest income/cash receipts are reported as investing activities
6) interest expense are either capital or noncapital financing
7) Capital asset purchases are reported as financing activities

Venmo: @jtaitel

Budgetary Accounting: Activity Basics

Revenue: measurable and available
Expenditure: all spending
Assets: expenditured
Debts: other financing sources

Revenue Recognition for Non-Exchange

Time Requirements: for all non-exchange revenues
- rev are first recognized in the period in which its used
Eligibility Req: for Gov-Mandated and Voluntary
Time: recognized in period it must be used
Required Characteristics of Recipients: the resource provider specifies certain characteristics for the recipient
Reimbursements: allowable expenditures must be incurred before it can be recognized
Contingencies: only for Voluntary
-actions must be taken before revenue is earned
Measurable and Available Criteria
- collection period does not exceed 60 days after FY

Fixed Assets on Governmental Funds

- not capitalized on the funds books; not depreciated
- considered an expenditure of the fund
DR) Expenditure - Capital Outlay
CR) Vouchers Payable

Debt (Long-Term)

-proceeds are *other financing sources*
- repayments are recorded as expenditures of both P +I
Proceeds from Bond Issuance
DR) Cash
CR) Other financing sources - bonds issued
Debt Service Payments
DR) Expenditure - principal
DR) Expenditure - interest
CR) Cash

Special vs Extraordinary Items (Management has control)

Special Items → unusual or infrequent
Extraordinary Items → unusual and infrequent
Special Items are reported before extraordinary items

Deferred Items

Deferred Outflows → positive effect on net position; reported following assets but before liabilities
Deferred Inflows → negative effect on net position; reported following liabilities but before equity

Fund Category Natures of Constraints

1) Nonspendable: practical (money has been spent
2) Restricted: External (legislation, grantor, or creditor)
3) Committed: Internal (highest governing authority)
4) Assigned: Internal (without formal commitment)
5) Unassigned: no constraint as to use

Governmental Fund Financial Statements

1) Balance Sheet
2) Statement of Revenues, Expenditures and change in FB

Two governmental funds that do not use Encumbrances

1) Debt Service — 2) Permanent Fund

Proprietary Fund Financial Statements

1) Statement of Net Position
2) Statement of Revenues, Expen and change in NP
3) statement of cash flows

Fiduciary Fund Financial Statements

1) Statement of Fiduciary Net Position
2) Statement of changes in fiduciary net position

Government Wide Financial Statements

1) Statement of Net Position
2) Statement of Activities
Fiduciary funds are excluded; component units are included

Requirements of GASB 34 (required presentation)

Basic Financial Statements
- Gov-wide Financial statements
- Fund Financial Statements
- Notes to the financial statements
Required Supplementary Information
- covers a wide range of data/presentations
- MD&A
- other schedules related to budgets

Accountability

Operational Accountability - the extent in which the gov has met its operating objectives efficiently and effectively
- focus of Gov-wide F/S
Fiscal Accountability - govs action in the current period have complied with public decision in the short term
- focus of fund financial statements

Primary Governments includes

1) state governments
2) general purpose local governments (city/county)
3) Special purpose local governments follow all criteria
a) separately elected governing body
b) legally separate
c) fiscally independent of other governments

Major Fund Measurement Rules (used in 5% and 10% test)

a) corresponding total revenues
b) expenditures/expenses
c) assets and deferred outflows of resources
bb liabilities and deferred inflow of resources

Balance Sheet Adjustments

Total Government Fund Balance
C + **Capital** Assets (existing and current)
A (**Accumulated** depreciation)
N (**Non**-Current liabilities)
+ Eliminate/reverse deferred inflows (Accrued Interest Payable)
I + Internal **Service** fund net position
Net position from government activities

Reconciliation to Statement of Activities

Net Change in Fund Balance - Total Governmental Funds
C + **Capital** outlay
P + **Principal** payment on debt
A (NBV of capital **assets** disposed during the period)
S (Other Financing sources - debt proceeds)
R + recognized revenues that are measurable, not avail
I (accrued interest expense)
DE (Depreciation Expense)
S + Internal Service fund Net Revenue
IT (Interfund Transfers)
Change in net position of governmental activies

4 Major Sections of the MD&A

1) description of financial statements
2) identity of primary government and discrete CUs
3) economic conditions and outlook
4) major initiatives

Non-Exchange Revenue

Non-Exchange Transactions: in which an entity gives/receives value without directly giving equal value in return
Exchange Transactions: in which an entity gives/receives equal value in an arm's length transaction

Types of Non-Exchange Revenue

Derived Tax Revenue: taxes imposed non exchange transactions (sales and income tax)
Imposed Non-Exchange Revenue: taxes imposed on non-exchange transactions (fines and property tax)
Gov-Mandated Non-Exchange Trans: higher level of government provides funds and requires an activity
Voluntary Non-Exchange Revenue: government receives resources without needed to provide equal value (grant)

Types of Governmental Expenditures

Function: groups expenditures into the major services of the entity
EX: Public safety, highways, education, health + welfare, and General governmental services
Program: groups expenditures into activities, operations, or units that are directly to specific purposes
EX: Programs for the elderly, drug addiction rehab, education
Organizational Unit: groups expenditures into org structure of the entity
EX: Police department, fire department
Activity: groups expenditures by specific activity, the economy and efficiency can be measured
EX: drug enforcement, highway safety patrol
Character: groups expenditures based on the basis in which the exps are presumed to benefit
Current Expenditures: benefit the current fiscal period
Capital Outlays: benefit both the present and future fiscal periods
Debt Service: benefit prior fiscal periods as well as current/future periods
Intergovernmental: when one governmental unit transfers resources to another
Object classes: groups expenditures by type of item purchased
EX: personnel service, supplies, insurance

Leases for Governmental Funds

Short Term Leases: similar in character and definition to short term operating leases
Lessees: recognize expenditures based on payment provisions; no exp during rent free periods
Lessor: recognize rent revenue based on payment provisions; no rev during rent free periods
- have maximum term of 12 months
Contracts that transfer ownership: similar to sales type finance lease
Lessee Accounting
1) Initial recording
DR) Expenditure - Capital Outlay
CR) Other Financing Sources
2) Lease Payments
DR) Expenditure - principal
DR) Expenditure - interest
CR) Cash

Fund Balance = (Assets + Deferred Outflows) - (Liabilities + Deferred Inflows) for Gov funds
Net Position = (Assets + Deferred Outflows) - (Liabilities + Deferred Inflows) for Proprietary/Gov-Wide

Categories of Fund Balance

1) Nonspendable: resources that are not able to be spent (Prepaid, inventory)
2) Restricted: resources that constitutionally, legislatively, or otherwise externally limited as to use
3) Committed: resources that are internally limited as by the highest level of decision making
4) Assigned: resources intended to be used for specific constraints that are not formally committed/restricted
5) Unassigned: residual classification of equity

Categories of Net Position

1) Invested in Capital Assets : capital assets reduced by accumulated depreciation and outstanding debt for assets
2) Restricted: restricted assets/deferred outflows reduced by related liabilities/deferred inflows
3) Non Restricted assets: resources that are not covered in the other two sections

General Fund

Revenue Sources
- Taxes (property taxes, franchise taxes, public service taxes)
- Public safety and regulation (Fines/fees, license/permit revenue)
- Intergovernmental grant revenue
- Charges for Services
- Investment earning, miscellaneous earnings

Special Revenue account for resources that are legally restricted or committed for specific purposes
Revenue Sources: taxes to specifically pay for something (ex: to operate a park, to maintain streets)
Expendable Trust Activities: represent funding for which principal may be expended for designated ops
DR) Cash/Current Assets
CR) Revenue
Grants
Monitoring or Admin Involvement → **Special Revenue Fund**
Non-Monitoring or No Admin Involvement → **Custodial Fund**

Debt-Service Fund accounts for the accumulate of resources and pays current portion of long term debt
Interfund Transfers
DR) Cash
CR) Interfund Transfer (from the X Fund)
Expenditures (recognizes principal/interest as expenditures when the debt is legally due)
Debt Service Funds are Required when
a) legally mandated
b) resources are being accumulated for general long term debt maturing in future years
General fund can pay directly to bond holders for non-short term leases

Capital Projects funds are for the construction, purchase, or leasing of significant fixed assets
Limited to a construction period of 1 to 3 years
Restricted Government Grants → revenues is reported when earned
Unrestricted Government Grants → revenues is recognized immediately
Special Assessments: taxes levied against those who will directly benefit from the project

Component Unit

Blended Presentation: consolidated with the primary government
used when any one of the following circumstances are present
a) the board of the unbit is substantivley the same of the primary government
b) the component unit serves the primary government exclusively (or almost)
c) the component unit is not a separate legal entity
Discrete/Separate Presentation: shown in a separate column (most common)

Component Unit as a non-profit

Criteria for discrete presentation
benefit standard: resources held by the org are for the near-exclusive benefit of the primary gov
access standard: primary gov has the access to a majority of the resources
significance standard: resources held by the tax-exempt org are significant to the primary gov

Gov-Wide Statement of Net Position

Components of Net Position
1) Net Investment in Capital Assets: all capital assets (net of A/D) reduced by debt attributable to the assets
2) Restricted: all externally imposed restricted assets reduced by liabilities
3) Unrestricted: all other net amount that are not included in the other components

Statement of Cash Flows Activities (only proprietary funds)

Operating Activities
- cash inflows from the sales of goods and services
- cash outflows to suppliers or employees
- cash inflows from interfund reimbursements and exchanges (payment in lieu of taxes)
- cash transactions not meeting the definition of other categories
Investing Activities
- cash inflows/outflows associated with loans and equity transactions
Capital and Related Financing Activities
- cash flows from issuing debt associated with capital assets
- cash outflows for capital asset purchases
- cash inflows from capital gains
- cash inflows from contribution activity associated with the capital asset
- cash activity related to special assessments with capital assets
Noncapital Financing Activities
- cash flows from issuing debt for noncapital purposes
- cash receipts from grants/subsidies
- cash received from property taxes and operating transfers