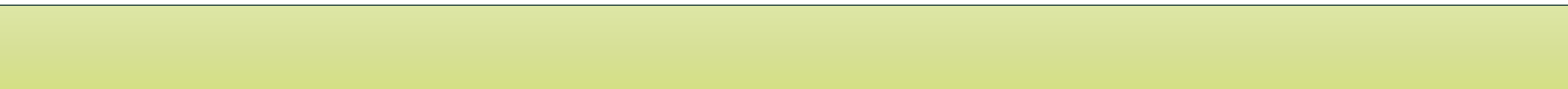# ACS-1803
Introduction to Information Systems

Instructor: Trevor Nadeau

Functional Area Systems
Financial Information Systems

Lecture Outline 5 - Part 1

System Examples: Functional Area Info Systems

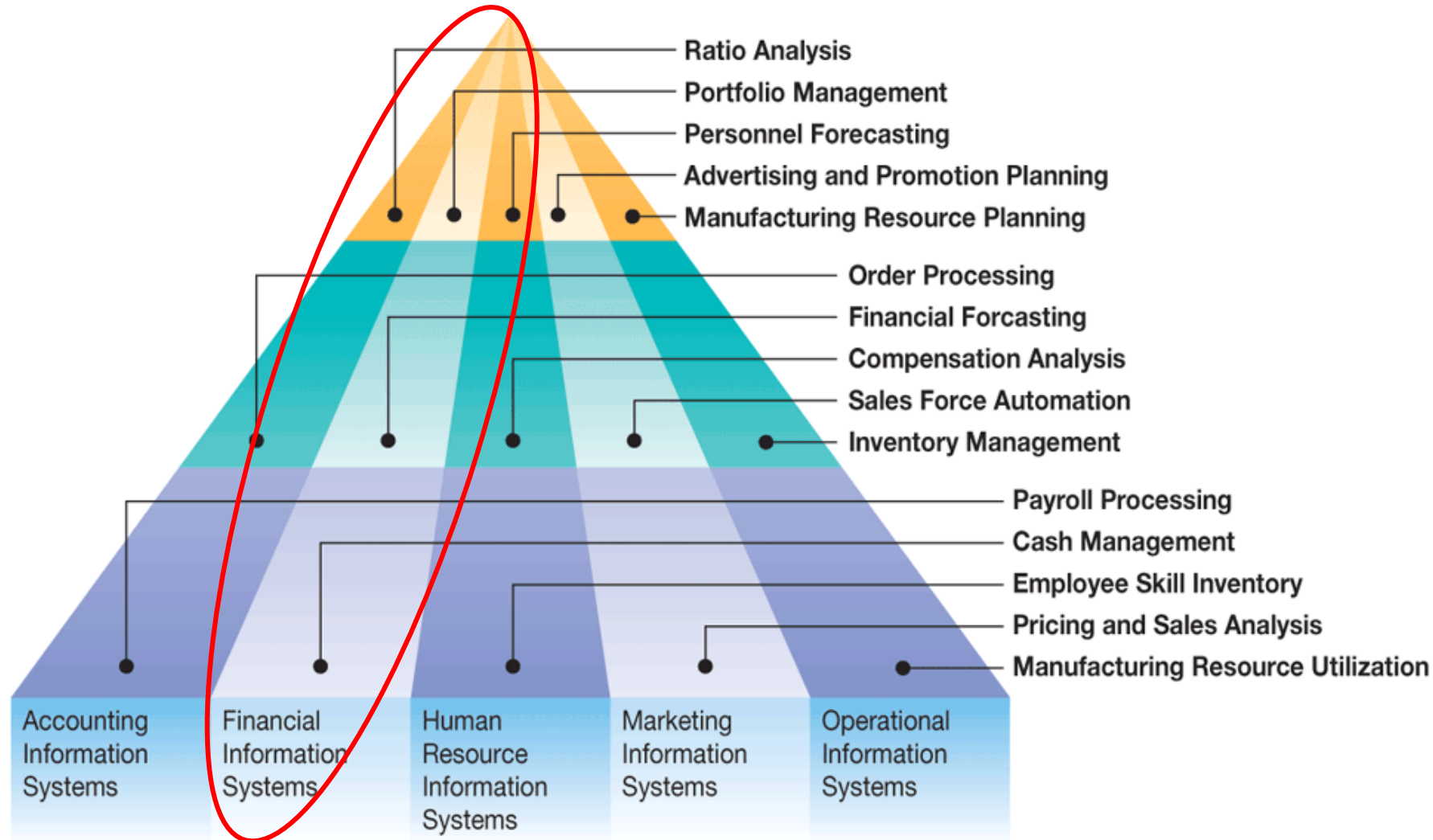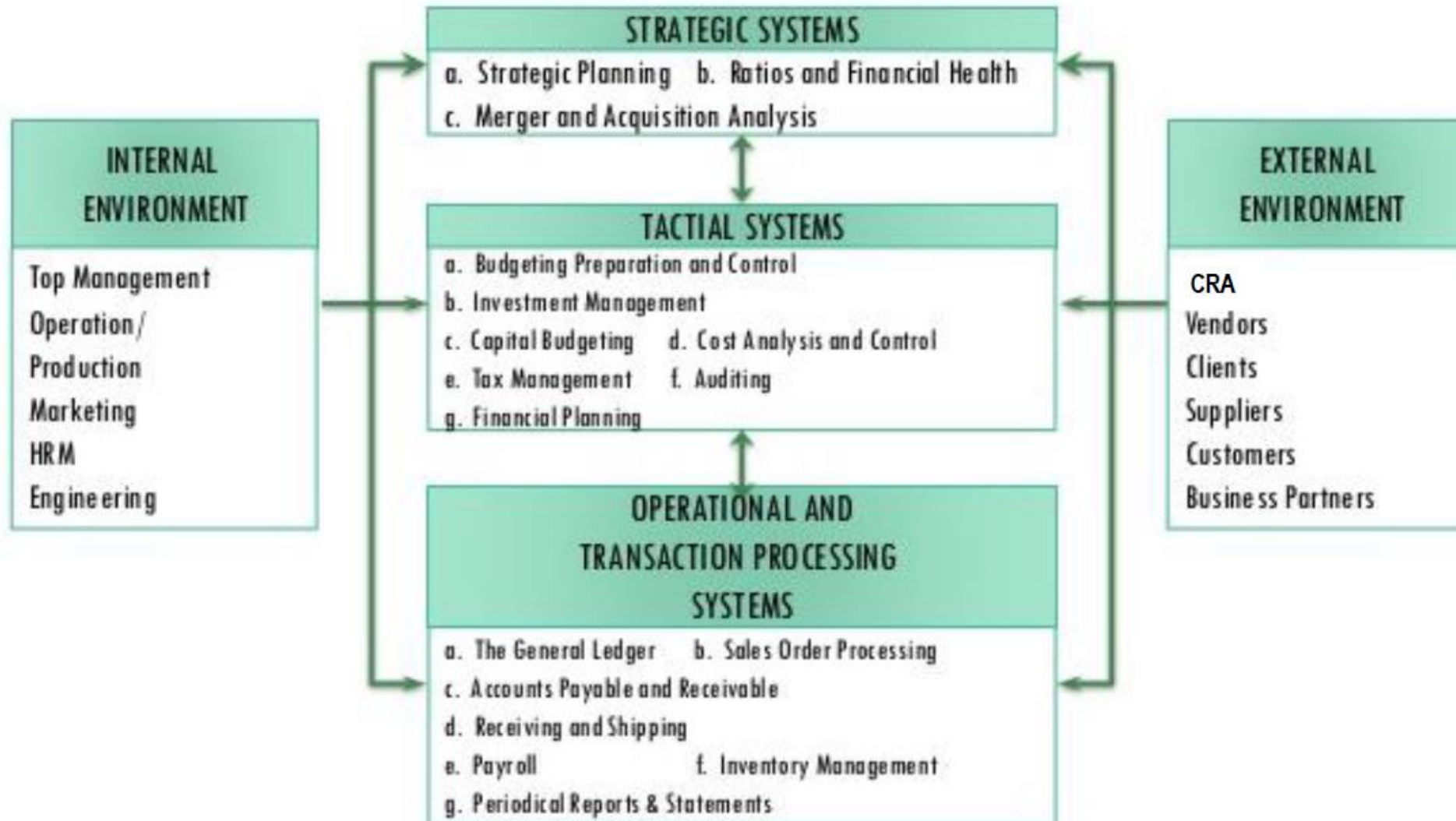| Functional Area	Information System	Examples of Typical Systems
Accounting and Finance	Systems used for managing, controlling, and auditing the financial resources of the organization	▌Inventory management ▌Accounts payable ▌Expense accounts ▌Cash management ▌Payroll processing
Human Resources	Systems used for managing, controlling, and auditing the human resources of the organization	▌Recruiting and hiring ▌Education and training ▌Benefits management ▌Employee termination ▌Workforce planning
Marketing	Systems used for managing new product development, distribution, pricing, promotional effectiveness, and sales forecasting of the products and services offered by the organization	▌Market research and analysis ▌New product development ▌Promotion and advertising ▌Pricing and sales analysis ▌Product location analysis
Production and Operations	Systems used for managing, controlling, and auditing the production and operations resources of the organization	▌Inventory management ▌Cost and quality tracking ▌Materials and resource planning ▌Customer service tracking ▌Customer problem tracking ▌Job costing ▌Resource utilization

Functional Area Information Systems

Figure 6.34 Functional area information systems.

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Finance Information Systems

Finance: Provide internal and external professional access to stock, investment and capital spending information.

- acquires and manages cash for a business
- Acquire thru shares or loans
- Invest cash wisely
- Company must maintain liquidity
  - Meet shot term obligations
- Need to analyze considerable financial info

Finance Information Systems

STRATEGIC SYSTEMS
a. Strategic Planning   b. Ratios and Financial Health
c. Merger and Acquisition Analysis

INTERNAL ENVIRONMENT

Top Management
Operation/
Production
Marketing
HRM
Engineering

TACTIAL SYSTEMS
a. Budgeting Preparation and Control
b. Investment Management
c. Capital Budgeting   d. Cost Analysis and Control
e. Tax Management   f. Auditing
g. Financial Planning

EXTERNAL ENVIRONMENT

CRA
Vendors
Clients
Suppliers
Customers
Business Partners

OPERATIONAL AND TRANSACTION PROCESSING SYSTEMS
a. The General Ledger   b. Sales Order Processing
c. Accounts Payable and Receivable
d. Receiving and Shipping
e. Payroll   f. Inventory Management
g. Periodical Reports & Statements

Finance Information Systems

- Tactical Financial
  A. System Budgeting Systems
  B. Cash Management Systems
  C. Capital Budgeting Systems
  D. Investment Management Systems

- Strategic Financial Systems
  A. Financial Conditional Analysis Systems
  B. Long Range Forecasting Systems
  C. Corporate Planning Systems

Tactical Systems in Finance

A. BUDGETING SYSTEMS

- Plan revenues and expenses line-by-line
- Can summarize in various ways
- Can compare this year's budget to last year's
- Can compare actual expenses vs budgeted (get actual results from General ledger System)

BUDGETING SYSTEMS (cont'd)

- Comparing budgeted to actual results allows for *variances analysis*
  - E.g.. Current budgeted expenses, actual expenses and variances by line item
  - E.g.. Projected expenses for each budget line item for entire year based on expenses incurred to date

- Spreadsheet-type systems are useful for budgeting (ie. formulas)
- Can use last year's budget as a base for next 5 years, maybe 10 years

- How are such system tactical? explain

Tactical Systems in Finance

B. CASH MANAGEMENT SYSTEMS

- Ensure that business has sufficient cash to meet its needs
  - For day-to-day operations
  - For acquisition of long-term assets

- Important output is the **cash flow report**
  - Can *forecast* cash flows for , say 6 months
  - Flow= total cash receipts – total cash payments

Tactical Systems in Finance

C. CAPITAL BUDGETING SYSTEMS

- Provide help with planning acquisition (disposal) of <u>major plant assets</u> that will be used by the business during many years
- Provide outgoing and incoming cash for the life of the asset
  - Use assumptions
  - Consider the time value of money (net present value)
- E.g. Can help to decide whether to lease or buy a new printer

Tactical Systems in Finance

D. INVESTMENT MANAGEMENT SYSTEMS

- Oversee organization's investment in stocks, bonds, and other securities

- Online database provide immediate updates for stock and bond prices

- E.g. Value Screen inputs the current price of each stock and calculates the gain or loss the company's investment portfolio would generate if sold now
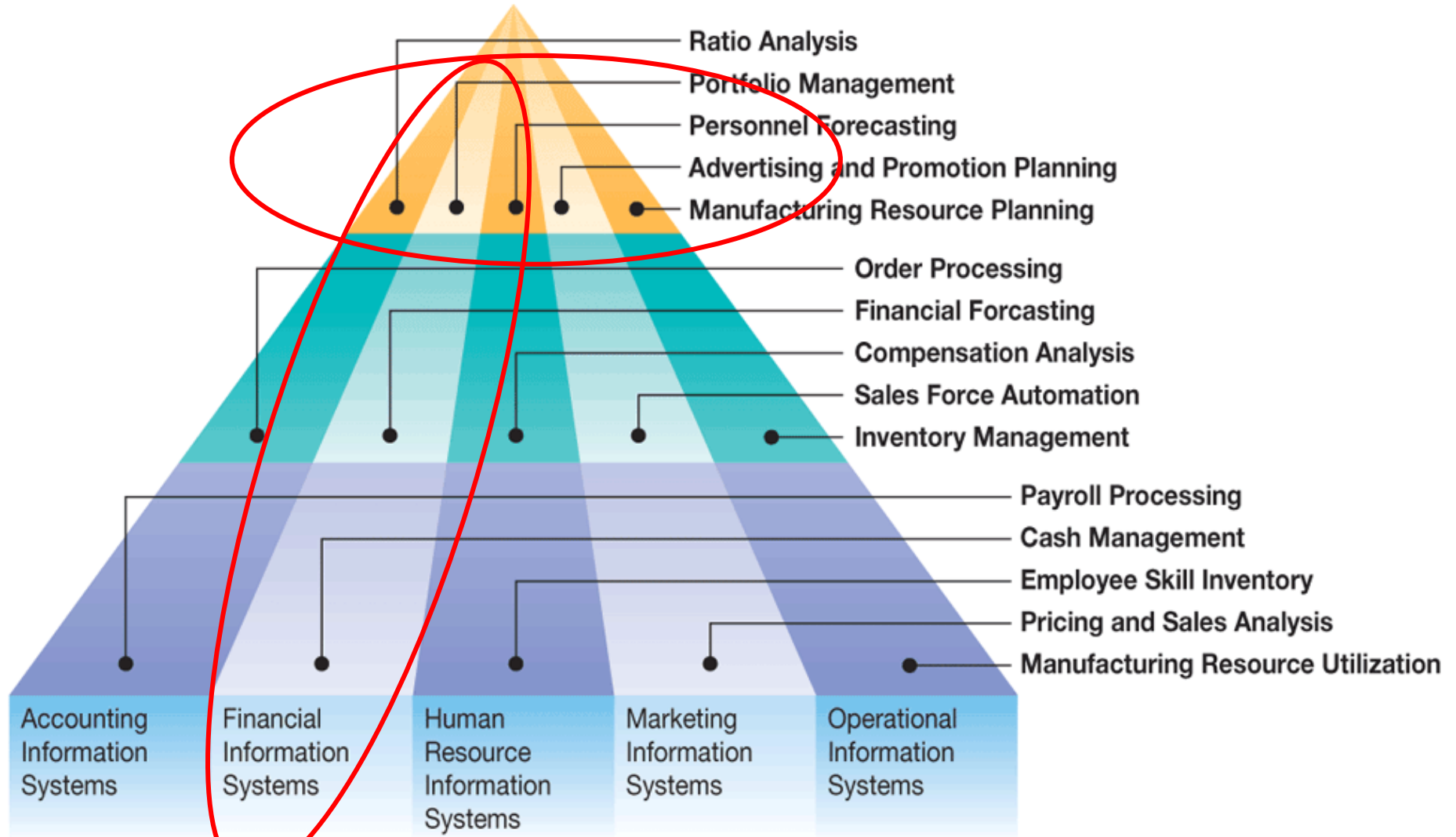
Functional Area Information Systems

Figure 6.34 Functional area information systems.

Strategic Systems in Finance

Characteristics

- Support very high-level managers

- Strategic systems relate to organizational goals

- Often, such systems use internal data (which may have originated in organizational AIS) and external data (eg. From online databases that contain economic, social, demographic, etc, info)

Strategic Systems in Finance

A. FINANCIAL CONDITION ANALYSIS SYSTEMS

- Provide insightful analysis of financial statements and data (e.g., ratios: current ratio, debt: equity ratio)

- Online database can allow for financial analysis of competitors, suppliers, buyers and other organizations

Financial Condition Analysis Examples

Ratio	How it is calculated	What it measures
Cash Ratio	(Cash + Cash Equivalents + Investments) / Current Liabilities	Measures ratio of cash, cash equivalents and investments to current liabilities Indicates ability to cover current liabilities and relates directly to short-term financial conditions
Current Ratio	Current Assets / Current Liabilities	Measures the ratio of current assets to current liabilities Ratio is an indication of a government's ability to meet short-term financial obligations with current assets
Operating Ratio	Total Revenues/Total Expenditures	Operating ratios greater than 1.00 indicates a budget surplus – less than 1.00 a deficit Important to the short-term financial condition Provides feedback and opportunities to make corrections to prevent deficits over the long-term
Debt/Equity Ratio	Total **Liabilities** / Stockholders' Equity	Indicates how much debt a company is using to finance its assets relative to the amount of value represented in **shareholders'** equity

Strategic Systems in Finance

B. LONG RANGE FORECASTING SYSTEMS

- May use both internal and external data

- Apply statistical techniques

- May use graphics

- Analyze trends

Strategic Systems in Finance

C. CORPORATE PLANNING SYSTEMS

- Use data from past, like forecasting systems

- More elaborate; contain simulation models of various aspects of business

- Models must have valid assumptions

Functional Area Systems – Financial Information Systems

End of Lecture 5 – Part 1