

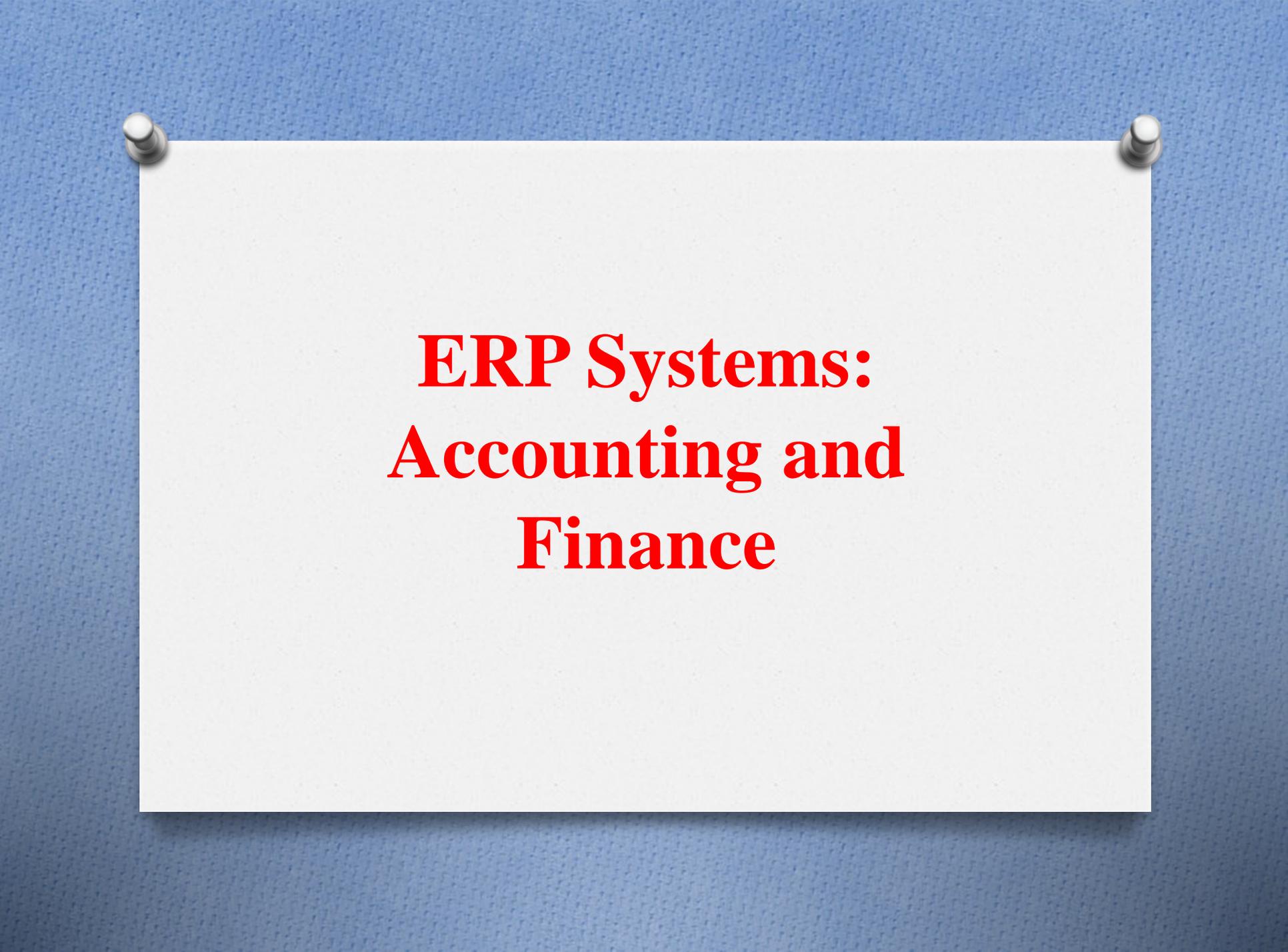
Enterprise Resource Planning

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**ERP Systems:
Accounting and
Finance**

Objectives

- o Understand the accounting and financial systems within ERP.
- o Recognize the interrelationships among business processes supporting sales and marketing, production, accounting and finance, and human resources.
- o **Problem:**
- o Difficulties with accounting functions can create problems that lead to bottlenecks, mis-information, lack of responsiveness to suppliers, and poor control

CASE: ATLANTIC MANUFACTURING

- o Manufacturing sometimes ships products to customers with inaccurate paperwork, so **Accounts Receivable** has to track down the product specifications to ensure customers are making **proper payment**. In some cases, the **original invoices are incorrect**.
- o Accounts payable to suppliers is bogged down, and **Purchasing has to contact Accounting** to get details about **payment dates**.

CASE: ATLANTIC MANUFACTURING (Cont.)

- o **Sales people report they could sell a large quantity of items at a reduced price. Should Atlantic submit a quotation? There is no management information to help sales managers determine if they can make a profit by selling items at a slightly reduced price.**

Problems without ERP in Accounting & Finance

TABLE 1 Problems without ERP

<i>Subsystems</i>	<i>Problems</i>
Credit management	Accounts receivable balances on customer accounts can fall out of date and result in mis-information in sales about customer credit limits
Product profitability	Inconsistent recordkeeping, keyed into multiple databases, may result in incorrect data on product profitability
Finished goods inventory	Delays in increasing finished goods inventory when finished goods are transferred from manufacturing into the warehouse
Inaccurate inventory costing	Difficulty providing information on cost variances (e.g., the difference between standard costs and actual costs)
Consolidating information from subsidiaries	Difficulty closing books at the end of accounting periods, which is complicated when multiple subsidiaries deal with multiple currencies; difficulty integrating financial information generated from incompatible systems, with different databases
Management reporting	Separate databases for marketing, production, and purchasing make it difficult to provide management with an integrated analysis of profitability and cash flow
Creating an audit trail	Difficulty creating an audit trail of transactions when multiple transactions use multiple databases

ACCOUNTING AND FINANCE PROCESSES

- o At the conceptual level, an accounting system supports operational and management control functions.
- o At the operational level, an accounting system produces transactions, such as paychecks, checks to vendors, customer invoices, and purchase orders.

Accounting Process

- o Accounting processes **begin when a sales order is entered.**
- o This generates an **inventory update** to the **inventory system**, which **maintains information about each item in stock and triggers the purchase of additional stock when stock levels reach certain points.** The **purchase order system** creates **purchase orders and tracks** which **purchase orders** have been **filled**, which items are **on back order**, and when orders are **expected to be received.**

Conceptual Model of an Accounting System

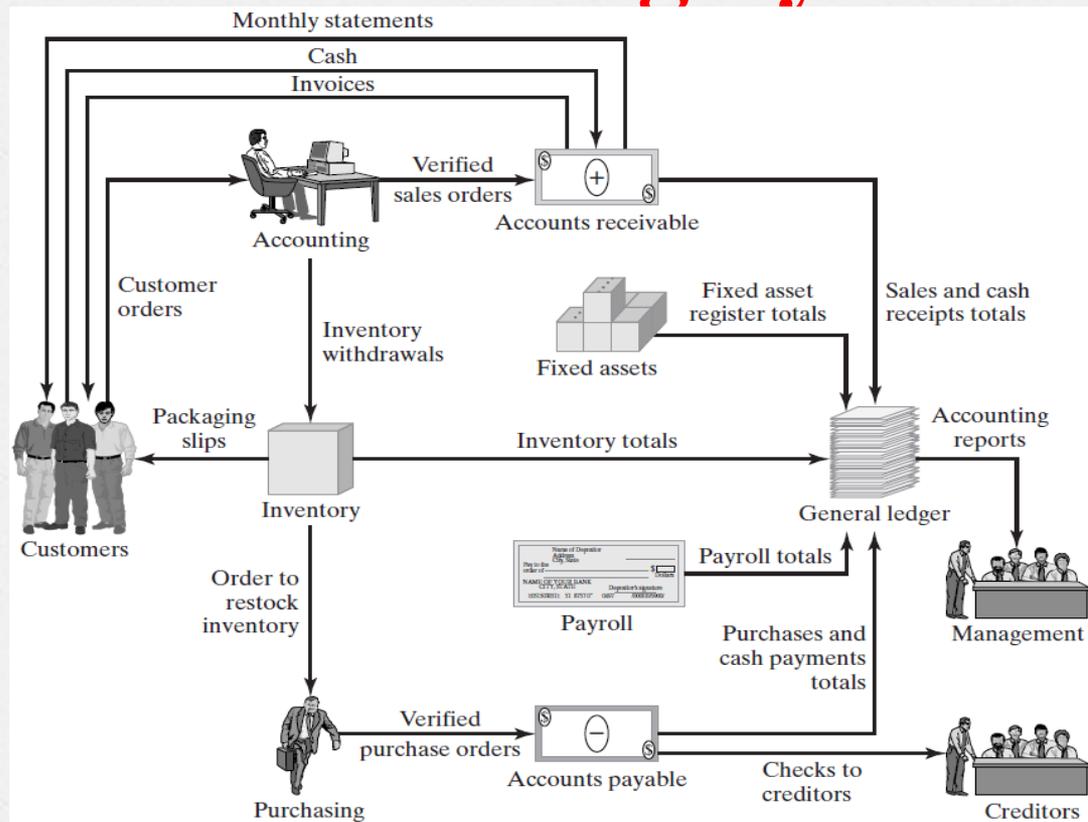
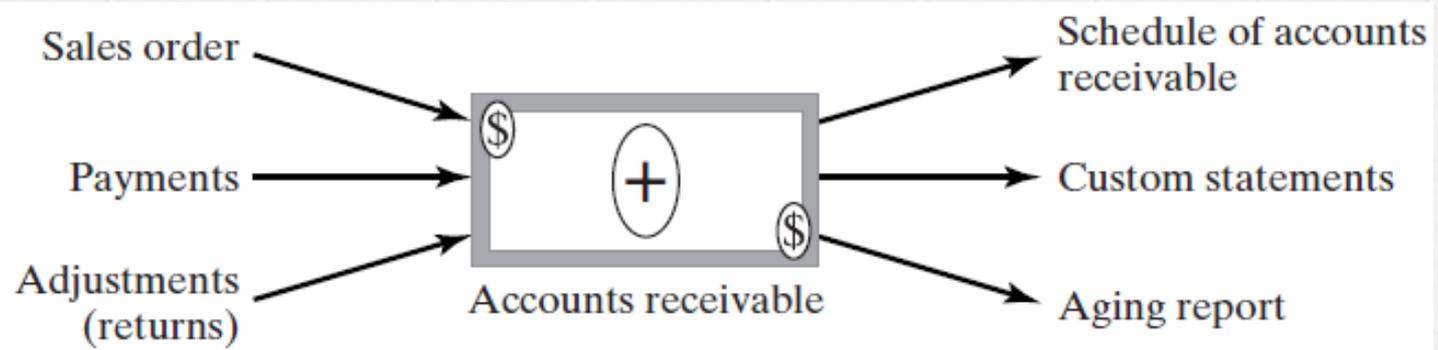


FIGURE 1 Conceptual Model of an Accounting System

Accounts Receivable



Accounts Receivable (Cont.)

- o **The sales order generates an invoice to the customer from the Accounts Receivable System. When payments are made, the accounts receivable balance is updated.**
- o **When payments are overdue, the Accounts Receivable System generates an Aging Report that shows account balances, which are 30, 60, and 90 days overdue. The inputs and outputs of the Accounts Receivable System include daily transactions.**

Accounts Payable

- o In the accounting system, payments to suppliers or vendors are made through the Accounts Payable System.

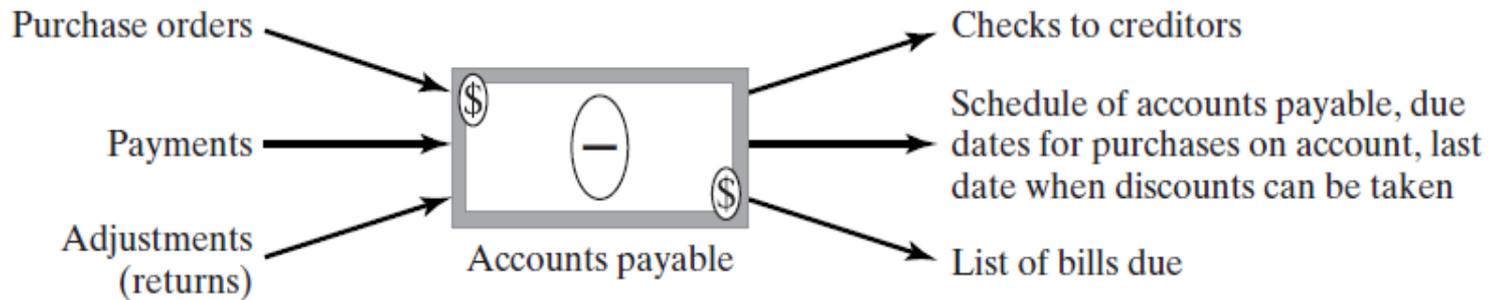


FIGURE 3 Accounts Payable

MANAGEMENT CONTROL PROCESSES IN ACCOUNTING

- o Control processes within accounting include:**
 - o Budgeting**
 - o Cash management**
 - o Capital budgeting**
 - o Investment management**

MANAGEMENT CONTROL PROCESSES IN ACCOUNTING (Budgeting)

- o **Budgeting processes entail tracking revenues and expenses and comparing these amounts to actual expenses and revenues.**
- o **Budgetary analysis includes, comparing current budget allocations to prior year's allocations and comparing current revenues and expenditures to prior years' revenues and expenditures.**
- o **Sales managers may want to take advantage of potential growth areas by assigning additional sales representatives or introducing new products into these regions.**

MANAGEMENT CONTROL PROCESSES IN ACCOUNTING (Cash Management)

- o **Cash management** ensures the organization has **sufficient cash to meet its needs** and to place excess funds into use through investments.
- o A **cash flow analysis** shows the **estimated amount of revenues** and expenditures each month.
- o **Budget analysts** can perform **what-if cash flow analysis** to determine the impact of **different business conditions**, such as **decreased revenue**, **deferred expenditures**, **deferred hiring**, and **leasing fixed assets** instead of purchasing them.

MANAGEMENT CONTROL PROCESSES IN ACCOUNTING (CAPITAL BUDGETING)

- o Capital budgeting processes **analyze the impact of possible acquisitions.**
- o Capital budgeting **uses evaluation tools**, such as **net present value (NPV)**, **internal rate of return (IRR)**, and **payback period.**
- o In **NPV** analysis, **the manager can determine the present value of future cash flows.**
- o In **IRR**, the organization can **determine if it can make a better return by acquiring an asset** now or by investing its money in another venture.

Summary of Accounting Processes

TABLE 2 Summary of Accounting Processes

Operational	General ledger Fixed asset Sales order Accounts receivable Accounts payable Inventory control Purchase order Payroll
Management Control	Budgeting Cash management Capital budgeting

- o In summary, **operational processes produce daily transactions on a periodic basis.** Management control processes, such as **budgeting and cash management, support decisions on how to allocate resources to maximize profitability and to cut costs.**

ACCOUNTING AND FINANCE MODULES IN ERP SYSTEMS

- o **Traditionally**, computerized accounting systems provide **operating-level** software to **produce invoices, checks, monthly statements, financial statements, and other financial outputs.**
- o Financial Accounting deals with **financial statements required for external reporting purposes.**
- o **External Reporting**, Provide **information on product profitability and cost center profitability, which enables managers to make business decisions.**

ACCOUNTING AND FINANCE MODULES IN ERP SYSTEMS (Differences)

- o **The difference** between traditional computerized accounting systems and ERP modules supporting the Accounting and Finance departments is **that financial information is shared in an integrated database.**
- o ERP modules **provide up-to-date information on cost variances**, so that product **pricing and profitability decisions** can be made with **accurate information.**

ACCOUNTING AND FINANCE MODULES IN ERP SYSTEMS (Differences)

- o Most accounting **entries are automated as different business transactions occur.**
- o One of the major benefits of using the Accounting module within an **ERP system** is that **the system creates a document flow of all transactions.**
- o **If the customer has a question about an invoice, an accounting representative can trace the data to the original order document.**

FINANCIAL ACCOUNTING MODULES IN ERP

- o Financial Accounting **deals with financial statements required for external reporting purposes.**
- o **External reporting** requirements, are set by **general accounting standards.**
- o Financial Accounting **modules post all accounting transactions, and these transactions are reflected in the general ledger.**

FINANCIAL ACCOUNTING MODULES IN ERP

- o **Within Financial Accounting is the Accounts Receivable subsystem.**
- o **The Accounts Receivable module monitors customer accounts, accepts payments, updates accounts, generates due date lists, generates balance confirmations, and produces account statements.**
- o **The accounts receivable module interfaces with Cash Management.**

How ERP Supports Accounting and Finance

TABLE 3 How ERP Supports Accounting and Finance

<i>Subsystem</i>	<i>What It Does</i>
Credit management	Accounts receivable balances are automatically updated, so sales has up-to-date information on customer credit limits
Product profitability	Data is entered and stored in an integrated database, leading to uniform results
Finished goods inventory	ERP automatically updates the increase in the monetary value of finished goods when finished goods are transferred to the warehouse; financial statements are updated
Inaccurate inventory costing	Provides up-to-date information on cost variances, which enables the company to establish prices that will enable it to sell products profitably
Consolidating information from subsidiaries	Provides an integrated database with the capability of converting multiple currencies
Management reporting	ERP database is integrated, so all information is consistent, complete, and accurate; a data warehouse provides a comprehensive database for management reporting
Creating an audit trail	ERP provides interconnected document flow, which establishes an audit trail and makes it possible to research and link source documents

Document Flow Creates an Audit Trail

TABLE 4 Document Flow Creates an Audit Trail

Order placed	Doc 789654
Order requirements transferred to Materials Management	Doc 667852
Picking request tells warehouse what items are on order	Doc 995380
Goods removed from inventory	Doc 345621
Invoice generated	Doc 786453
Accounting entries posted	Doc 094531

FINANCIAL ACCOUNTING MODULES IN ERP

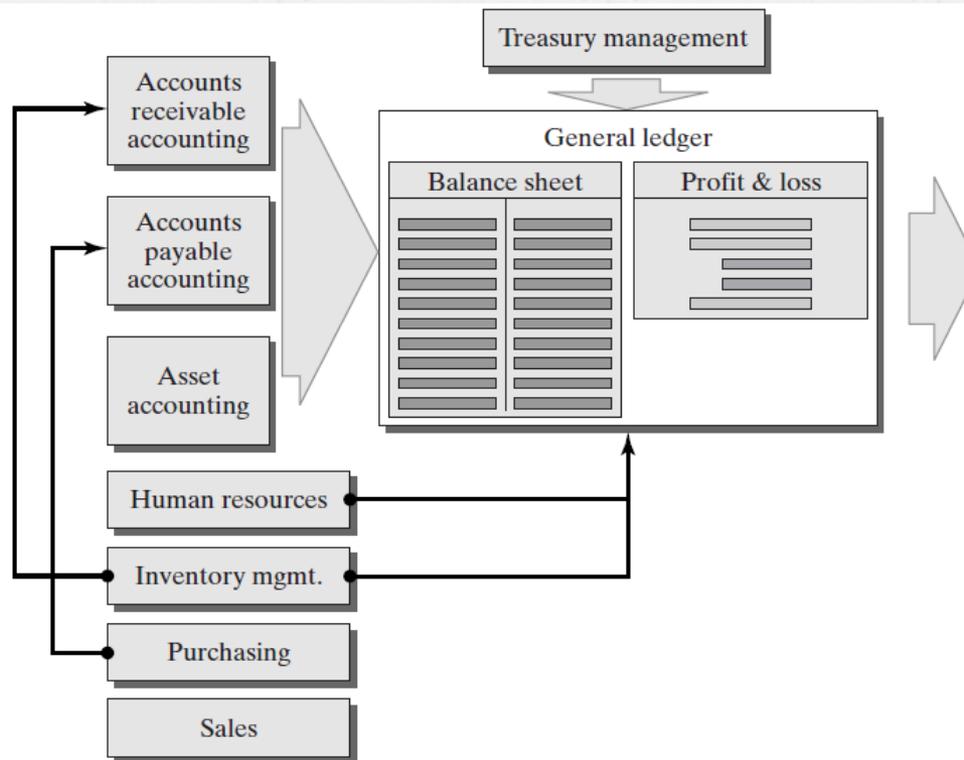


FIGURE 4 Financial Accounting Process

FINANCIAL ACCOUNTING MODULES IN ERP

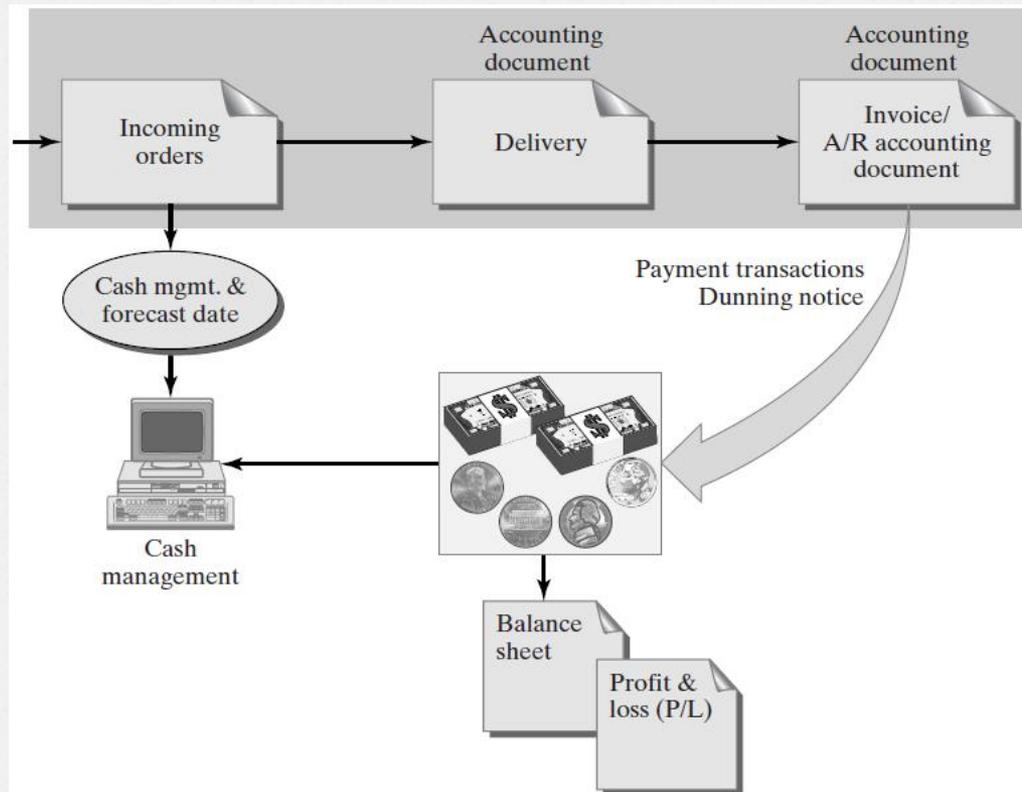


FIGURE 5 Accounts Receivable

FINANCIAL ACCOUNTING MODULES IN ERP

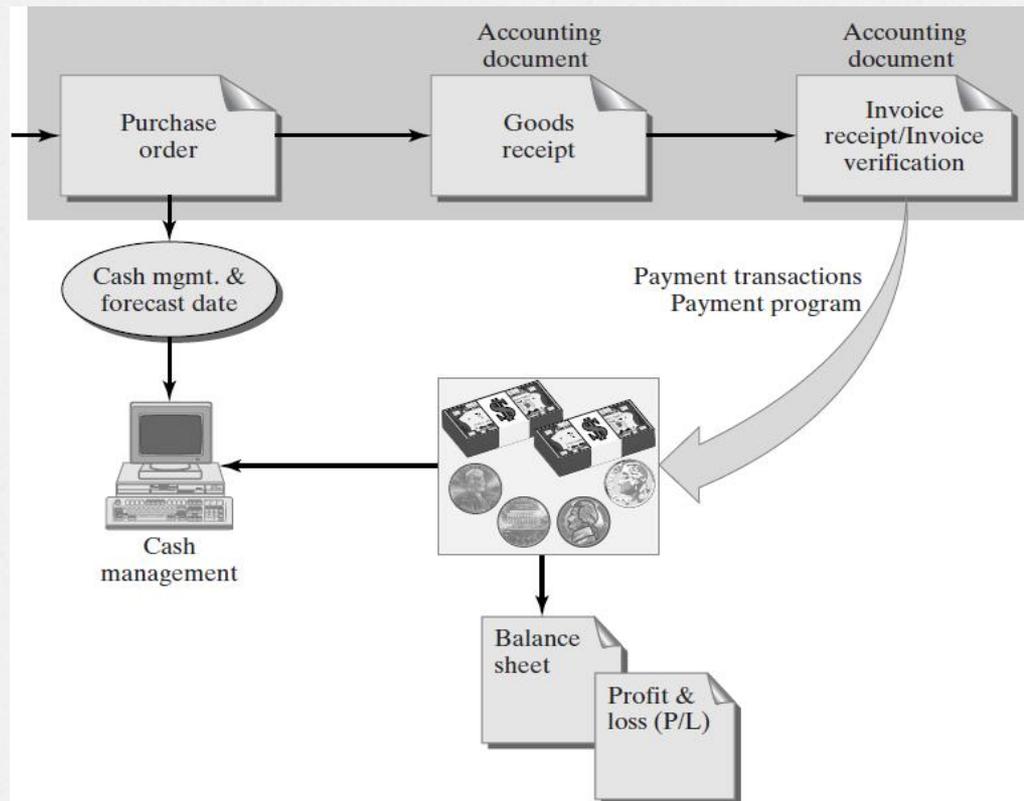


FIGURE 6 Accounts Payable

Management Control Functions in ERP

TABLE 5 Management Control Functions in ERP

<i>Business Scenarios</i>	<i>Functions</i>
Profit center accounting	Provides profitability reports with planned versus actual comparisons; provides profitability reports with a comparison of current period versus cumulative period
Profitability analysis	Identifies which products or markets have the highest contribution margins

- o Which products are most profitable?
- o Which divisions are most profitable?
- o Which customers are most profitable?

Profitability Analysis

- Profit center accounting creates reports on the performance of these profit centers

FIGURE 7 Profitability Analysis

	A	B	C	D	E	F	G	H	I	J	K
1	MIDTOWN BRANCH										
2	PROFITABILITY ANALYSIS										
3	26-Apr-04										
4											
5	SEVICE TYPE	NUMBER OF	TOTAL	UNIT	TOTAL		MARGIN				
6		TRANS	CHARGES	COST	COST	PROFIT	AS A % OF SALES				
7											
8	Money Order	12,000	2160	0.13	\$1,560	\$600	28%				
9	Wire Trans	120,000	40875	0.20	\$24,000	\$16,875	41%				
10	Trav Checks	87,000	7830	0.06	\$5,220	\$2,610	33%				
11											
12	TOTAL	219,000	50865		\$30,780	\$20,085					
13											
14											
15											
16											
17											
18											
19											
20											
21											

Sheet1 | Sheet2 | Sheet3

Integration of Managerial Accounting and Control Systems with Other ERP Modules

- o The Managerial Accounting module within ERP is a **central clearinghouse for accounting information** that is **created, updated,** and used by **many different functional areas** of the business, including financial accounting, **materials management, production planning, personnel administration, and sales and distribution.**

TABLE 6 Integration of Managerial Accounting and Control Systems with Other ERP Modules

<i>Module</i>	<i>Interface</i>
Financial Accounting	The source of data for Management Accounting (e.g., revenue postings to the general ledger)
Materials Management	Posts cost of goods to Management Accounting
Production Planning	Posts the cost of bills of materials, which are created in Production Planning
Personnel Administration	Posts expenses for payroll transactions
Sales and Distribution	Posts revenue from billing documents

THE NEW ROLE FOR MANAGEMENT ACCOUNTING

- o **ERP systems provide on-line real-time data for decision making.**
- o **With ERP, “Accountants are no longer at the back of the corporate ship issuing delayed reports about the history**
- o **Instead, they will be on the bridge with the CEO, offering real-time cost information to help steer the ship into the future”**

THE NEW ROLE FOR MANAGEMENT ACCOUNTING (Cont.)

- o Using these systems, **managers can answer important questions**, such as the following:
- o **How much does it cost to make a product?**
- o **How profitable is a customer?**
- o **How profitable is a product?**

A Comparison of Operational Control and ABC Systems

TABLE 7 A Comparison of Operational Control and ABC Systems

	<i>Operational Control Systems</i>	<i>ABC Systems</i>
Purpose	Provides information about process and business unit efficiencies	Provides strategic cost information about the underlying economies of the business
Data	Information must be timely, accurate, and specific to the work group	Estimates are sufficient; lower requirements for accuracy
How cost is defined	Relevant information on the cost of people, machines, energy, which are used in operating processes	Cost of resources across the value chain of providing a product or service (e.g., from suppliers to after-sale service)
Questions addressed	What scrap metal is left over from production?	How much does it cost to make a product and serve a customer? How profitable is a product? How profitable is a customer?
Scope	Specific to a responsibility center	Aggregates costs across multiple cost and responsibility centers
Example	Measure actual expenses of a specific process: a customer help desk	Measure what it costs to connect a customer to the Internet including customer help desk, credit check, dispatching, billing, and customer service

SUMMARY

- o The purpose of the Accounting and Financial modules **is to support financial accounting and management accounting functions.**
- o Financial information **is created, maintained, and updated for external reporting purposes.**
- o Management accounting information **is internal information designed to support management decision making.**

SUMMARY (Cont.)

- **By analyzing profitability and business unit performance, managers can allocate resources to marketing the most profitable products and services, and this will increase revenues and reduce costs.**

موفق باشید