Volume II of IV

The Karachi Stock Exchange Training

PAKISTAN INVESTMENT EXPANSION PROGRAM (PIEP)

Project Number 391-0514

Submitted to:

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PAKISTAN

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Submitted by:

The International Science and Technology Institute, Inc.
1129 Twentieth Street, NW Suite 800
Washington, DC 20036

ISTI — TEAM MEMBERS

Project Manager:

Bradford A. Warner, Jr. is Vice President of ISTI's Private Enterprise and Economics Division. Mr. Warner has over 25 years of international corporate finance experience including capital market development, public and private securities offerings, corporate direct investment, real estate and equipment lease financing and venture capital portfolio management.

Corporate Law Authority Training Program:

Robert M. Bishop, former Senior Vice President, Chief Regulatory Officer and Member of the Managing Committee of the New York Stock Exchange, was the longest-termed regulatory officer in the exchange's history. An employee from 1955, and an officer from 1963, he retired in 1986 after heading N.Y.S.E. regulation during years of major crisis, development and change. He has advised 13 foreign stock exchanges.

Anthony D. Loehnis, former Group Executive Director and Vice Chairman of S.G. Warburg in London and Executive Director of Bank of England for Overseas Affairs, has over 25 years of international corporate finance and banking experience. He is a member of the Group of Thirty, Chairman of the Centre for Economic Policy Research, Director of the U.K—Japan 2000 Group and member of the Council of Management of the Ditchley Foundation.

Debra J. Kertzman is an attorney who is currently the Regulation Specialist for the USAID/Sri Lanka Financial Markets Project which is being managed by ISTI as contractor. She has worked for the U.S. Securities and Exchange Commission, the Hong Kong Securities and Futures Commission and as a securities lawyer in New York City.

Karachi Stock Exchange Training Program and Certification Course:

John R. Buehler has over 30 years of management experience in the capital markets industry including former positions as National Marketing Director, National Training Director and National Sales Manager of three N.Y.S.E. member firms. In addition, he founded the NYSE/NASD Securities Industry Examinations required of all U.S. investment brokers and securities firm branch managers. He is a member of the Examinations Policy Review Committee of the NYSE and a past member of the NASD Qualifications Committee.

Alfred C. Morley has over 40 years' experience in the investment business, dealing primarily with securities research and management of institutional funds and with the training of global investment professionals. He was the first President of the Institute of Chartered Financial Analysts and is the ISTI Program Coordinator for establishing the CFA program in Sri Lanka under the USAID/Sri Lanka Financial Markets Project.

John L. Kinnaman has over 20 years experience in stock exchange and securities firm operations and management in the U.S. and internationally. As ISTI's Advisor to the Colombo Stock Exchange, he was responsible for the development of its Central Depository, and recently he has advised on clearance and settlement, stock exchange rules and custody arrangements in Tanzania, Venezuela, Bulgaria, India and Pakistan. He is a former Vice President of NYSE, Midwest Stock Exchange and the National Securities Clearing Corporation.

Ronald E. Copley is an Associate Professor of Finance at the University of North Carolina and a principal reviewer of examinations for the Institute of Chartered Financial Analysts. He also is engaged in investment management for professionals, retirement plans and foundations. He is an expert court witness on investments and personal and business valuation and advises the State of North Carolina on its $7 billion pension fund.

Susan S. Martin, as an ISTI consultant, designed and implemented the first Sri Lanka stockbroker licensing program for the Colombo Stock Exchange and the Securities and Exchange Commission, including formulating the syllabus, compiling and writing the training manuals, teaching the curriculum and administering the final examinations. Ms. Martin is a stockbroker by profession.

Table of Contents

Management of Stock Exchanges and Securities Companies Course

MANAGEMENT OF STOCK EXCHANGES AND SECURITIES COMPANIES

KARACHI STOCK EXCHANGE, KARACHI, PAKISTAN
INTERNATIONAL SCIENCE AND TECHNOLOGY INSTITUTE, INC. FOR USAID

September 18-23, 1993

September 18, 1993

2:30 - 3:00	Introductory Remarks	KINNAMAN/BUEHLER
2:00 - 4:00	1. <u>Role and Structure of Stock Market</u>	KINNAMAN

- Primary and Secondary Markets
  - Mobilize Savings for Investment
  - Provide Blanket Investment Alternatives
  - Provide Organized Disciplined Mechanism
  - Permits Supervisory Process to be Integrated with Trading, Distribution and Settlement
  - Creates Safe and Reliable Environment for Issuers and Investors
- Participants
  - Government
  - Stock Exchange
  - Securities Firms
  - Public Companies
  - Investors
  - Custodians
  - Others

4:00 - 4:30 Coffee/Tea Break

September 18, 1993

4:30 - 6:00 2. <u>Government Regulator</u> KINNAMAN

- Role, Staffing and Governance
- Securities and Company Laws
- Regulations; vis-a-vis Self-regulatory Organizations
- Enforcement Responsibilities and Capabilities

Revenue Sources

September 19, 1993

4:30 - 6:00 3. Public and Listed Companies KINNAMAN

- Public Offering Process; Initial and Secondary
  - Issuer
  - Investment Bank
  - Syndicate
  - Auditors
  - Bankers
  - Under-Over Subscription Procedures
- Disclosures; initial and continuing
  - Business Prospects/History
  - Valuations
  - Governance (Board-Insiders)
- Information Distribution Requirements
  - Initial
  - Continuing
- Insider Behavior and Obligations
  - Board
  - Management
- Tender Offers, Acquisitions, Divestitures & Stake Building Procedures and Options
  - Holdings Requiring Disclosure
  - Insider Selling/Buying Disclosures
  - Holdings Requiring Mandatory Offerings

4:00 - 4:30 Coffee\Tea Break

September 19, 1993

4:30 - 30 4. Ethics and Codes of Conduct BUEHLER

- Introduction

- Consequences of Internationalization
  - Developing Countries
  - Developed Countries
- Effects of Financial Deregulation
  - Legislative Focus
  - Regulatory Weaknesses
- Malpractice and Fraud
  - Causes
  - Examples
  - Results
- Broker-Dealer Rules
  - Fair Practice
  - Market Makers
- Codes of Conduct
  - Background
  - Application
- Ethical Behavior
  - Conflicts
  - Psychological Factors
  - Practical Considerations
- Conclusion

September 20, 1993

2:30 - 4:00 5. Stock Exchange Management and Operation KINNAMAN

- Ownership
  - Financing Issues (ROI)
  - Revenue Mix
  - Institution for "Public Good"
- Governance (with Public Participation)

- Benefits of Board/Diverse Guidance

- Multiple Roles

  - Regulator
  - Operator
  - Promoter

- Management, I.C.W. Governance

- Listing Process and Procedures; Initial and Continuing

  - Listing Rules
  - Company Information Management
  - Continuing Listing Issues

    -- Public Holdings
    -- Voting Rights
    -- Profitability

4:00 - 4:30 Coffee/Tea Break

  - Membership
  - Compliance
  - Capital and Operational Capability
  - Reporting Requirements
  - Oversight
  - Discipline

- Rule Making Process and Enforcement

  - Comment and Review
  - Administration
  - Role with Government Regulator

- Arbitration

  - Role Indisputes
  - How to Structure

- Trading

  - Alternative Methods

    -- Order Match
    -- Dealer
    -- Auction

- Procedures for Supervision

- Automation

- Information Disclosure

  - Principal or Agent
  - Insider Consideration

    -- Board Directors
    -- Company Relations

  - Transparency

- Short Selling: Role, Benefits and Concerns

- Customer Reference

- Front Running

September 21, 1993 5. Stock Exchange management and Operation (Cont.) KINNAMAN

2:30 - 4:00

- Clearance/Settlement/Depository/Operations

  (Procedures, Rules, Process, Control)

- Automation, Accounting and Settlement
- Participation; S.E. Members and Institutions
- Priorities

  - Broker to Broker
  - Broker to Institutional/Custodian
  - Broker to Individual Investor
  - Deliver and Receive Versus Payment

- Depository

  - Certificate/Non-Certificates
  - Beneficial Shareholder right

    -- Dividends
    -- Voting

  - Information Protection
  - Company Registrar Role

- International Standards

- Settlement Periods
- Information Structures

4:00 - 4:30 Coffee/Tea Break

4:30 - 6:30

- Automated Central Customer Accounting Systems
  - Confirms
  - Statements
  - Security
- Commission Structures
  - Alternatives
  - Pros/Cons
- Professional Development and Training of Staff and S.E. Professionals
- Staff Market Participation
  - Record Keeping
  - Disclosures
  - Timing

September 22, 1993

2:30 - 4:30 6. <u>General Brokerage Firm Management and Operations</u> BUEHLER

- Introduction
  - Series 7
  - Series 8
- Management Purposes
  - Gross Production
  - Net Profit
  - Cost Controls
  - Compliance
  - Other
- Basic Management Principles

- Unity of Command
- Span of Control
- Delegation of Authority

- Attracting a Clientele

  - Public Awareness
  - Communications
  - Prospecting
  - Restrictions

- Relationships Between Brokers and Their Clients

  - NYSE Survey
  - Account Servicing
  - Suitability
  - Profitable Record Keeping
  - 405

- Procedures for New Accounts

  - The Essential Facts
  - Types of Accounts
  - Special Requirement
  - Business Risks
  - Official Approval

4:00 - 4:30 Coffee-Tea Break

4:30 - 6:30

- A Program for Supervisory Reviews

  - Daily Transactions
  - Correspondence
  - Portfolio and Cross-Reference Records
  - Continued Service
  - Situations Which May Require Further Inquiry
  - Evidence of Supervisory Reviews
  - MBWA

- Operations System and Procedures

  - The Flow of Securities and Funds
  - Order Errors
  - Customer Complaints

- The Education and Training Process

- Osmosis
- Brokers
- Staff

- Characteristics of a Capable and Effective Manager

- Conclusion

September 23, 1993

2:30 - 4:30 7. Interpersonal Skills-Human Resource Development BUEHLER

- Introduction

- Leadership

- Purpose

  - MY Theory
  - Attitudes

- Productivity of Brokers

  - Understanding
  - Identification
  - Styles
  - Perceptions
  - Recommendations
  - Empathy
  - Care
  - A Program for Success

- Staff

  - Time and Money
  - Inform
  - Productivity
  - Turnover
  - A Program for Improvement

- Meetings

  - Purpose
  - Scheduling
  - Content
  - Attendance

- Underachievers

  - Identify
  - Inform
  - Background
  - Determinations
  - Improvement Programs
  - Detente
  - Responsibilities
  - Odd-Lots

4:00 - 4:30 Coffee/Tea Break

- Compliance

  - Standards
  - Inform
  - MBWA
  - Blotter
  - Wire Operators

- Charm Course

  - Optimal

- New Brokers

  - Selection
  - Review
  - Coach
  - The Great Commitment
  - Crosstell

- Leadership

  - Leadership vs. Management
  - Truth
  - Instinct
  - Dignity

- Summary

6:30 Closing discussion KINNAMAN/BUEHLER

Financial Analysis and Portfolio Management Course

FINANCIAL ANALYSIS AND PORTFOLIO MANAGEMENT

KARACHI STOCK EXCHANGE, KARACHI, PAKISTAN
INTERNATIONAL SCIENCE AND TECHNOLOGY INSTITUTE, INC.
FOR USAID/PAKISTAN

September 25 to 30, 1993

SEPTEMBER 25 - 27 : FINANCIAL ANALYSIS
INSTRUCTOR : ALFRED C. MORLEY

SEPTEMBER 25, 1993

2:30 - 2:45		Introductory Remarks	MORLEY/COPLEY
2:45 - 4:00	A.	Global Security Markets: Their Size and Performance Over Time A presentation showing the size, growth and performance of security markets around the world. The role of stock exchanges in privatization.	MORLEY
	B.	Issues Traded on Global Security Markets A description of the various forms of equity, debt and other instruments traded on global security markets.	MORLEY
	C.	Security Market Indexes How stock and bond indexes are calculated, and how they are used by investors.	MORLEY
4:00 - 4:30		Coffee/Tea Break	
4:30 - 6:00	D.	The use of Options, Futures and Index Futures Examples, among others, of the application of covered call options, protective put options and program trading.	MORLEY
	E.	Prospectus Disclosure The reason for a prospectus and what must be disclosed.	MORLEY

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SEPTEMBER 26, 1993

2:30 - 4:00	F.	Understanding and Using Financial Statements Calculation and application of key financial statement ratios, using Coca Cola, Anheuser-Busch, and a company in Pakistan as examples. Also a critique of the formulas used in K.S.E. analysis.	MORLE
4:00 - 4:30	Coffee/Tea Break		
4:30 - 6:00		Topic "F" continues	MORLE

SEPTEMBER 27, 1993

2:30 - 4:00		Complete Topic "F"	MORLE
	G.	A View on Development of Global Capital Markets What will be required to stay competitive.	MORLE
4:00 - 4:30	Coffee/Tea Break		
4:30 - 6:00	H.	What's so Special about becoming a Chartered Financial Analyst (CFA) The CFA designation increasingly is being recognized as the premier designation for investment professionals around the world. A discussion of the scope and purpose of the program. Sample questions from the CFA examination, primarily focusing on financial statement analysis.	MORLEY

SEPTEMBER 28 - 30 : PORTFOLIO MANAGEMENT
INSTRUCTOR : RONALD COPLEY

SEPTEMBER 28, 1993

2:30 - 4:00	A.	Stock Selection CFA Review Questions	COPLEY
4:00 - 4:30	B.	Bond Selection CFA Review Questions	COPLEY

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SEPTEMBER 29, 1993

2:30 - 4:00	C.	Principles of Financial Asset Management	COPLEY
	D.	Equity Investment Management	COPLEY
		CFA Review Questions	
4:00 - 4:30	Coffee/Tea Break		
4:30 - 6:00	E.	Fixed Income Investment Management	COPLEY
		CFA Review Questions	

SEPTEMBER 30, 1993

2:30 - 4:00	F.	Portfolio Construction, Monitoring and Revision Process	COPLEY
4:00 - 4:30	Coffee/Tea Break		
4:30 - 6:00	G.	CFA Case Analysis	COPLEY
6:00 - 6:30	Closing Discussion		COPLEY/MORLEY

TABLE OF CONTENTS

1. GLOBAL SECURITY MARKETS
THEIR SIZE AND PERFORMANCE OVER TIME

WORLD CAPITAL MARKETS

MARKET CAPITALISATION - DECEMBER 31, 1992

COMMON STOCKS	$9 TRILLION
FIXED-INCOME	13 TRILLION
TOTAL	$22 TRILLION

$22,000,000,000,000

DOES NOT INCLUDE DERIVATIVES (OPTIONS, FUTURES, ETC.), VENTURE CAPITAL, EQUITY REAL ESTATE, AND OTHER ASSET CLASSES.

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WORLD STOCK MARKET CAPITALISATIONS

	1970	1980	1988	1992
UNITED STATES	74%	57%	36%	45%
JAPAN	3	10	29	17
UNITED KINGDOM	8	9	11	12
GERMANY	3	3	4	4
ALL OTHERS	12	21	21	22
TOTAL	100%	100%	100%	100%
TOTAL TRILLIONS OF $	$0.9	$2.0	$6.7	$9.0

NOTE: JAPAN MARKET CAPITALIZATION IS ADJUSTED FOR CROSS-OWNERSHIP.

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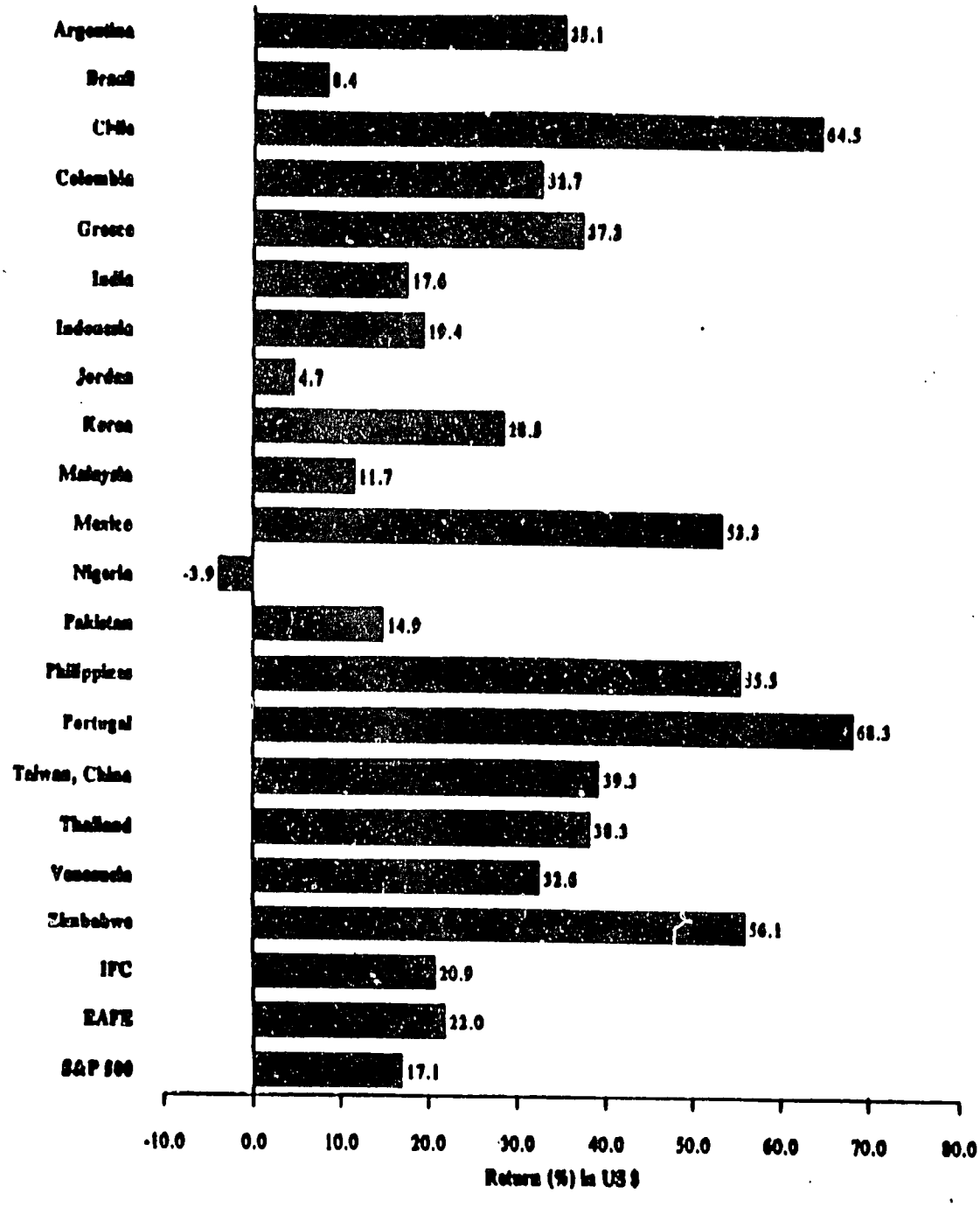
EMERGING STOCK MARKET AVERAGE ANNUAL TOTAL RETURNS

January 1, 1985 through June 30, 1991



Source: J.P. Morgan Investment Management.

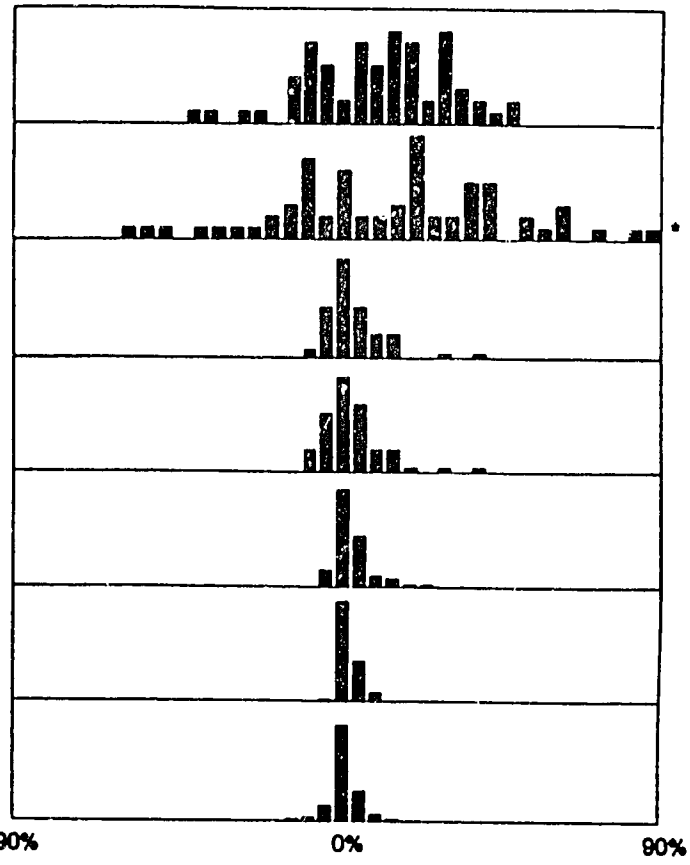
AVERAGE ANNUAL TOTAL RETURN

10 YEARS TO JUNE 30, 1993

HONG KONG	27.4%
FRANCE	21.9%
JAPAN	19.7%
EAFE INDEX	18.1%
UNITED KINGDOM	16.4%
GERMANY	15.0%
S&P 500 INDEX	14.3%

Basic Series: Summary Statistics of Annual Total Returns (1926-92)

Series	Geometric Mean	Arithmetic Mean	Standard Deviation
Common Stocks	10.3%	12.4%	20.6%
Small Company Stocks	12.2	17.6	35.0
Long-Term Corporate Bonds	5.5	5.8	9.5
Long-Term Government Bonds	4.8	5.2	8.6
Intermediate-Term Government Bonds	5.2	5.3	5.6
U.S. Treasury Bills	3.7	3.8	3.3
Inflation	3.1	3.2	4.7



* The 1933 Small Company Stock Total Return was 142.9 percent

Source: Stocks, Bonds, Bills, and Inflation 1993 Yearbook™, Ibbotson Associates, Chicago (annually updates work by Roger G. Ibbotson and Rex A. Sinquefield). Used with permission. All rights reserved.

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2. ISSUES TRADED ON GLOBAL MARKETS

ISSUES TRADED ON VARIOUS GLOBAL SECURITY MARKETS

EQUITY RELATED

FIXED-INCOME RELATED

OPTIONS/FUTURES/OPTIONS ON FUTURES

OTHER

EQUITY RELATED ISSUES

COMMON STOCKS

ADRs

RIGHTS

WARRANTS

CONVERTIBLE PREFERRED STOCKS

CONVERTIBLE DEBENTURES/BONDS

OPEN-END MUTUAL FUNDS

CLOSED-END FUNDS

FIXED-INCOME RELATED ISSUES

PREFERRED STOCKS

MONEY MARKET INSTRUMENTS

- TREASURY BILLS
- COMMERCIAL PAPER
- CERTIFICATES OF DEPOSIT
- BANKERS' ACCEPTANCES
- REPURCHASE AGREEMENTS (REPOS)

FEDERAL DEBT

- TREASURY NOTES (UP TO TEN YEARS MATURITY)
- TREASURY BONDS (TEN TO THIRTY YEARS MATURITY)
- 0 COUPON NOTES AND BONDS

FEDERAL AGENCY DEBT

- FEDERAL HOME LOAN BANK
- FEDERAL NATIONAL MORTGAGE ASSOCIATION (FANNIE MAY)
- GOVERNMENT NATIONAL MORTGAGE ASSOCIATION (GINNIE MAY)
- FEDERAL HOME LOAN MORTGAGE CORPORATION (FREDDIE MAC)

MORTGAGE-BACKED SECURITIES

- MORTGAGE PASS-THROUGHS
- COLLATERIZED MORTGAGE OBLIGATIONS (CMOs)
- MORTGAGE-BACKED BONDS
- STRIPPED MORTGAGE-BACKED BONDS
- REAL ESTATE MORTGAGE INVESTMENT CONDUITS (REMICS)

CORPORATE BONDS/DEBENTURES

MUNICIPAL BONDS/NOTES

GUARANTEED INVESTMENT CONTRACTS (GICs)

OPEN-END MUTUAL FUNDS

CLOSED-END FUNDS

OPTIONS/FUTURES/OPTIONS ON FUTURES

CALLS/PUTS ON INDIVIDUAL SECURITIES

CALLS/PUTS ON INDEXES

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LISTED OPTIONS QUOTATIONS

Option/Strike		Exp.	Call Vol.	Call Last	Put Vol.	Put Last
34¾	35	Dec	...	...	60	3⅛
34¾	40	Oct	254	⅜	...	...
Elecim	17½	Sep	57	1 11/16	...	...
17¾	17½	Oct	52	1⅜	20	1½
17¾	20	Jan	33	1½	...	...
EmrsEl	60	Dec	50	2⅞	...	...
[illegible]OG	50	Sep	30	1¾	...	...
[illegible]	55	Sep	...	...	20	3⅜
[illegible]	30	Oct	20	5⅜	...	...
Entera	30	Sep	...	...	85	6⅜
Entrey	40	Dec	48	½	...	...
Enzon	7½	Jan	22	½	...	...
Eqlipe	17½	Sep	12	13/16	100	⅝
18	17½	Oct	70	1 13/16	...	...
18	20	Oct	70	1	...	...
18	20	Jan	60	1¾	...	...
18	22½	Oct	20	⅜	...	...
EqtCes	30	Jan	20	1 11/16	...	...
Equifx	20	Jan	60	5	...	...
25	22½	Oct	61	2¾	...	...
25	25	Jan	75	1½	...	...
Exxon	60	Oct	...	...	25	3/16
65¼	65	Sep	130	1¼	25	½
65¼	65	Oct	112	1 13/16	45	1⅛
65¼	65	Jan	42	2⅜	30	2⅜
65¼	65	Apr	125	3⅜	...	...
65¼	70	Oct	...	...	24	4½
65¼	70	Jan	32	13/16	...	...
F N M	70	Dec	...	...	60	11/16
79	75	Dec	170	6¾	...	...
79	80	Sep	225	1⅜	...	...
79	80	Dec	20	3½	30	4
79	85	Dec	20	1¾	...	...
F P L	40	Mar	63	1 1/16	10	2
FHLB	55	Oct	114	13/16	...	...
FHP s	22½	Sep	30	2 1/16	...	...
24	25	Dec	25	2½	...	...
FM Cop	20	Sep	30	1	...	...
20⅜	25	Sep	24	⅛	...	...
FMogul	25	Jan	24	2½	...	...
FUnion	45	Oct	156	1⅜	19	1¾
44⅝	50	Oct	130	¼	...	...
FamDlr	20	Sep	40	¼	...	...
FedDSI	20	Sep	125	1	50	5/16
20⅝	22½	Sep	20	¼	...	...
20⅝	22½	Oct	65	7/16	...	...
FedExp	60	Sep	25	1⅛	50	2
59⅝	60	Jan	170	4⅜	...	...
59⅝	65	Sep	20	⅛	...	...
FedPap	25	Sep	...	...	32	2
23⅛	25	Oct	24	¼	20	2⅜
Feddrs	5	Oct	36	¾	...	...
5½	5	Jan	30	1⅛	...	...
50-Off	7½	Sep	...	...	30	1 3/16
FileNt	15	Oct	25	1 1/16	...	...
FishPr	30	Dec	...	...	40	11/16
FleetC	30	Sep	7	9⅜	40	¼
39⅜	30	Oct	...	...	50	⅜
39⅜	35	Sep	44	4¾	103	½
39⅜	40	Sep	174	1⅜	251	15/16
39⅜	40	Nov	53	3¾	...	...
39⅜	40	Feb	41	6⅜	...	...
[illegible]F	35	Jan	50	1	...	...
[illegible]ank	10	Feb	...	...	25	1 1/16
[illegible]ord	45	Sep	77	7¼	4	3/16
52⅜	50	Sep	429	2⅜	110	9/16
52⅜	50	Oct	13	3	28	1 1/16
52⅜	50	Dec	111	3⅞	...	...
52⅜	55	Sep	68	¼	...	...
52⅜	55	Oct	90	⅞	...	...
52⅜	55	Dec	28	1⅜	10	5
ForstL	35	Sep	60	13/16	...	...
FostWh	30	Sep	100	3⅞	...	...
34⅜	35	Oct	30	1	...	...
FounHl	22½	Sep	29	1	1	1½
21¾	22½	Feb	71	2⅜	...	...
FruitL	25	Sep	100	7⅜	...	...
31⅝	30	Sep	1222	13/16	100	½
31⅝	35	Sep	...	...	20	2⅞
31⅝	35	Oct	...	...	250	3⅜
FstUSA	50	Nov	36	12	...	...
60⅛	55	Nov	30	7⅞	1	2⅛
FtData	30	Sep	40	8	...	...
37⅜	35	Sep	30	3	3	¼
37⅜	40	Sep	32	¼	...	...
FtPcNt	17½	Sep	30	2 1/16	35	½
19⅜	17½	Oct	43	3⅛	205	1¼
19⅜	20	Sep	71	13/16	...	...
19⅜	20	Oct	228	2¼	...	...
G M	35	Sep	163	11¼	...	...
46⅜	35	Dec	...	...	50	3/16
46⅜	40	Sep	173	6⅜	...	...
46⅜	40	Dec	193	7⅜	39	¾
46⅜	45	Sep	194	2 1/16	213	½
46⅜	45	Oct	25	2¾	68	1 3/16
46⅜	45	Dec	131	3⅞	60	2 1/16
46⅜	50	Sep	37	⅛	133	3⅜
46⅜	50	Oct	526	⅜	...	...
46⅜	50	Dec	52	1 1/16	11	4
G T E	35	Oct	60	2	51	1/16
36¾	35	Dec	30	2⅜	4	⅝
36¾	40	Oct	50	1/16	10	3⅜
GM E	30	Sep	35	2⅛	...	...
GM H	30	Sep	...	...	25	1/16
GMills	65	Sep	...	...	92	2½
GSignl	37½	Feb	150	1¾	...	...
GaPac	65	Jan	6	3⅞	20	4⅜
Gap	25	Mar	140	5¼	...	...
28¾	30	Sep	391	9/16	20	2
28¾	30	Oct	42	1 1/16	...	...
28¾	30	Dec	44	1¾	25	3
28¾	35	Dec	105	7/16	...	...
Gdrich	50	Nov	250	1 11/16	...	...
Gen El	85	Dec	...	...	32	7/16
98⅛	90	Dec	...	...	33	1⅛
98⅛	95	Sep	111	3⅜	225	¼
98⅛	95	Oct	32	4⅜	32	1¼
98⅛	95	Dec	137	5⅜	11	2½
98⅛	95	Mar	160	7	...	...
98⅛	100	Sep	320	9/16	10	2⅛
98⅛	100	Oct	281	1 7/16	...	...
98⅛	100	Dec	32	2¾	...	...
GenDyn	90	Sep	60	6¾	...	...
96⅞	90	Oct	51	6⅞	...	...
96⅞	90	Nov	25	6⅞	...	...
96⅞	95	Sep	65	2¾	...	...
96⅞	95	Nov	53	4½	...	...
GenTch	7½	Oct	20	1/16	...	...
Genco	15	Dec	...	...	40	½
GenuPt	40	Nov	20	⅜	...	...
Genzym	35	Sep	26	1 9/16	25	1 1/16
35½	35	Oct	23	⅜	12	2
GerbPd	25	Oct	40	2½	10	⅜

Option/Strike		Exp.	Call Vol.	Call Last	Put Vol.	Put Last
45⅝	40	Oct	67	6½	906	¼
45⅝	40	Jan	72	7¼	563	1
45⅝	40	Apr	54	8⅛	24	1½
45⅝	45	Sep	3867	1⅛	2895	½
45⅝	45	Oct	1174	2¼	1644	1¼
45⅝	45	Jan	618	3⅜	613	2 11/16
45⅝	45	Apr	59	5⅜	85	3⅜
45⅝	50	Sep	367	⅛	65	4¼
45⅝	50	Oct	2198	9/16	334	4½
45⅝	50	Jan	879	1¾	54	5½
45⅝	50	Apr	80	2¾	44	6¼
45⅝	55	Oct	155	⅛	...	...
45⅝	55	Jan	580	¾	2	9½
45⅝	55	Apr	391	1 1/16	...	...
45⅝	60	Jan	130	5/16	...	...
45⅝	70	Jan	56	⅛	...	...
I T T	90	Dec	30	5¼	...	...
93⅛	95	Sep	20	11/16	...	...
ICI	40	Oct	20	5	...	...
44½	45	Oct	48	1½	...	...
44½	45	Apr	50	4	...	...
ICN Ph	10	Sep	47	1	...	...
10¾	10	Jan	21	2 7/16	10	1⅜
10¾	12½	Sep	20	3/16	...	...
10¾	12½	Oct	135	11/16	...	...
10¾	12½	Jan	66	1 1/16	...	...
IDB Cm	45	Sep	32	5¾	10	⅜
53	50	Sep	9	3½	30	1⅜
53	55	Oct	30	2¾	...	...
IGame	30	Sep	25	8¾	50	1/16
38⅝	30	Oct	30	8⅞	20	⅛
38⅝	30	Jan	30	10	10	⅞
38⅝	32½	Oct	22	6½	40	7/16
38⅝	35	Sep	37	3¾	254	¼
38⅝	35	Oct	61	4¾	70	15/16
38⅝	35	Jan	25	6⅜	15	2⅜
38⅝	40	Sep	222	11/16	10	2¼
38⅝	40	Oct	317	1 13/16	16	3⅛
38⅝	40	Jan	107	3¾	5	4⅞
38⅝	45	Jan	64	2⅛	...	...
IMC Frt	30	Jan	20	2 9/16	...	...
IIICIr	30	Sep	30	1 3/16	10	11/16
Imcera	30	Sep	30	1⅛	...	...
30⅞	30	Oct	29	1 13/16	...	...
ImoCh e	85	Oct	25	3½	...	...
ImunRs	7½	Feb	40	4⅛	...	...
10¾	10	Sep	45	¾	...	...
10¾	12½	Sep	70	⅛	...	...
10¾	12½	Oct	45	11/16	...	...
10¾	12½	Nov	40	1⅜	10	2⅜
10¾	15	Nov	40	7/16	2	4¾
10¾	17½	Feb	20	15/16	...	...
Imunen	5	Sep	20	2¾	...	...
7½	7½	Sep	100	¼	...	...
7½	7½	Dec	100	¾	...	...
7½	10	Dec	50	½	...	...
Imunmd	7½	Dec	27	13/16	...	...
In Pap	60	Oct	4	5	43	½
64⅛	60	Jan	...	...	28	1⅜
64⅛	65	Sep	40	¾	15	1⅜
64⅛	65	Oct	192	1⅝	50	2⅜
64⅛	70	Sep	...	...	170	6
64⅛	70	Oct	102	⅜	10	6
Inco	25	Jan	20	½	...	...
Infrmx	17½	Sep	85	3⅞	...	...
21¼	17½	Oct	50	4	...	...
21¼	20	Sep	65	1¾	...	...
21¼	22½	Sep	25	9/16	...	...
IngRnd	35	Sep	30	3	...	...
37¾	35	Dec	150	4¼	...	...
37¾	35	Mar	140	5	...	...
IntRec	10	Sep	40	11/16	...	...
10¾	10	Mar	40	1 13/16	12	13/16
10¾	12½	Mar	432	1	...	...
IntSpc	7½	Nov	30	⅜	...	...
Intel	55	Oct	46	9¼	33	11/16
63½	55	Jan	5	10½	25	2
63½	57½	Oct	22	6⅞	...	...
63½	60	Sep	618	4¼	440	¾
63½	60	Oct	68	5¼	215	1¾
63½	62½	Oct	82	3⅞	...	...
63½	65	Sep	1270	1¼	83	2¾
63½	65	Oct	142	2 9/16	67	4¼
63½	65	Jan	109	5⅜	...	...
63½	70	Sep	110	¼	...	...
63½	70	Oct	285	1	...	...
63½	70	Jan	40	3¼	...	...
Intel e	17½	Sep	35	9/16	...	...
IntgDv	15	Sep	20	2¼	80	¼
17⅛	17½	Sep	137	¾	45	1 3/16
17⅛	17½	Oct	42	1½	251	13/16
17⅛	17½	Nov	34	2⅛	...	...
17⅛	20	Oct	162	¾	...	...
Intgph	10	Oct	249	2	...	...
11⅝	10	Jan	120	2⅜	...	...
11⅝	12½	Oct	62	7/16	1	1½
11⅝	12½	Jan	20	1¼	1	1¾
IntrDig	5	Sep	319	2½	...	...
7⅜	5	Oct	63	2 9/16	...	...
7⅜	7½	Sep	452	7/16	...	...
7⅜	7½	Oct	440	15/16	...	...
7⅜	7½	Dec	193	1⅛	11	1 11/16
7⅜	10	Sep	...	...	49	3
7⅜	10	Dec	90	⅜	40	3⅛
IvaxCp	25	Oct	116	1	...	...
Jackpot	17½	Sep	70	⅛	...	...
17⅜	20	Sep	50	⅛	...	...
17⅜	20	Dec	20	1	...	...
JbnCll	55	Sep	...	...	20	[illegible]
57⅜	60	Oct	58	1⅛	...	...
JohnJn	35	Jan	...	...	25	¾
40⅜	40	Sep	191	1	188	¾
40⅜	40	Oct	59	1⅜	60	1¼
40⅜	40	Jan	55	3	10	2½
40⅜	45	Oct	21	¼	...	...
40⅜	45	Jan	23	1	2	5¼
40⅜	45	Apr	70	1 13/16	...	...
40⅜	50	Jan	150	⅜	...	...
JonesAp	25	Nov	...	...	40	1 9/16
K mart	22½	Mar	25	1 13/16	...	...
22⅞	25	Oct	230	⅛	...	...
KBHome	22½	Jan	28	1 1/16	...	...
KLM	20	Oct	120	13/16	...	...
Kellog	50	Sep	54	3⅜	25	⅜
52⅞	55	Sep	750	5/16	5	2¾
52⅞	55	Oct	42	⅝	6	3¼
52⅞	55	Dec	750	2	...	...
KalyOil	12½	Sep	170	⅜	135	1
12¼	12½	Oct	50	1⅛	6	1½
12¼	12½	Nov	...	...	20	2
12¼	15	Sep	432	¼	152	3
12¼	15	Oct	92	¾	...	...
12¼	15	Nov	44	13/16	...	...
12¼	17½	Nov	70	[illegible]	15	[illegible]

Option/Strike		Exp.	Call Vol.	Call Last	Put Vol.	Put Last
57⅜	50	Sep	59	7⅜	...	...
57⅜	50	Dec	200	8	130	½
57⅜	50	Mar	...	...	300	¾
57⅜	55	Sep	104	2 7/16	22	¼
57⅜	55	Dec	...	...	50	1½
57⅜	60	Sep	40	¼	...	...
57⅜	60	Oct	...	...	30	3½
McKess	55	Sep	...	...	75	4⅛
Mead	45	Oct	50	3⅜	5	½
MedVsn	30	Jan	35	2¼	...	...
MedcRs	12½	Sep	25	⅛	...	...
MedcrC	30	Oct	...	...	310	7/16
35⅞	35	Sep	...	...	65	½
35⅞	35	Oct	10	2	100	1⅛
35⅞	35	Nov	...	...	102	1⅜
35⅞	40	Oct	40	¼	...	...
Merck	25	Sep	680	6¾	...	...
31⅜	25	Oct	620	6⅞	...	...
31⅜	25	Jan	26	7⅛	...	...
31⅜	30	Sep	397	1 13/16	642	¼
31⅜	30	Oct	719	2 1/16	255	⅜
31⅜	30	Jan	172	3¼	155	1½
31⅜	30	Apr	54	4	19	2⅛
31⅜	35	Sep	462	⅛	20	3¾
31⅜	35	Oct	776	⅜	675	3⅞
31⅜	35	Jan	472	1⅛	206	4½
31⅜	40	Oct	98	⅛	8	8½
31⅜	40	Jan	314	⅜	...	...
31⅜	41⅜	Jan	60	¼	...	...
Merisl	12½	Sep	30	2 1/16	...	...
14¾	15	Sep	39	7/16	...	...
MerrlI	50	Jan	...	...	20	⅛
95⅜	85	Sep	10	12⅜	60	¼
95⅜	90	Sep	144	6½	106	11/16
95⅜	90	Oct	150	7⅜	74	1⅝
95⅜	90	Jan	26	10½	...	...
95⅜	95	Sep	360	2¾	720	2 1/16
95⅜	95	Oct	112	5⅛	54	3⅞
95⅜	95	Jan	22	9	3	6⅜
95⅜	100	Sep	289	⅜	36	5¼
95⅜	100	Oct	139	2¾	27	6
95⅜	100	Jan	556	5⅜	...	...
MichSt	25	Sep	30	3⅜	...	...
Micron	35	Oct	...	...	87	¼
52⅜	45	Sep	102	8¼	15	⅜
52⅜	45	Oct	20	9½	...	...
52⅜	50	Sep	72	3⅜	113	1½
52⅜	50	Oct	90	5⅞	1	3⅜
52⅜	55	Sep	164	1⅜	100	4⅛
52⅜	55	Oct	83	3⅛	...	...
52⅜	60	Jan	28	5	...	...
Micsft	65	Sep	22	11⅜	28	⅛
76¾	65	Oct	...	...	50	½
76¾	75	Apr	2	9½	30	6¾
76¾	80	Apr	2	7⅛	30	9⅜
76¾	85	Sep	351	3/16	...	...
76¾	85	Oct	829	1⅛	115	8⅞
76¾	90	Oct	281	½	...	...
76¾	90	Jan	41	2¼	...	...
76¾	95	Jan	40	1¾	1	18½
Midlan	25	Sep	...	...	160	¾
Mkean	55	Sep	...	...	30	2¾
53	55	Oct	32	2¼	...	...
Mobil	75	Nov	20	4⅛	5	1¼
78⅜	80	Sep	...	...	43	2
78⅜	80	Nov	9	1½	80	3½
MolBio	25	Oct	31	15/16	...	...
MorgSt	75	Sep	200	7¼	...	...
83¼	75	Nov	307	9⅜	...	...
83¼	85	Sep	34	1¼	...	...
Morgan	65	Mar	...	...	24	1¼
75⅛	70	Sep	20	5⅜	32	3/16
75⅛	75	Sep	22	1	...	...
75⅛	75	Oct	45	2⅛	27	2⅜
75⅛	75	Dec	50	3⅛	...	...
75⅛	80	Sep	42	⅛	...	...
75⅛	80	Oct	100	½	...	...
75⅛	80	Dec	25	1⅜	...	...
Motrla	65	Oct	45	30½	...	...
95	80	Sep	...	...	44	1/16
95	80	Oct	...	...	22	⅜
95	85	Sep	3	10⅜	30	3/16
95	85	Oct	29	11½	28	⅝
95	90	Sep	210	6¼	89	11/16
95	90	Oct	60	7½	34	2
95	95	Sep	545	2½	164	2¼
95	95	Oct	59	4¾	145	4
95	95	Jan	25	8	2	6¾
95	100	Sep	513	¾	8	5⅜
95	100	Oct	143	2 7/16	5	7
95	100	Jan	40	5⅜	...	...
95	105	Sep	150	¼	...	...
95	105	Oct	145	1¼	...	...
95	110	Sep	30	⅛	...	...
MryGRd	7½	Oct	40	1	13	½
Mylan	20	Sep	20	2⅜	10	3/16
22	20	Jan	30	3½	30	1⅜
22	22½	Sep	40	¾	4	13/16
22	22½	Jan	40	2½	12	2 9/16
22	25	Sep	30	⅛	20	3
22	25	Jan	56	1 1/16	...	...
22	30	Oct	20	⅛	...	...
N Semi	15	Nov	...	...	34	½
18¼	20	Sep	201	¼	...	...
18¼	20	Nov	81	⅝	...	...
NAMtg	22½	Sep	...	...	20	½
NAVec	10	Sep	32	⅛	...	...
NMedE	5	Nov	...	...	50	1/16
7⅛	5	Feb	10	3¼	90	1/16
7⅛	7½	Sep	60	11/16	125	¼
7⅛	7½	Oct	100	15/16	98	11/16
7⅛	7½	Nov	145	1 1/16	29	⅛
7⅛	7½	Feb	30	1½	30	1 3/16
7⅛	10	Sep	56	1/16	209	1 11/16
7⅛	10	Nov	53	⅜	30	2¼
7⅛	10	Feb	46	¾	30	2⅜
NTNCom	10	Oct	50	¼	...	...
NatVsn	15	Oct	5	1⅛	40	1½
NatnsBk	45	Sep	300	6	200	⅛
51⅛	45	Nov	...	...	65	11/16
51⅛	50	Sep	50	1 11/16	...	...
51⅛	50	Oct	...	...	25	1⅜
51⅛	55	Nov	26	⅝	...	...
Navistr	25	Jan	25	1⅛	...	...
NewbNk	55	Sep	108	15½	30	3/16
70⅛	60	Sep	35	10½	22	11/16
70⅛	65	Sep	178	6¾	82	1⅜
70⅛	65	Oct	...	...	57	3¼
70⅛	70	Sep	173	3½	120	3⅜
70⅛	70	Oct	53	6¼	...	...
70⅛	70	Dec	26	9⅜	44	8⅜
70⅛	75	Sep	155	1⅜	3	6¼
70⅛	75	Oct	56	3⅜	...	...
70⅛	75	Nov	44	10¼	...	...

Option/Strike		Exp.	Call Vol.	Call Last	Put Vol.	Put Last
34¾	40	Sep	25	¼	...	...
PicTel	17½	Sep	20	⅜	20	1
Placer	17½	Sep	12	3¾	100	⅛
21⅜	20	Sep	25	1⅜	25	⅜
21⅜	20	Mar	...	...	20	2 7/16
21⅜	22½	Dec	108	1½	52	13/16
21⅜	22½	Mar	82	2½	10	3⅜
21⅜	25	Sep	10	1/16	30	4
Players	17½	Sep	20	2⅛	...	...
18⅝	20	Sep	210	5/16	...	...
18⅝	20	Oct	7	1 1/16	101	2 7/16
PlcyMg	25	Sep	...	...	25	1½
PcgsPd	17½	Sep	14	1	23	⅜
Praxair	15	Sep	...	...	22	3/16
Premrk	65	Oct	20	2⅜	...	...
PricCo	35	Sep	58	3	...	...
38	35	Oct	20	3½	14	½
38	40	Oct	24	1⅛	3	2½
38	40	Jan	22	1⅜	...	...
Primca	37½	Sep	22	6⅜	...	...
...	40	Oct	55	5	...	...
...	41¼	Sep	131	3⅜	15	3/16
...	45	Oct	23	1 13/16	...	...
...	45	Dec	120	2 11/16	...	...
ProcG	45	Oct	...	...	25	¾
49	50	Sep	10	5/16	351	1⅜
49	50	Oct	357	15/16	300	2 1/16
49	50	Jan	50	2⅛	3	3
Promus	60	Sep	38	10⅜	33	¾
70¼	60	Feb	5	15	20	3⅛
70¼	70	Sep	29	3⅛	23	2½
70¼	70	Oct	11	5⅜	48	6⅜
70¼	75	Nov	26	4	...	...
PuritB	20	Sep	...	...	45	⅝
PyrmTc	30	Dec	20	3⅜	...	...
Pyxis	50	Sep	44	2½	22	2⅞
50	55	Sep	30	¾	...	...
Q V C	50	Jan	20	14½	...	...
64½	70	Oct	63	2	3	6⅞
QntmCp	12½	Sep	30	½	...	...
12⅞	12½	Nov	27	1⅛	...	...
QuakrO	70	Jan	119	2½	...	...
Qualcm	70	Jan	3	14½	30	5¾
77¾	75	Sep	43	4⅜	5	2
77¾	80	Sep	117	2¼	...	...
77¾	85	Sep	23	⅝	...	...
RJR Nb	5	Sep	1160	3/16	1150	⅛
5⅛	5	Dec	25	7/16	4	5/16
5⅛	5	Mar	810	¾	600	½
RP Rer	45	Oct	5	1¾	76	1½
RdrDig	35	Jan	...	...	300	1
Reebok	25	Sep	30	⅛	...	...
25¼	25	Oct	90	1⅛	50	1 1/16
25¼	30	Sep	20	1/16	...	...
25¼	30	Jan	20	1	...	...
Replgn	7½	Oct	23	⅜	...	...
Reuter	70	Feb	162	4⅞	...	...
RibiIm	7½	Oct	25	⅛	...	...
RioHit	17½	Sep	20	⅝	20	¾
RochSB	12½	Sep	20	1½	...	...
14⅝	12½	Oct	110	2¼	...	...
14⅝	12½	Apr	120	3	15	1 1/16
14⅝	15	Sep	130	½	50	1⅛
14⅝	15	Oct	53	1	6	1⅜
14⅝	15	Jan	20	1⅜	15	2
14⅝	17½	Sep	20	¼	...	...
14⅝	17½	Oct	20	½	...	...
14⅝	17½	Jan	20	1⅛	...	...
14⅝	20	Oct	20	⅛	...	...
14⅝	20	Jan	70	7/16	...	...
Rockwl	25	Oct	20	2⅛	55	½
Pelir	7½	Mar	1	1 13/16	200	13/16
RossSt	15	Sep	...	...	65	1¼
RoyDut	100	Oct	20	1 13/16	...	...
RyanFm	7½	Feb	20	1 11/16	...	...
RynMtl	50	Sep	40	1 1/16	...	...
SBFund	15	Nov	30	5/16	...	...
SFeEn	12½	Jan	90	¼	...	...
SFePac	15	Sep	53	3½	...	...
18⅝	20	Dec	27	1⅛	5	2 5/16
18⅝	20	Mar	110	1¾	...	...
SPI Ph	15	Sep	37	⅛	...	...
Safewy	20	Oct	40	5/16	...	...
18½	20	Dec	20	11/16	10	2
SallieM	35	Oct	...	...	25	1/16
Salomn	50	Sep	83	2 1/16	10	15/16
51⅜	50	Oct	274	3¼	42	1⅛
51⅜	50	Jan	50	4¾	27	2 7/16
51⅜	55	Jan	79	2 9/16	...	...
SaraL	25	Sep	...	...	20	3/16
26⅝	25	Oct	25	1⅜	10	½
26⅝	30	Jan	32	5/16	...	...
Sbarro	45	Sep	30	½	...	...
Scherer	30	Oct	160	5/16	...	...
Schering	60	Oct	24	2¾	...	...
60⅛	70	Feb	20	1⅛	...	...
Schwab	30	Sep	50	4	13	5/16
33⅝	30	Dec	19	5⅞	30	1⅜
33⅝	35	Sep	15	⅜	35	2
SciAtl	30	Sep	37	7⅛	...	...
37½	35	Sep	38	3⅛	...	...
Scimed	40	Oct	...	...	20	1/16
55½	55	Sep	25	2¾	13	2
55½	55	Oct	25	4⅜	...	...
55½	60	Oct	20	2½	3	6⅞
Scios	7½	Sep	20	⅛	...	...
6½	7½	Dec	61	11/16	...	...
SciTex	25	Jan	50	2¾	...	...
25⅛	35	Jan	50	⅜	...	...
Seagrm	25	Oct	...	...	100	¼
27⅝	25	Feb	...	...	120	⅞
27⅝	30	Sep	...	...	200	3⅛
Seagte	17½	Sep	20	2⅜	...	...
20	17½	Oct	...	...	150	5/16
20	20	Oct	25	1 3/16	...	...
Sensor	35	Sep	250	9⅜	250	⅛
44½	40	Sep	70	4	...	...
44½	45	Sep	70	15/16	...	...
44½	50	Sep	20	⅛	...	...
SeqntC	15	Sep	32	½	...	...
14⅜	17½	Jan	24	1½	...	...
Shawin	40	Feb	...	...	20	1⅞
Shawmt	20	Mar	...	...	20	¾
24⅛	25	Sep	50	¼	...	...
24⅛	25	Dec	130	1½	...	...
24⅛	25	Mar	20	2⅛	...	...
SherW	30	Sep	...	...	22	1/16
34	30	Oct	...	...	75	1/16
Shoney	20	Sep	39	2	...	...
21¾	22½	Oct	34	15/16	...	...
21¾	25	Oct	100	⅜	...	...
ShopKo	12½	Mar	3	5/16	60	2⅜
Showbt	15	Oct	35	3¼	...	...
[illegible]	[illegible]	Dec	25	4½	...	...

Option/Strike		Exp.	Call Vol.	Call Last	Vo[illegible]
32	35	Mar	34	5⅛	
32	40	Sep	147	¼	
32	40	Dec	89	2⅛	
32	45	Dec	48	1⅛	
StoneC	7½	Sep	110	1 11/16	
9⅛	7½	Dec	...	...	
9⅛	10	Sep	184	¼	
9⅛	10	Oct	70	7/16	
9⅛	10	Dec	207	11/16	
9⅛	10	Mar	103	1⅜	
Strbck	45	Sep	40	5¼	
50½	45	Oct	5	6⅜	
50½	50	Sep	142	2 7/16	
50½	50	Oct	218	4	
50½	55	Sep	51	11/16	
50½	55	Oct	82	1⅝	
Stricm	12½	Sep	...	...	
Strykr	25	Sep	...	...	
27⅜	25	Dec	...	...	
Sulcus	7½	Sep	95	1⅛	
9⅛	7½	Oct	50	1¾	
9⅛	7½	Nov	25	2¼	
9⅛	7½	Feb	...	...	
9⅛	10	Sep	34	¼	
9⅛	10	Nov	75	⅜	
SumHT	22½	Sep	24	4½	
26¾	25	Sep	3	1 13/16	
26¾	30	Oct	53	⅜	
26¾	30	Dec	88	1⅛	
SunCo	30	Sep	20	⅛	
28¾	30	Feb	36	1	
SunMic	22½	Sep	10	4½	
27⅛	22½	Oct	30	4⅜	
27⅛	22½	Jan	10	5½	
27⅛	25	Sep	92	2⅜	
27⅛	25	Oct	133	3⅛	
27⅛	25	Jan	4	4⅜	
27⅛	30	Sep	145	¼	
27⅛	30	Oct	135	⅞	
27⅛	35	Oct	95	¼	
SunOst	20	Jan	100	1⅜	
Sunamr	40	Sep	5	2 9/16	
SunMac	12½	Feb	...	...	
16¼	15	Sep	20	1 11/16	
16¼	15	Oct	31	2½	
16¼	17½	Sep	32	½	
16¼	17½	Nov	75	1¾	
16¼	17½	Feb	41	2 9/16	
SvcCp	25	Oct	100	7/16	
SvcMer	10	Jan	80	1½	
SwAirl	35	Sep	116	1⅜	
35¼	40	Sep	...	...	
35¼	40	Dec	30	1 1/16	
SwBell	45	Sep	75	⅝	
Sybase	60	Sep	48	4⅜	
63½	65	Sep	257	1⅜	
63½	65	Oct	22	3⅜	
63½	65	Dec	20	6	
63½	70	Sep	30	⅝	
63½	70	Oct	41	2 1/16	
63½	75	Sep	40	¼	
63½	80	Sep	30	1/16	
Symntc	15	Sep	35	2	
Synopt	25	Sep	25	3⅞	
28⅜	25	Dec	10	6⅜	
28⅜	28⅜	Sep	34	2¾	
28⅜	30	Sep	461	1	
28⅜	30	Oct	130	1 15/16	
28⅜	30	Dec	21	3⅜	
28⅜	31⅜	Sep	20	¾	
28⅜	35	Sep	35	¼	
28⅜	35	Oct	47	1⅛	
Synrgn	10	Sep	70	2¼	
12½	10	Oct	...	...	
12½	12½	Sep	92	½	
12½	12½	Oct	39	¾	
12½	12½	Dec	10	1½	
12½	12½	Mar	...	...	
12½	15	Mar	30	1 7/16	
Syntex	15	Sep	99	3¼	
18¼	17½	Sep	249	1 1/16	
18¼	17½	Oct	490	1½	
18¼	17½	Dec	44	1⅞	
18¼	20	Sep	366	3/16	
18¼	20	Oct	96	½	
18¼	20	Dec	261	15/16	
18¼	22½	Sep	140	1/16	
SysSf	15	Feb	22	4⅜	
17¾	17½	Sep	48	¾	
17¾	17½	Oct	...	...	
17¾	20	Sep	78	½	
17¾	22½	Sep	50	⅛	
T R W	65	Oct	50	1 11/16	
T2 Med	5	Nov	...	...	
7	5	Feb	20	2¾	
7	7½	Sep	188	5/16	
7	7½	Oct	66	⅜	
7	7½	Nov	31	⅝	
7	10	Sep	387	1/16	
7	10	Oct	70	3/16	
7	10	Nov	135	⅜	
Tadiran	25	Sep	52	9¼	
34½	30	Sep	121	4¾	
34½	30	Oct	20	5¼	
34½	30	Mar	23	6⅜	
Tambrd	35	Oct	51	15	
49¼	40	Sep	12	9⅜	
49¼	40	Jan	3	10½	
49¼	45	Sep	310	5	
49¼	45	Oct	402	6⅛	
49¼	45	Jan	209	7¼	
49¼	50	Sep	2078	2 1/16	
49¼	50	Oct	1378	3½	
49¼	50	Jan	217	4⅞	
49¼	55	Oct	1017	1⅜	
Tandem	10	Oct	53	½	
9¼	12½	Jan	41	½	
Tandy	30	Sep	41	1⅜	
31⅞	30	Oct	53	2⅛	
31⅞	30	Jan	29	2¾	
31⅞	35	Oct	20	⅜	
31⅞	35	Jan	166	1 7/16	
TelDat	50	Sep	20	1 1/16	
50½	55	Nov	30	¾	
TelMex	45	Feb	...	...	
53¼	50	Sep	273	3⅜	
53¼	50	Oct	...	...	
53¼	50	Nov	109	5	
53¼	55	Sep	729	7/16	
53¼	55	Oct	126	1¼	
53¼	55	Nov	100	2	
53¼	60	Nov	61	⅜	
Telabs	50	Sep	45	7¾	
TeleCm	25	Sep	420	1	

Selected Derivative Contracts and Exchanges Where Traded

Contract	Futures	Options	Futures Options	Exchange[a]
Indexes				
S&P 500	X	X	X	CME
S&P 100 (OEX)		X		CBOE
Major Market	X	X		CBT, ASE
NYSE Composite	X	X	X	NYFE, NYSE
Value Line	X	X		KC, PH
Institutional		X		ASE
Interest rates				
30-day interest rate	X			CBT
3-month T-bills	X		X	IMM
3-month Eurodollars	X		X	IMM
5-year T-notes	X		X	CBT
10-year T-notes	X		X	CBT
Municipal Bond Index	X		X	CBT
T-bonds	X		X	CBT
Foreign Exchange				
Japanese yen	X	X	X	IMM, PH
Deutsche mark	X	X	X	IMM, PH
Canadian dollar	X	X	X	IMM, PH
British pound	X	X	X	IMM, PH
Swiss franc	X	X	X	IMM, PH
Australian dollar	X	X	X	IMM, PH

[a] CME – Chicago Mercantile Exchange
CBOE – Chicago Board Options Exchange
CBT – Chicago Board of Trade
ASE – American Stock Exchange
IMM – International Monetary Market at the Chicago Mercantile Exchange
KC – Kansas City Board of Trade
PH – Philadelphia Stock Exchange
NYFE – New York Futures Exchange
NYSE – New York Stock Exchange

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Wednesday, September 1, 1993

Volume, close, net change and open interest for all contracts. Volume figures are unofficial. Open interest reflects previous trading day. p-Put c-Call

RANGES FOR UNDERLYING INDEXES

Wednesday, September 1, 1993

	High	Low	Close	Net Chg.	From Dec. 31	% Chg.
S&P 100 (OEX)	428.32	426.54	427.61	- 0.71	+ 30.97	+ 7.8
S&P 500-A.M.(SPX)	463.80	461.77	463.15	- 0.41	+ 27.44	+ 6.3
S&P 500 P.M.(NSX)	463.80	461.77	463.15	- 0.41	+ 27.44	+ 6.3
FT-SE 100 (FSX)	308.51	307.08	308.51	- 1.49	+ 23.86	+ 8.4
Russell 2000 (RUT)	247.12	245.07	247.11	+ 3.92	+ 26.11	+ 11.8
Lps S&P 100 (OEX)	42.83	42.65	42.76	- 0.07	+ 3.10	+ 7.8
Lps S&P 500 (SPX)	46.38	46.18	46.32	- 0.04	+ 2.75	+ 6.3
S&P Midcap (MID)	174.61	173.82	174.29	+ 0.29	+ 13.74	+ 8.6
Major Mkt (XMI)	370.[illegible]	368.65	369.58	- 0.92	+ 22.78	+ 6.6
Leaps MMkt (XLT)	37.05	36.88	36.96	- 0.09	+ 2.28	+ 6.6
Institut'l-A.M.(XII)	459.86	457.68	459.04	- 0.48	+ 15.34	+ 3.5
Institut'l-P.M.(PXP)	459.86	457.68	459.04	- 0.48	+ 15.34	+ 3.5
Eurotop 100 (EUR)	112.25	111.74	111.99	- 1.21	+ 24.43	+ 27.9
Japan (JPN)			212.38	- 0.72	+ 41.15	+ 24.0
Pharma (DRG)	164.18	162.82	163.69	- 0.19	- 34.15	- 17.3
Biotech (BTK)	114.84	112.19	113.22	- 0.50	- 57.42	- 33.6
NYSE (NYA)	257.15	256.13	256.88	.00	+ 16.67	+ 6.9
Wilshire S-C (WSX)	323.96	322.70	323.84	+ 0.65	+ 33.53	+ 11.5
Gold/Silver (XAU)	117.06	114.74	116.62	+ 1.25	+ 45.32	+ 63.6
Value Line (VLE)	436.47	434.95	436.27	+ 0.60	+ 50.19	+ 13.0
OTC (XOC)	567.77	562.77	566.16	+ 1.80	+ 35.41	+ 6.7
Bank (BKX)	277.60	276.26	276.88	- 0.97	+ 23.42	+ 9.2

CHICAGO

FINTIMES-SE 100 (FSX)

Call vol. 0 Open Int. 1,190
Put vol. 2 Open Int. 1,103

RUSSELL 2000 (RUT)

Strike		Vol.	Last	Net Chg.	Open Int.
Sep	195c	75	50½	...	...
Sep	220c	1	27¾	+ 1¼	500
Sep	230c	211	17	+ ¾	1,533
Sep	230p	200	¼	- ½	1,335
Sep	235c	10	11	+ 1	555
Oct	235p	50	1⅝	- ⅛	308
Sep	240c	20	7	+ ¼	1,908
Sep	240p	20	⅝	- 1/16	730
Oct	240p	40	1⅝	- 1½	102
Dec	240c	205	11½	- ½	3,490
Dec	240p	200	4⅛	+ ⅛	710
Sep	245c	5	3⅝	+ 5/16	274
Sep	245p	40	1½	- ⅜	191
Sep	250c	5	¾	+ 1/16	50
Sep	250p	5	4⅝	...	...
Oct	250c	20	2 9/16	+ 1/16	208

Call vol. 547 Open Int. 15,190
Put vol. 580 Open Int. 13,348

S & P 100 INDEX (OEX)

Strike		Vol.	Last	Net Chg.	Open Int.
Sep	370p	129	1/16	...	7,640
Sep	375p	167	1/16	...	4,087
Oct	375p	10	⅜	...	3,258
Sep	380p	14	⅛	...	7,058
Oct	380p	43	½	...	3,406
Nov	380p	732	1	- ⅛	4,904
Dec	380p	580	1½	...	1,264
Sep	385p	77	⅛	- 1/16	7,480
Oct	385p	29	⅝	...	3,458
Nov	385p	110	1 3/16	- ⅛	703
Sep	390p	1,092	3/16	...	22,203
Oct	390c	22	38¾	+ 4	464
Oct	390p	693	11/16	...	6,285
Nov	390p	1,605	1⅝	...	6,457
Dec	390p	310	2 9/16	- 3/16	283
Sep	395p	1,295	¼	...	21,790
Oct	395p	109	15/16	...	7,762
Nov	395p	6,374	1 13/16	- ⅛	1,791
Sep	400c	5	27½	- ¾	793
Sep	400p	4,059	5/16	- 1/16	26,924
Oct	400p	228	1 3/16	...	6,957
Nov	400p	379	2 5/16	...	3,111
Dec	400p	187	3½	+ ⅛	1,890
Sep	405p	7,908	7/16	- 1/16	31,097
Oct	405p	710	1 9/16	- 1/16	9,109
Nov	405p	8	3	+ 3/16	459
Sep	410c	127	17¾	- ⅜	10,895
Sep	410p	3,200	11/16	- 1/16	29,320
Oct	410p	1,155	2 1/16	...	7,080
Nov	410p	176	3⅜	...	13,919
Dec	410p	24	4⅝	- ⅝	5,004
Sep	415c	837	13¼	- ⅜	19,453
Sep	415p	9,561	15/16	- 1/16	44,449
Oct	415c	36	14⅜	- ⅜	3,323
Oct	415p	1,520	2⅜	- 1/16	4,769
Nov	415p	56	4⅜	- ⅛	2,992
Sep	420c	9,163	8⅝	- ⅝	45,813
Sep	420p	14,993	1⅝	- 1/16	56,793
Oct	420c	1,368	11⅛	- ⅜	8,259
Oct	420p	3,166	3⅝	...	12,219
Nov	420c	12	12¼	- ¾	12,989
Nov	420p	310	6	+ ¼	4,445
Dec	420c	2	15	- ⅝	1,225
Dec	420p	21	7⅜	- ⅛	1,436
Sep	425c	22,854	4⅝	- ⅜	45,241
Sep	425p	20,589	2 13/16	...	45,765
Oct	425c	1,342	7⅜	- ½	6,242
Oct	425p	2,817	5⅜	+ ⅛	4,236
Nov	425c	268	9⅝	- ⅜	1,824
Nov	425p	64	7½	...	900
Sep	430c	28,958	2⅛	- 1/16	55,184
Sep	430p	7,865	5⅛	+ ⅜	7,719
Oct	430c	1,404	4⅝	- ½	10,616
Oct	430p	375	7⅜	+ ½	1,114
Nov	430c	236	6⅜	- ⅝	7,210
Nov	430p	96	10	+ ½	384
Dec	430c	45	8⅝	- ⅜	3,154
Dec	430p	40	11⅜	- ⅛	117
Sep	435c	9,852	11/16	- 3/16	58,246
Sep	435p	313	8⅜	- ⅜	958
Oct	435c	1,438	2⅜	- ⅜	11,824
Oct	435p	40	10⅝	+ ½	32
Nov	435c	786	4⅜	...	3,573
Nov	435p	14	12⅝	- ¼	83
Sep	440c	7,455	⅛	- 1/16	44,709
Oct	440c	1,453	1 3/16	- 3/16	18,781
Oct	440p	1	14½	- 1¼	73
Nov	440c	148	3	- ⅛	14,732
Dec	440c	354	4⅝	- ⅛	2,432
Dec	440p	81	17⅜	- ¼	36
Sep	445c	968	⅛	...	10,921
Sep	445p	3	19⅜	- ½	...
Oct	445c	1,337	⅜	- ⅛	2,773
Nov	445c	234	1⅜	+ ⅛	1,574
Oct	450c	163	⅜	...	884
Nov	450c	548	15/16	- 1/16	901
Dec	450c	78	1⅝	+ 1/16	818
Dec	450p	5	25	- ½	123

Call vol. 83,171 Open Int. 402,956
Put vol. 96,715 Open Int. 439,451

S & P 500 INDEX-AM (SPX)

Strike		Vol.	Last	Net Chg.	Open Int.
Dec	350p	49	⅛	...	4,797
Nov	400p	1	⅜	- ⅛	565
Dec	400p	115	1	- ⅛	31,482
Sep	410p	208	1/16	...	10,788
Dec	410p	192	1½	...	6,174
Oct	415p	908	⅜	- ⅛	670
Dec	415p	920	1⅝	- ⅛	5,032
Sep	420p	783	⅛	...	20,786
Nov	420p	10	1½	+ 1/16	358
Dec	420p	175	2⅜	...	3,658
Sep	425c	43	37½	...	17,422
Sep	425p	145	⅛	...	24,682
Oct	425p	5	1	+ ⅛	864
Dec	425p	1,640	2 9/16	+ 1/16	40,454
Sep	430p	4,175	¼	...	16,457
Oct	430p	535	1	[illegible]	[illegible]
Nov	[illegible]				
Sep	470p	101	7⅜	- ⅛	44,773
Oct	470c	118	3⅝	- ⅛	13,615
Oct	470p	1	9¾	- 1¾	202
Dec	470c	4,000	7	- ¼	8
Dec	470p	5	14	...	...
Sep	475c	122	¼	- ½	24,938
Sep	475p	122	11⅝	- ⅜	45,529
Oct	475c	197	1 11/16	- 1/16	12,356
Nov	475c	100	3⅜	...	...
Dec	475c	264	5⅜	+ ¼	9,867
Dec	475p	37	16½	- ¼	1,451
Sep	480c	377	⅛	- 1/16	5,444
Sep	480p	15	17½	- ¼	58
Oct	480c	1,225	1	...	2,371
Nov	480p	9	18½	- 1¼	1
Dec	480c	220	4	+ ⅜	1,854
Dec	500p	1	37½	+ 1¼	1,854

Call vol. 30,509 Open Int. 455,065
Put vol. 40,366 Open Int. 735,130

S & P 500 INDEX-PM (NSX)

Strike		Vol.	Last	Net Chg.	Open Int.
Dec	390p	25	¼	+ 1/16	4,045

Call vol. 0 Open Int. 19,531
Put vol. 25 Open Int. 50,015

AMERICAN

BIO TECH (BTK)

Strike		Vol.	Last	Net Chg.	Open Int.
Oct	90p	10	½	- ⅛	115
Sep	105c	2	8¾	+ 2¼	17
Sep	110c	6	5⅛	+ ½	21
Oct	110c	5	6⅜	- ¼	75
Sep	115c	4	2½	+ ⅜	21

Call vol. 17 Open Int. 501
Put vol. 10 Open Int. 902

EUROTOP (EUR)

Strike		Vol.	Last	Net Chg.	Open Int.
Sep	100c	381	12⅜	- 1⅛	380
Sep	100p	381	⅛	...	381
Nov	100c	381	14½	...	...
Nov	100p	381	½	...	...
Sep	110c	1	3⅜	- ½	...

Call vol. 763 Open Int. 456
Put vol. 762 Open Int. 381

INSTITUTIONAL-AM (XII)

Strike		Vol.	Last	Net Chg.	Open Int.
Sep	415p	50	⅛	...	60
Sep	450c	50	10⅜	+ 4⅜	323
Sep	455c	25	5½	- ⅜	60
Sep	455p	100	2 11/16	...	245
Sep	460p	75	4⅜	- 3½	101
Oct	460c	50	6⅛	+ 2⅜	100
Sep	465c	125	1	- 1/16	7,395
Oct	475c	17	⅜	+ 1/16	110
Oct	480c	17	7/16	+ 3/16	12

Call vol. 284 Open Int. 22,866
Put vol. 225 Open Int. 14,134

INSTITUTIONAL-P.M. (PXP)

Call vol. 75 Open Int. 20,150
Put vol. 65 Open Int. 26,312

JAPAN INDEX (JPN)

Strike		Vol.	Last	Net Chg.	Open Int.
Sep	190p	70	1/16	- 1/16	1,181
Dec	190c	100	25½	...	...
Dec	190p	40	1 15/16	- 1/16	3,591
Sep	205p	8	1	...	849
Sep	210c	131	4⅜	- ½	2,013
Sep	210p	118	2 7/16	...	1,112
Dec	210c	140	11⅛	- ⅛	328
Dec	210p	101	7½	- ¼	200
Sep	215c	31	2¼	- ⅜	1,273
Sep	215p	52	4⅜	...	342
Sep	220c	6	15/16	- 3/16	1,905
Oct	220c	273	3	- ½	305

Call vol. 1,131 Open Int. 28,208
Put vol. 454 Open Int. 38,339

MAJOR MARKET (XMI)

Strike		Vol.	Last	Net Chg.	Open Int.
Dec	300p	6	⅛	...	5,556
Sep	320p	25	1/16	...	60
Sep	345p	50	3/16	+ 1/16	219
Sep	350p	10	7/16	+ ⅛	3,324
Dec	350p	3	3⅜	- ⅜	2,744
Oct	355p	5	2	- ⅜	100
Nov	355p	12	3½	- ½	286
Sep	360c	1	11⅜	+ ⅜	515
Sep	360p	30	15/32	+ 1/16	1,089
Nov	360p	40	[illegible]		

PHILADELPHIA

GOLD/SILVER (XAU)

Strike		Vol.	Last	Net Chg.	Open Int.
Sep	110c	41	7⅜	- ½	286
Sep	110p	25	1⅛	+ ⅛	176
Oct	110p	8	3¼	+ 5/16	38
Sep	115c	245	4	- ⅜	992
Sep	115p	15	3	+ 7/16	446
Oct	115c	25	6⅛	- 1⅜	125
Oct	115p	2	4⅜	+ ½	53
Dec	115c	3	10⅜	+ ⅜	47
Sep	120c	143	2⅛	- ⅛	1,483
Sep	120p	45	5⅜	+ 1	366
Oct	120c	15	3⅜	- 1¼	241
Dec	120c	220	7⅜	- ⅜	240
Dec	120p	200	10⅜	+ ⅜	131
Sep	125c	105	⅝	- ¼	1,346
Sep	125p	2	9¾	- ⅜	33
Oct	125c	20	2 1/16	- 1 7/16	229
Dec	125c	10	5½	- 1⅜	354
Oct	130c	20	1⅛	- 7/16	160
Sep	135c	10	1/16	- 1/16	390

Call vol. 833 Open Int. 7,445
Put vol. 297 Open Int. 2,980

OTC INDEX (XOC)

Strike		Vol.	Last	Net Chg.	Open Int.
Oct	515p	4	1 13/16	...	...
Sep	520p	16	7/16	- ½	302
Oct	530p	1	4⅜	- 1⅛	330
Sep	540p	25	1 11/16	- 13/16	49
Sep	545c	2	24⅜	+ 7⅛	15
Sep	545p	11	1⅜	- [illegible]	60
Sep	550c	15	18⅜	+ 7[illegible]	322
Oct	550c	2	25	+ 7⅛	2
Oct	555p	7	8⅜	- 4¼	1
Sep	560c	24	11⅜	+ 1⅜	408
Sep	560p	16	5⅛	- ⅜	122
Sep	565c	12	7⅜	+ ⅜	85
Sep	565p	13	6½	- 2	55
Sep	570c	7	5⅜	+ 1⅜	303
Sep	570p	10	9½	- 1	52
Sep	575c	23	3⅛	+ ⅜	60
Sep	580p	6	16⅜	- 10⅛	35
Oct	580p	1	17⅜	- 5½	1
Sep	585c	5	1 11/16	+ 5/16	285
Nov	585c	10	9⅜	...	...
Sep	590c	10	5/16	- ⅛	110
Nov	590c	10	7⅜	...	...
Sep	600c	5	¼	...	...

Call vol. 122 Open Int. 4,042
Put vol. 129 Open Int. 4,456

PHLX KBW BANK (BKX)

Strike		Vol.	Last	Net Chg.	Open Int.
Sep	260p	20	½	- 1¼	21
Sep	275c	100	4⅜	- ⅜	200
Sep	280c	110	2⅜	- ¼	100
Oct	285c	10	3⅜	...	...

Call vol. 220 Open Int. 1,472
Put vol. 20 Open Int. 3,854

VALUE LINE (VLE)

Strike		Vol.	Last	Net Chg.	Open Int.
Sep	410p	10	⅛	- 1/16	142
Sep	415c	90	20⅜	+ 6⅜	970
Sep	440c	5	1 5/16	- 9/16	11

Call vol. 230 Open Int. 6,180
Put vol. 10 Open Int. 3,094

PACIFIC

WILSHIRE INDEX (WSX)

Strike		Vol.	Last	Net Chg.	Open Int.
Sep	320c	10	5	+ 1⅛	341
Sep	320p	15	1 15/16	- 1 1/16	227
Oct	320c	10	7½	...	...
Oct	320p	15	4⅜	- ¼	135
Sep	325c	60	2½	+ 7/16	2,334
Sep	325p	60	3½	- 1⅜	1,700
Oct	325p	10	5⅜	...	25

Call vol. 110 Open Int. 5,271
Put vol. 100 Open Int. 6,255

BEST AVAILABLE COPY

OTHER TRADED SECURITY ISSUES

COMMODITY/METAL OPTIONS % FUTURES

PARTNERSHIPS (OIL & GAS, ETC.)

EQUITY REAL ESTATE PARTICIPATIONS

VENTURE CAPITAL PARTICIPATIONS

SECURITIZED ASSETS

3. SECURITY MARKET INDEXES

SECURITY MARKET INDEXES

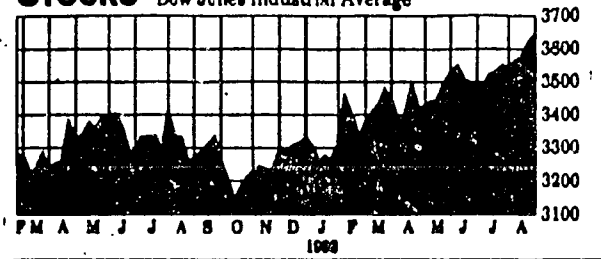
PRICE-WEIGHTED INDEXES (I.E. DOW JONES)

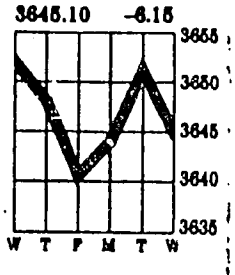
MARKET-WEIGHTED INDEXES (I.E S&P 500)

TOTAL-RETURN INDEXES (I.E. BOND INDEXES)

MARKETS DIARY 9/1/93

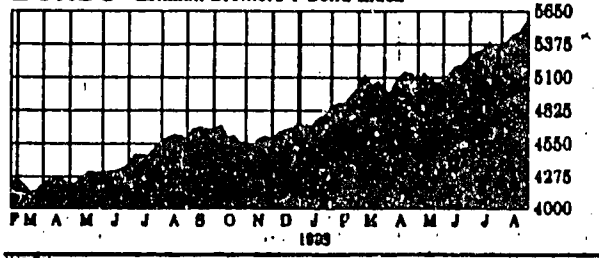
STOCKS Dow Jones Industrial Average

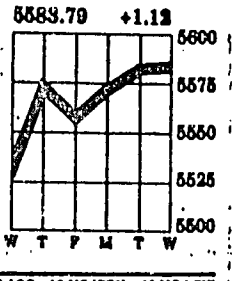




INDEX	CLOSE	NET CHNG	PCT CHNG	12-MO HIGH	12-MO LOW	12-MO CHNG	12-MO PCT	FROM 12/31	FROM 12/31 PCT
DJIA	3645.10 –	6.15 –	0.17	3652.09	3136.58	+ 354.79	+ 10.78	+ 343.99	+ 10.42
DJ Equity	439.03 –	0.25 –	0.06	439.83	380.79	+ 46.44	+ 11.81	+ 26.39	+ 6.39
S&P 500	463.15 –	0.41 –	0.09	463.56	[illegible]	+ 45.17	+ 10.81	+ [illegible]	+ 6.30
Nasdaq Comp.	746.15 +	3.31 +	0.45	746.15	565.21	+ 174.90	+ 30.62	+ 69.20	+ 10.22
DJ World Index	112.75 –	0.27 –	0.24	113.02	88.61	+ 18.77	+ 19.97	+ 20.14	+ 21.74
London (FT 100)	3063.1 –	14.9 –	0.48	3100.6	2313.0	+ 772.1	+ 33.30	+ 238.6	+ 8.38
Tokyo (Nikkei)	20953.30 –	73.30 –	0.35	21076.00	15393.48	+ 3365.58	+ 19.14	+ 4028.35	+ 23.89

BONDS Lehman Brothers T-Bond Index





INDEX	WED	WED YIELD	TUES	TUES YIELD	YR AGO	12-MO HIGH	12-MO LOW
Lehman Brothers Long T-Bond	5583.79	6.09%	5582.67	6.09%	4604.93	5583.79	4505.29
DJ 20 Bond (Price Return)	109.39	6.27	109.34	6.28	102.24	109.45	101.83
Salomon mortgage-backed	751.53	5.84	752.61	5.78	704.88	753.71	702.20
Bond Buyer municipal	104-6	5.59	104-4	5.61	96	104-19	93-13
Merrill Lynch corporate	694.87	6.49	694.61	6.49	613.79	696.29	606.17

Price-weighted: Prices of individual securities divided by number of securities, adjusted for splits, substitutions, etc. Divisor for Dow Jones Industrials now is 0.447.

Market-value weighted: Price times shares outstanding totaled for all securities in index.

Total Return Index: Price change plus income, applicable to most Bond Indexes.

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4. THE USE OF OPTIONS, FUTURES AND INDEX FUTURES

OPTIONS AND FUTURES

*WRITING COVERED CALL OPTIONS

*WRITING PROTECTIVE PUT OPTIONS

*STOCK INDEX FUTURES - PROGRAM TRADING

*TRIPLE WITCHING HOUR

Supporting documentation for discussion of the above and related subjects will be made available at time of presentation.

5. PROSPECTUS DISCLOSURE

SUBJECT TO COMPLETION
PRELIMINARY PROSPECTUS DATED JUNE 15, 1993

1,350,000 Shares

Pulitzer Publishing Company

Common Stock

All of the shares of Common Stock offered hereby are being sold by Pulitzer Publishing Company ("Pulitzer" or the "Company"). After giving effect to this offering (assuming the over-allotment option is not exercised), the Company will have outstanding 3,482,000 shares of Common Stock with one vote per share (representing 3.5% of the combined voting power of the Company) and 9,467,566 shares of Class B Common Stock held in a voting trust with ten votes per share (representing 96.5% of the combined voting power of the Company). Other than voting rights, the terms of the Common Stock and Class B Common Stock are substantially similar. See "Description of Capital Stock."

The Common Stock is traded on the NASDAQ National Market System under the symbol "PLTZ." The Common Stock is also listed on the Midwest Stock Exchange. The Company has made application to list the Common Stock on the New York Stock Exchange. On June 11, 1993, the last sale price of the Common Stock, as reported by the NASDAQ National Market System, was $29.75 per share. See "Price Range of Common Stock and Dividends."

THESE SECURITIES HAVE NOT BEEN APPROVED OR DISAPPROVED BY THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION NOR HAS THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION PASSED UPON THE ACCURACY OR ADEQUACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

	Price to Public	Underwriting Discounts and Commissions(1)	Proceeds to Company(2)
Per Share	$	$	$
Total(3)	$	$	$

(1) The Company has agreed to indemnify the Underwriters against certain civil liabilities, including liabilities under the Securities Act of 1933. See "Underwriting."

(2) Before deducting expenses of the offering estimated at $ payable by the Company.

(3) The Company has granted the Underwriters a 30-day option to purchase up to 202,500 additional shares of Common Stock, solely to cover over-allotments. If the over-allotment option is exercised in full, the Total Price to Public, Underwriting Discounts and Commissions and Proceeds to Company will be $, $ and $, respectively. See "Underwriting."

The shares of Common Stock are offered by the several Underwriters, subject to prior sale, when, as, and if delivered and accepted by them, subject to the right of the Underwriters to reject any order in whole or in part. It is expected that the delivery of the shares will be made on or about , 1993.

A.G. Edwards & Sons, Inc. ***Morgan Stanley & Co.*** *Incorporated*

The date of this Prospectus is , 1993.

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PROSPECTUS SUMMARY

The following summary is qualified in its entirety by the more detailed information and financial statements appearing elsewhere in this Prospectus. Unless the context otherwise requires, the term "Company" or "Pulitzer" means Pulitzer Publishing Company and subsidiaries. Unless otherwise indicated (i) all share and per share data in this Prospectus have been adjusted to give effect to a ten percent stock dividend declared on January 4, 1993 and (ii) the information in this Prospectus assumes the Underwriters' over-allotment option is not exercised. The Company's fiscal year and first fiscal quarter end on the Sunday coincident with or prior to December 31 and March 31, respectively. For ease of presentation, the Company has used December 31 as the fiscal year end and March 31 as the first fiscal quarter end in this Prospectus.

THE COMPANY

Pulitzer Publishing Company is engaged in newspaper publishing and television and radio broadcasting. Its newspaper operations consist of two major metropolitan dailies, the *St. Louis Post-Dispatch* (the "*Post-Dispatch*"), the only major daily newspaper serving the St. Louis metropolitan area; *The Arizona Daily Star* (the "*Star*"), serving the Tucson metropolitan area; and the *Daily Southtown*, a suburban daily newspaper in the Chicago area. The Company's broadcasting operations consist of seven network-affiliated television stations located in Greenville, South Carolina; New Orleans, Louisiana; Lancaster, Pennsylvania; Winston-Salem, North Carolina; Albuquerque, New Mexico; Louisville, Kentucky; and Omaha, Nebraska; and two radio stations located in Phoenix, Arizona. Pulitzer's media properties serve markets with a total population of 20 million people.

The Company's long-term operating strategy for its geographically diverse media assets is to maximize each property's growth and profitability through maintenance of editorial excellence, leadership in locally-responsive news, and tight control of costs. In addition to internal growth, Pulitzer selectively acquires properties which complement its operating strategy and present attractive investment opportunities.

As of April 6, 1993, the Company entered into an agreement to acquire two network-affiliated television stations, WESH located in Daytona Beach, Florida and KCCI-TV located in Des Moines, Iowa. WESH operates in the Daytona Beach/Orlando/Melbourne, Florida market, one of the fastest growing metropolitan areas in the United States. KCCI-TV, while in a much smaller market, complements the Company's existing operations. The Company has amended the agreement to permit different closing dates for the acquisitions of the stations. The Company expects to complete the acquisition of WESH by July 1, 1993. The acquisition of KCCI-TV is pending, among other things, the approval of the Federal Communications Commission. See "Recent Developments."

The Company was founded by the first Joseph Pulitzer in 1878 to publish the original *St. Louis Post-Dispatch* and has operated continuously since that time under the direction of the Pulitzer family. Joseph Pulitzer, Jr., a grandson of the founder, served as Chairman of the Board of the Company until his death on May 26, 1993. Michael E. Pulitzer, also a grandson of the founder, currently serves as Chairman of the Board, President and Chief Executive Officer of the Company.

THE OFFERING

Common Stock offered	1,350,000
Common Stock and Class B Common Stock outstanding after the offering	12,957,471
Use of Proceeds	To partially repay the debt borrowed to finance the acquisitions of WESH and KCCI-TV. See "Use of Proceeds" and "Recent Developments."
NASDAQ symbol	PLTZ
Listing	The Common Stock is listed on the Midwest Stock Exchange. The Company has made application to list the Common Stock on the New York Stock Exchange.

SUMMARY CONSOLIDATED FINANCIAL DATA
(In thousands, except per share data)

	Year Ended December 31,				Three Months Ended March 31,		
	Historical			Pro Forma As Adjusted	Historical		Pro Forma As Adjusted
	1990	1991	1992	1992(1)	1992	1993	1993(1)
Consolidated Income Statement Data:							
Operating Revenues — net:							
Publishing	$287,241	$284,353	$285,004	$285,004	$ 67,935	$68,106	$ 68,106
Broadcasting	115,531	109,019	113,369	158,192	24,573	25,485	35,956
Total	$402,772	$393,372	$398,373	$443,196	$ 92,508	$93,591	$104,062
Operating Income (loss):							
Publishing	$ 12,654	$ 9,041	$ 18,179	$ 18,179	$ 2,703	$ 4,554	$ 4,554
Broadcasting	21,550	17,793	23,311	23,197	2,551	3,561	2,691
Corporate	(2,957)	(3,424)	(4,856)	(4,856)	(907)	(921)	(921)
Total	$ 31,247	$ 23,410	$ 36,634	$ 36,520	$ 4,347	$ 7,194	$ 6,324
Income before cumulative effect of change in accounting principles	$ 12,524	$ 10,559	$ 23,902	$ 19,054	$ 1,216	$ 3,336	$ 1,671
Cumulative effect of change in accounting principles, net of applicable income taxes(2)	—	—	(25,147)		(25,147)	360	
Net income (loss)	$ 12,524	$ 10,559	$ (1,245)		$(23,931)	$ 3,696	
Per Share Data:							
Income before cumulative effect of change in accounting principles	$ 1.09	$ .92	$ 2.07	$ 1.48	$ .10	$ .29	$ .13
Cumulative effect of change in accounting principles, net of applicable income taxes(2)	—	—	(2.18)		(2.18)	.03	
Earnings (loss) per share	$ 1.09	$ .92	$ (.11)		$ (2.08)	$ .32	
Dividends per share of common stock and Class B common stock	$ .45	$ .47	$ .49		$ .12	$ .13	
Weighted average number of shares (common and Class B common stock) outstanding	11,522	11,523	11,539	12,889	11,529	11,584	12,934
Other Consolidated Financial Data:							
Earnings before interest, income taxes, depreciation and amortization	$ 52,748	$ 47,183	$ 55,503	$ 72,772	$ 9,044	$11,497	$ 14,973
Capital expenditures	10,941	12,924	9,259	9,451	1,123	2,621	2,710
Depreciation and amortization	21,501	23,773	18,869	36,252	4,697	4,303	8,649

	As of December 31,			As of March 31,		
	Historical			Historical		Pro Forma As Adjusted
	1990	1991	1992	1992	1993	1993(1)
Consolidated Balance Sheet Data:						
Working capital	$ 34,863	$ 32,044	$ 45,989	$ 35,715	$ 51,647	$ 54,647
Total assets	261,626	243,947	285,235	242,516	287,610	447,610
Long-term debt, less current maturities	90,975	74,372	57,661	74,358	57,644	181,004
Stockholders' equity	67,610	72,851	67,074	71,584	68,189	104,829

(1) The pro forma as adjusted income statement data, per share data, and other financial data, respectively, assume that the acquisition of WESH and KCCI-TV, the related debt financing, and the issuance of 1,350,000 shares of common stock offered hereby and the application of the net proceeds therefrom had occurred as of the beginning of the respective periods. The pro forma as adjusted balance sheet data assume that the acquisition of WESH and KCCI-TV, the related debt financing, and the issuance of 1,350,000 shares of common stock offered hereby and the application of the net proceeds therefrom had occurred as of March 31, 1993. See "Pro Forma Financial Statements" and "Recent Developments."

(2) Effective January 1, 1992, the Company adopted the provisions of Statement of Financial Accounting Standards No. 106 "Employers' Accounting for Postretirement Benefits Other Than Pensions" ("SFAS 106"). The Company's election to recognize its initial liability under SFAS 106 resulted in a one-time charge against 1992 earnings, net of taxes, of $25.1 million or $2.18 per share. This change was recognized in the first quarter of 1992. Effective January 1, 1993, the Company adopted the provisions of Statement of Financial Accounting Standards No. 109 "Accounting for Income Taxes" ("SFAS 109"). The Company's adoption of SFAS 109 resulted in an increase in net income of $360,000 or $0.03 per share. This change was recognized in the first quarter of 1993.

THE COMPANY

Pulitzer Publishing Company is engaged in newspaper publishing and television and radio broadcasting. Its newspaper operations consist of two major metropolitan dailies, the *St. Louis Post-Dispatch* (the "*Post-Dispatch*"), the only major daily newspaper serving the St. Louis metropolitan area; *The Arizona Daily Star* (the "*Star*"), serving the Tucson metropolitan area; and the *Daily Southtown*, a suburban daily newspaper in the Chicago area. The Company's broadcasting operations consist of seven network-affiliated television stations located in Greenville, South Carolina; New Orleans, Louisiana; Lancaster, Pennsylvania; Winston-Salem, North Carolina; Albuquerque, New Mexico; Louisville, Kentucky; and Omaha, Nebraska; and two radio stations located in Phoenix, Arizona. The Company has entered into an agreement to acquire two additional network-affiliated television stations located in Daytona Beach, Florida and Des Moines, Iowa. See "Recent Developments."

The Company's long-term operating strategy for its geographically-diverse media assets is to maximize each property's growth and profitability through maintenance of editorial excellence, leadership in locally-responsive news, and tight control of costs. In addition to internal growth, Pulitzer selectively acquires broadcasting and newspaper properties which complement its operating strategy and present attractive investment opportunities.

The Pulitzer Publishing Company was founded by the first Joseph Pulitzer in 1878 to publish the original *St. Louis Post-Dispatch* and has operated continuously since that time under the direction of the Pulitzer family. In 1986, the Company was reincorporated in the State of Delaware. The Company's executive offices are located at 900 North Tucker Boulevard, St. Louis, Missouri 63101, and its telephone number is (314) 340-8000.

RECENT DEVELOPMENTS

As of April 6, 1993, the Company entered into an agreement with H&C Communications, Inc. ("H&C") to acquire the operating assets (including accounts receivable) of two network-affiliated television stations: WESH, an NBC affiliate, which is licensed to Daytona Beach, Florida and KCCI-TV, a CBS affiliate, which is licensed to Des Moines, Iowa. The Company has amended the agreement to permit different closing dates for the acquisitions of the stations. The purchase price for WESH is $136.2 million, payable in cash. The purchase price for KCCI-TV is $20.8 million, payable in cash. In addition, the Company will acquire the net receivables of WESH and KCCI-TV for the lesser of $8 million or the recorded net receivable balance. The Company will also assume the obligations of H&C arising after each closing under the various operating and programming rights agreements of the stations. The agreement is subject to, among other conditions, receipt of various consents, including consents by the Federal Communications Commission (the "FCC") and the appropriate television networks. Pulitzer expects to complete the acquisition of WESH by July 1, 1993. The acquisition of KCCI-TV is pending, among other things, the approval of the FCC.

The acquisition is consistent with the Company's strategy of selectively acquiring broadcasting and newspaper properties which present attractive investment opportunities. The Daytona Beach/Orlando/Melbourne station allows the Company to move into a large, rapidly growing market that can provide opportunities for future growth. The Des Moines station, though in a much smaller market, complements Pulitzer's existing broadcasting operations. In addition, both stations provide further geographic diversification of the Company's media assets.

WESH serves an area of eastern Florida that includes the metropolitan areas of Daytona Beach and Orlando. Orlando, the 23rd largest media market in the United States, is also one of the fastest growing metropolitan areas in the country. Following the acquisition, Orlando will be the Company's largest broadcasting market.

KCCI-TV serves an area that is approximately 100 miles in circumference and centered in Des Moines. Des Moines, the 70th largest media market in the United States, has a relatively stable economy anchored by state government and stable business and consumer services.

During 1992, the stations had operating revenues of $44.8 million and operating expenses, excluding depreciation and amortization, of $27.2 million.

In connection with the acquisitions, the Company has entered into a letter of intent with The Prudential Insurance Company of America ("Prudential") providing for the issuance by the Company to Prudential of up to $50 million principal amount of 6.76% Senior Notes due 2001 and up to $50 million principal amount of 7.22% Senior Notes due 2005 (collectively, the "Notes"). The net proceeds received by the Company from the issuance of the Notes will be used to partially finance the acquisition of WESH. Prudential's obligation to purchase any or all of the Notes is subject to, among other things, Prudential and the Company's entering into a satisfactory purchase agreement regarding the Notes and the Company completing the acquisition of WESH. The Company has a commitment for a five year revolving and term credit facility from The Canadian Imperial Bank of Commerce ("CIBC") for up to $60 million. The interest rate on such debt is initially expected to be %. The credit facility will be used to partially finance the acquisition of WESH and KCCI-TV. A portion of such credit facility will be repaid with the proceeds from this offering. See "Use of Proceeds."

On March 8, 1993, applications were filed with the FCC to obtain its consent to the assignment of the licenses of WESH and KCCI-TV to the Company. On April 27, 1993, the FCC provisionally granted its consent to the assignment of the WESH license to the Company, which consent is expected to become final on June 14, 1993. Because the broadcasting signals of KCCI-TV and KETV, Omaha (which is owned by the Company), minimally overlap, the Company requested a waiver from the FCC's duopoly rules or, in the alternative, authority to operate KCCI-TV with a directional antenna which would result in the elimination of the overlap of KCCI-TV and KETV. These applications are pending action by the FCC. The Company anticipates that the FCC will waive the duopoly rules and grant its consent to the assignment of the KCCI-TV license to the Company.

USE OF PROCEEDS

The net proceeds to be received by the Company from the sale of the shares offered hereby are estimated to be $ ($ if the Underwriters' over-allotment option is exercised in full). The net proceeds will be used to partially repay the debt borrowed to finance the acquisitions of WESH and KCCI-TV. See "Recent Developments." Pending such use, the net proceeds will be invested in short-term, investment grade, interest bearing securities.

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CAPITALIZATION

The following table sets forth the capitalization of the Company (i) as of March 31, 1993, (ii) pro forma, as of March 31, 1993, as if the acquisition of WESH and KCCI-TV, and the related debt financing, had occurred on March 31, 1993 and (iii) pro forma as adjusted, as of March 31, 1993, to reflect (a) the acquisition of WESH and KCCI-TV and the related debt financing and (b) the sale by the Company of 1,350,000 shares of Common Stock offered hereby and the application of the estimated net proceeds as set forth in "Use of Proceeds." See "Pro Forma Financial Statements" and "Recent Developments."

	March 31, 1993		
	Actual	Pro Forma	Pro Forma As Adjusted
		(In thousands)	
Long-term debt, less current maturities	$ 57,644	$ 217,644	$ 181,004
Stockholders' equity:			
Preferred Stock, $.01 par value; 25,000,000 shares authorized; issued and outstanding — none	—	—	—
Common Stock, $.01 par value; 100,000,000 shares authorized; issued — 2,138,255 actual and pro forma (3,488,255 pro forma as adjusted)	21	21	34
Class B Common Stock, $.01 par value; 50,000,000 shares authorized; issued — 15,849,848	158	158	158
Additional paid-in-capital	83,083	83,083	119,710
Retained earnings	172,546	172,546	172,546
	255,808	255,808	292,448
Treasury stock — at cost; 8,235 shares of Common Stock and 6,382,282 shares of Class B Common Stock actual, pro forma and pro forma as adjusted	(187,619)	(187,619)	(187,619)
Total stockholders' equity	68,189	68,189	104,829
Total capitalization	$ 125,833	$ 285,833	$ 285,833

PRICE RANGE OF COMMON STOCK AND DIVIDENDS

The Company's Common Stock is traded on the NASDAQ National Market System under the symbol "FLTZ." The Common Stock is also listed on the Midwest Stock Exchange. The Company has made application to list the Common Stock on the New York Stock Exchange. At May 24, 1993, there were approximately 448 record holders of the Company's Common Stock and 40 record holders of its Class B Common Stock. The following table sets forth the range of high and low sales prices as reported on the NASDAQ National Market System and dividends paid for each quarterly period:

	High	Low	Dividend*
1991			
First Quarter	$21.818	$16.364	$0.1182
Second Quarter	23.409	20.227	0.1182
Third Quarter	22.955	20.000	0.1182
Fourth Quarter	20.909	16.364	0.1182
1992			
First Quarter	$24.318	$19.546	$0.1227
Second Quarter	29.318	22.955	0.1227
Third Quarter	29.773	25.455	0.1227
Fourth Quarter	32.273	27.159	0.1227
1993			
First Quarter	$39.750	$30.500	$0.1350
Second Quarter through June 11, 1993	36.000	28.500	0.1350

* The dividends paid on each share of Common Stock and Class B Common Stock are identical.

Since its founding, the Company has paid cash dividends in every year other than 1911 and 1917.

On June 11, 1993, the closing price for the Common Stock, as reported on the NASDAQ National Market System, was $29.75 per share.

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SELECTED CONSOLIDATED FINANCIAL DATA
(In thousands, except per share data)

The selected consolidated financial data presented below for, and as of the end of, each of the five years in the period ended December 31, 1992, have been derived from the consolidated financial statements of the Company, which have been audited by Deloitte & Touche, independent auditors. The selected consolidated financial data presented below for, and as of the end of the three-month periods ended March 31, 1992 and 1993 have been prepared on the same basis as the audited financial statements of the Company and include all adjustments (consisting only of normal recurring adjustments) necessary to present fairly the information set forth therein. This data should be read in conjunction with the consolidated financial statements, related notes and other financial information included elsewhere or incorporated by reference in this Prospectus.

	Years Ended December 31,					Three Months Ended March 31,	
	1988	1989	1990	1991	1992	1992	1993
						(unaudited)	
Consolidated Income Statement Data:							
Operating Revenues — net	$390,979	$402,214	$402,772	$393,372	$398,373	$ 92,508	$93,591
Operating Expenses:							
Operations	189,486	195,921	198,317	184,784	170,307	42,183	41,830
Selling, general and administrative	128,940	142,151	146,454	154,115	160,873	39,432	38,062
St. Louis Agency adjustment	11,100	8,127	5,253	7,290	11,690	1,849	2,202
Depreciation and amortization	16,721	15,032	21,501	23,773	18,869	4,697	4,303
Total operating expenses	346,247	361,231	371,525	369,962	361,739	88,161	86,397
Operating income	44,732	40,983	31,247	23,410	36,634	4,347	7,194
Interest income	1,812	2,151	2,041	1,618	1,156	317	298
Interest expense	(12,426)	(10,909)	(10,920)	(9,443)	(7,801)	(2,165)	(1,719)
Gain on sale of broadcasting property(1)		19,370					
Net other expense	(327)	(422)	(519)	(661)	(756)	(221)	(224)
Income before provision for income taxes	33,791	51,173	21,849	14,924	29,233	2,278	5,549
Provision for income taxes	14,150	19,784	9,325	4,365	5,331	1,062	2,213
Income before cumulative effect of change in accounting principles	19,641	31,389	12,524	10,559	23,902	1,216	3,336
Cumulative effect of change in accounting principles, net of applicable income taxes(2)	—	—	—	—	(25,147)	(25,147)	360
Net income (loss)(1)	$ 19,641	$ 31,389	$ 12,524	$ 10,559	$ (1,245)	$(23,931)	$ 3,696
Per Share Data:							
Earnings (loss) per share of common and Class B common stock:(1)(3)							
Income before cumulative effect of change in accounting principles, net of applicable income taxes	$ 1.71	$ 2.73	$ 1.09	$ .92	$ 2.07	$ .10	$ .29
Cumulative effect of change in accounting principles(2)	—	—	—	—	(2.18)	(2.18)	.03
Earnings (loss) per share	$ 1.71	$ 2.73	$ 1.09	$ .92	$ (.11)	$ (2.08)	$ .32
Dividends per share of common stock and Class B common stock(3)	$ .40	$ .44	$ .45	$ .47	$ .49	$ .12	$ .13
Weighted average number of shares (common and Class B common stock) outstanding(3)	11,519	11,515	11,523	11,523	11,539	11,529	11,584
	December 31,					March 31,	
	1988	1989	1990	1991	1992	1992	1993
						(unaudited)	
Consolidated Balance Sheet Data:							
Working capital	$ 42,945	$ 32,695	$ 34,863	$ 32,044	$ 45,989	$ 35,715	$ 51,647
Total assets	227,077	260,345	261,626	243,947	285,235	242,516	287,610
Long-term debt, less current maturities	123,208	107,570	90,975	74,372	57,661	74,358	57,644
Stockholders' equity	33,868	60,323	67,610	72,851	67,074	71,584	68,189

(1) The gain on the sale of WPTA-TV added $12,748 (after tax) to 1989 net income ($1.11 per share).

(2) Effective January 1, 1992, the Company adopted the provisions of Statement of Financial Accounting Standards No. 106, "Employers' Accounting for Postretirement Benefits Other Than Pensions" ("SFAS 106"). The Company's election to recognize its initial liability under SFAS 106 resulted in a one-time charge against 1992 earnings, net of taxes, of $25,147 or $2.18 per share. This charge was recognized in the first quarter of 1992. Effective January 1, 1993, the Company adopted the provisions of Statement of Financial Accounting Standards No. 109 "Accounting for Income Taxes" ("SFAS 109"). The Company's adoption of FSAS 109 resulted in an increase in net income of $360,000 or $0.03 per share. This change was recognized in the first quarter of 1993.

(3) Shares outstanding, dividends and earnings per share have been adjusted for 1992 and restated for 1988-91 to reflect the impact of a 10% Common and Class B Common Stock dividend declared by the Company's Board of Directors on January 4, 1993.

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PULITZER PUBLISHING COMPANY AND SUBSIDIARIES

PRO FORMA FINANCIAL STATEMENTS
(Unaudited)

Following are pro forma statements of income of Pulitzer Publishing Company and subsidiaries ("Pulitzer" or the "Company") for the year ended December 31, 1992 and for the three months ended March 31, 1993, giving effect to the proposed acquisition of WESH and KCCI-TV by Pulitzer as if consummated at the beginning of each of the respective periods, accounted for as a purchase and giving effect to the assumptions set forth in the notes to unaudited pro forma financial statements. Also included is the pro forma statement of financial position of Pulitzer as of March 31, 1993, giving effect to the proposed acquisition as if consummated as of March 31, 1993, accounted for as a purchase and giving effect to the assumptions set forth in the notes to unaudited pro forma financial statements.

The as adjusted statements of income for the pro forma year ended December 31, 1992 and for the pro forma three months ended March 31, 1993, give effect to the issuance of 1,350,000 shares of common stock offered hereby (assuming the Underwriters' overallotment option is not exercised) and the application of the estimated net proceeds therefrom to reduce certain indebtedness as of the beginning of those periods. The March 31, 1993 as adjusted statement of financial position also gives effect to the issuance of common stock offered hereby and the application of the estimated net proceeds therefrom to reduce certain indebtedness as of March 31, 1993.

The following pro forma financial statements are unaudited and should be read in conjunction with the consolidated financial statements of Pulitzer Publishing Company and subsidiaries and the combined financial statements of WESH and KCCI-TV (Divisions of H&C Communications, Inc.), both included elsewhere in this Prospectus. The pro forma information is presented for illustrative purposes only and is not necessarily indicative of the financial results that would have occurred had the acquisition been consummated in accordance with the assumptions set forth above, or of Pulitzer's future consolidated financial results.

PULITZER PUBLISHING COMPANY AND SUBSIDIARIES

PRO FORMA STATEMENT OF INCOME
FOR THE YEAR ENDED DECEMBER 31, 1992
(In Thousands, Except Per Share Data; Unaudited)

	Pulitzer(1)	Pro Forma Adjustments	Pro Forma	Offering Adjustments	Pro Forma As Adjusted
OPERATING REVENUES — NET	$398,373	$ 44,823 (a)	$443,196	$ —	$443,196
OPERATING EXPENSES:					
Operations	170,307	20,699 (a)	191,006		191,006
Selling, general and administrative	160,873	6,526 (a) 329 (b)	167,728		167,728
St. Louis Agency adjustment	11,690		11,690		11,690
Depreciation and amortization	18,869	17,383 (c)	36,252		36,252
Total operating expenses	361,739	44,937	406,676		406,676
OPERATING INCOME	36,634	(114)	36,520		36,520
INTEREST EXPENSE	(7,801)	(9,315) (d)	(17,116)	1,420(g)	(15,696)
OTHER INCOME — NET	400	71 (a)	471		471
INCOME BEFORE PROVISION FOR INCOME TAXES	29,233	(9,358)	19,875	1,420	21,295
PROVISION FOR INCOME TAXES (BENEFIT)	5,331	(3,643) (e)	1,688	553(h)	2,241
INCOME BEFORE CUMULATIVE EFFECT OF CHANGE IN ACCOUNTING PRINCIPLE	$ 23,902	$ (5,715)	$ 18,187	$ 867	$ 19,054
EARNINGS PER SHARE OF COMMON AND CLASS B COMMON STOCK — Income before cumulative effect of change in accounting principle	$2.07		$1.58		$1.48
WEIGHTED AVERAGE NUMBER OF SHARES (COMMON AND CLASS B COMMON STOCK) OUTSTANDING	11,539		11,539		12,889(i)

Note: (1) Statement of income, as reported in the historical financial statements for the year ended December 31, 1992, is included elsewhere in this Prospectus.

See notes to unaudited pro forma financial statements.

PULITZER PUBLISHING COMPANY AND SUBSIDIARIES

PRO FORMA STATEMENT OF INCOME
FOR THE THREE MONTHS ENDED MARCH 31, 1993
(In Thousands, Except Per Share Data; Unaudited)

	Pulitzer(1)	Pro Forma Adjustments	Pro Forma	Offering Adjustments	Pro Forma As Adjusted
OPERATING REVENUES — NET	$ 93,591	$ 10,471 (a)	$104,062	$ —	$104,062
OPERATING EXPENSES:					
Operations	41,830	5,185 (a)	47,015		47,015
Selling, general and administrative	38,062	1,726 (a)	39,872		39,872
		84 (b)			
St. Louis Agency adjustment	2,202		2,202		2,202
Depreciation and amortization	4,303	4,346 (c)	8,649		8,649
Total operating expenses	86,397	11,341	97,738		97,738
OPERATING INCOME	7,194	(870)	6,324		6,324
INTEREST EXPENSE	(1,719)	(2,329) (d)	(4,048)	355(q)	(3,693)
OTHER INCOME — NET	74	117 (a)	191		191
INCOME BEFORE PROVISION FOR INCOME TAXES	5,549	(3,082)	2,467	355	2,822
PROVISION FOR INCOME TAXES (BENEFIT)	2,213	(1,200) (e)	1,013	138(h)	1,151
INCOME BEFORE CUMULATIVE EFFECT OF CHANGE IN ACCOUNTING PRINCIPLE	$ 3,336	$ (1,882)	$ 1,454	$ 217	$ 1,671
EARNINGS PER SHARE OF COMMON AND CLASS B COMMON STOCK — Income before cumulative effect of change in accounting principle	$0.29		$0.13		$0.13
WEIGHTED AVERAGE NUMBER OF SHARES (COMMON AND CLASS B COMMON STOCK) OUTSTANDING	11,584		11,584		12,934(i)

Note: (1) Statement of income, as reported in the historical financial statements for the three months ended March 31, 1993 (unaudited), is included elsewhere in this Prospectus.

See notes to unaudited pro forma financial statements.

PULITZER PUBLISHING COMPANY AND SUBSIDIARIES

PRO FORMA STATEMENT OF FINANCIAL POSITION
MARCH 31, 1993
(In Thousands; Unaudited)

	Pulitzer(1)	Pro Forma Adjustments	Pro Forma	Offering Adjustments	Pro Forma As Adjusted
ASSETS					
CURRENT ASSETS:					
Cash and cash equivalents	$ 40,864	$ (5,000) (f)	$ 35,864	$ —	$ 35,864
Accounts receivable — net	42,952	8,000 (f)	50,952		50,954
Other	17,736		17,736		17,736
Total current assets	101,552	3,000	104,552		104,552
PROPERTIES — NET	79,174	63,427 (f)	142,601		142,601
INTANGIBLES — NET	54,310	93,573 (f)	147,883		147,883
RECEIVABLE FROM THE HERALD COMPANY	38,440		38,440		38,440
OTHER ASSETS	14,134		14,134		14,134
TOTAL	$ 287,610	$160,000	$ 447,610	$ —	$447,610
LIABILITIES AND STOCKHOLDERS' EQUITY					
CURRENT LIABILITIES:					
Current portion of long-term debt	$ 14,313	$ —	$ 14,313	$ —	$ 14,313
Other	35,592		35,592		35,592
Total current liabilities	49,905		49,905		49,905
LONG-TERM DEBT	57,644	160,000 (f)	217,644	(36,640) (j)	181,004
POSTRETIREMENT BENEFIT OBLIGATION	81,980		81,980		81,980
OTHER LONG-TERM LIABILITIES	29,892		29,892		29,892
STOCKHOLDERS' EQUITY:					
Common stock	21		21	13 (j)	34
Class B common stock	158		158		158
Additional paid-in capital	83,083		83,083	36,627 (j)	119,710
Retained earnings	172,546		172,546		172,546
Treasury stock	(187,619)		(187,619)		(187,619)
Total stockholders' equity	68,189		68,189	36,640	104,829
TOTAL	$ 287,610	$160,000	$ 447,610	$ —	$447,610

Note: (1) Statement of financial position, as reported in the historical financial statements as of March 31, 1993 (unaudited), is included elsewhere in this Prospectus.

See notes to unaudited pro forma financial statements.

PULITZER PUBLISHING COMPANY AND SUBSIDIARIES

NOTES TO UNAUDITED PRO FORMA FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 1992 AND THREE MONTHS ENDED MARCH 31, 1993

The pro forma adjustments reflect the following:

(a) *WESH and KCCI-TV Operations* — Adjustments reflect the combined 1992 annual and combined 1993 first quarter historical operating results of WESH and KCCI-TV, except for depreciation and amortization (see Note (c)).

(b) *Adjustment of Pension Expense* — Adjustment reflects increased pension expense for the participation of WESH and KCCI-TV employees in Pulitzer sponsored pension plans for the applicable period.

(c) *Adjustment to Depreciation and Amortization* — Adjustments reflect the pro forma depreciation and amortization expense for WESH and KCCI-TV based upon the purchase price allocation discussed in Note (f). The pro forma adjustment for the year ended December 31, 1992 represents the first full year of depreciation and amortization expense included in the table below. The pro forma adjustment for the three months ended March 31, 1993 represents one-fourth of the first full year of depreciation and amortization expense included in the table below. The following is a summary of depreciation and amortization expense for the first six full years and thereafter:

	Depreciation	Intangible Amortization	Goodwill Amortization	Total
First year	$ 7,435,183	$ 9,931,331	$ 16,426	$ 17,382,940
Second year	7,435,183	5,763,832	16,426	13,215,441
Third year	7,435,183	4,863,916	16,426	12,315,525
Fourth year	7,435,183	4,245,307	16,426	11,696,916
Fifth year	7,435,183	4,043,018	16,426	11,494,627
Sixth year	1,410,807	3,883,237	16,426	5,310,470
Thereafter	21,130,654	60,185,589	558,444	81,874,687
Total	$59,717,376	$92,916,230	$657,000	$153,290,606

Depreciation expense has been computed using the straight-line method and is based upon the estimated useful lives of the individual assets — buildings are depreciated over 32 years, transmitter towers over 15 years and equipment over 5 years.

Specifically identifiable intangibles, which consist principally of television licenses and network affiliations, advertising client base, film contracts, advertising contracts and talent contracts, have been valued based on an independent appraisal and are being amortized over their estimated useful lives which range from 1 to 25 years. However, depending upon the outcome of the matter discussed in the second following paragraph, the estimated useful lives used in determining the pro forma amortization amounts may change.

Goodwill (excess of cost of acquired assets over the underlying appraised values at date of acquisition) is amortized over 40 years.

On May 27, 1993, the U.S. House of Representatives approved legislation including a provision under which amortization deductions with respect to the capitalized cost of certain intangible assets acquired and held by a taxpayer in connection with the conduct of a trade or business would be allowed ratably over 14 years. The intangibles provision approved by the U.S. House of Representatives generally would be applicable to property acquired after the date of enactment of the legislation, but taxpayers could elect to apply the intangibles provision to all qualifying intangible property acquired after July 25, 1991. While no assurance can be given that the intangibles provision will ultimately be enacted into law, in the event it is ultimately enacted in its

present form, the Company expects that it will elect to amortize over 14 years the cost of the intangible assets which it will acquire in connection with its acquisition of the assets of WESH and KCCI-TV. In that event, it is anticipated that the charges for depreciation and amortization attributable to the assets of WESH and KCCI-TV would be as follows:

	Depreciation	Intangible Amortization	Goodwill Amortization	Total
First year	$ 7,435,183	$ 6,636,874	$ 46,928	$ 14,118,985
Second year	7,435,183	6,636,874	46,928	14,118,985
Third year	7,435,183	6,636,874	46,928	14,118,985
Fourth year	7,435,183	6,636,874	46,928	14,118,985
Fifth year	7,435,183	6,636,874	46,928	14,118,985
Sixth year	1,410,807	6,636,874	46,928	8,094,609
Thereafter	21,130,654	53,094,986	375,432	74,601,072
Total	$59,717,376	$92,916,230	$657,000	$153,290,606

(d) *Interest Adjustments* — Funding for the $165,000,000 purchase of WESH and KCCI-TV is assumed to consist of $160,000,000 of long-term borrowings and $5,000,000 of cash. Pulitzer has entered into a letter of intent with an institutional lender providing for the issuance by Pulitzer to such lender of up to $50,000,000 principal amount of 6.76% Senior Notes due 2001 and up to $50,000,000 principal amount of 7.22% Senior Notes due 2005. The terms of the letter of intent provide for initial repayment of the Senior Notes to begin in 1998. In addition, Pulitzer has a commitment from a bank for a revolving credit facility with a variable interest rate in the principal amount of $60,000,000, which will be repaid over a five year period beginning September 30, 1994.

The interest rate related to the revolving credit facility borrowings will be based upon one of several interest rate options which may be selected for varying time periods by Pulitzer. For purposes of the pro forma financial statements, a variable rate of 3.875% has been assumed based upon the terms of the bank's commitment and current market rates. This rate represents the variable rate which would be in effect for the first 90 days of the revolving credit facility borrowings. This rate has been assumed for a full year for purposes of computing the interest adjustment for the year ended December 31, 1992 and for the full three months for the quarter ended March 31, 1993.

The pro forma interest expense adjustments reflect additional interest which would have been incurred on the additional $160,000,000 of long-term borrowings had such debt been outstanding for the full year of 1992 and for the first quarter of 1993.

(e) *Adjustment of Income Tax Provision* — The pro forma income tax adjustments reflect the net benefit of the pro forma income statement adjustments included herein.

An effective income tax rate of 39%, which approximates Pulitzer's incremental tax rate, has been assumed for the year ended December 31, 1992 and for the three months ended March 31, 1993. The amortization of goodwill does not give rise to a deduction for income tax purposes.

(f) *Acquisition of WESH and KCCI-TV* — Adjustments record the purchase price of WESH and KCCI-TV. The purchase price has been allocated as follows:

Description	Amount
Land	$ 3,709,394
Buildings	19,525,468
Transmitter towers	8,500,071
Equipment	31,691,837
Total properties	63,426,770
Specifically identifiable intangibles	92,916,230
Goodwill	657,000
Total intangibles	93,573,230
	$157,000,000

In addition, Pulitzer will acquire the net receivables of WESH and KCCI-TV for the lesser of $8,000,000 or the recorded net receivable balance at the closing date. For purposes of the pro forma financial statements, net receivables of $8,000,000 are assumed in determining the total purchase price.

For purposes of the pro forma financial statements, financing for the acquisition is assumed to consist of $160,000,000 in long-term debt and $5,000,000 in cash (see Note (d)).

The offering adjustments reflect the following:

(g) *Interest Adjustment* — Adjustment reflects the reduction in pro forma interest expense as a result of the sale of common stock offered hereby. A reduction of the Company's pro forma revolving credit facility borrowings through the application of the net proceeds from the offering has been assumed as of the beginning of the respective period (see Notes (d) and (j)).

(h) *Adjustment of Income Tax Provision* — Adjustment reflects the increase in income tax expense as a result of the offering interest expense adjustment (see Note (g)).

(i) *Weighted Average Shares Outstanding* — As adjusted weighted average shares outstanding reflects the issuance of 1,350,000 shares of common stock offered hereby, as of the beginning of the respective periods.

(j) *Sale of Common Stock* — Adjustments reflect the sale of 1,350,000 shares of common stock being offered hereby, net of estimated fees and expenses (including underwriting discounts and commissions), and the application of the estimated net proceeds (assuming the Underwriters' over-allotment option is not exercised) to reduce pro forma long-term borrowings under the revolving credit facility. For purposes of the as adjusted pro forma financial statements, an assumed sale price of $29.13 per share (average of the closing bid price, $28.50, and the closing asked price, $29.75, on June 8, 1993) of common stock has been utilized.

6. SELECTED DATA FROM COCA-COLA 1992 ANNUAL REPORT

COCA-COLA NYSE-KO

RECENT PRICE 44 | P/E RATIO 25.9 (Trailing: 27.8 Median: 17.0) | RELATIVE P/E RATIO 1.55 | DIVD YLD 1.5% | VALUE LINE 1535

TIMELINESS 2 Above Average (Relative Price Performance Next 12 Mos.)

SAFETY 1 Highest (Scale: 1 Highest to 9 Lowest)

BETA 1.10 (1.00 = Market)

1996-98 PROJECTIONS

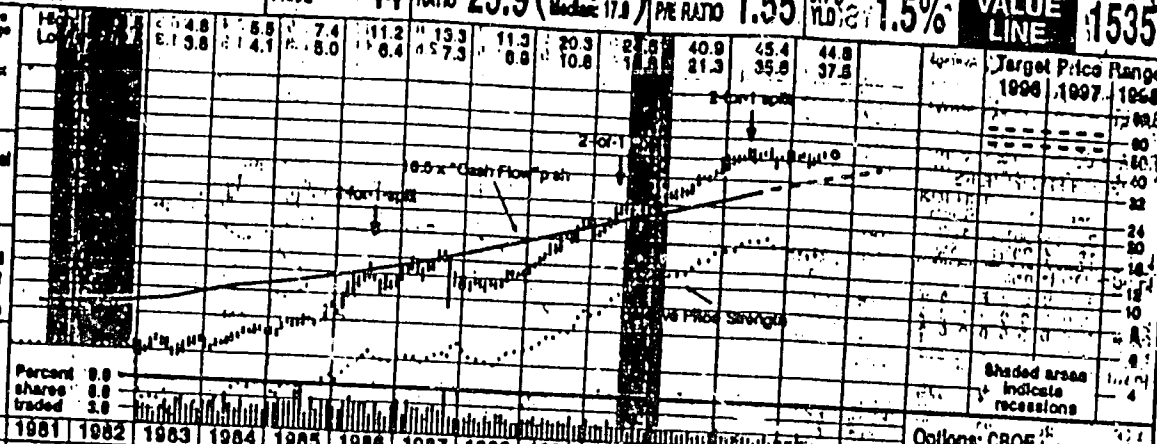
	Price	Gain	Ann'l Total Return
High	88	(+100%)	19%
Low	66	(+50%)	8%

Insider Decisions

	S	O	N	D	J	F	M	A	M
to Buy	1	0	1	0	0	0	0	1	2
Options	0	0	3	0	0	0	2	1	1
to Sell	0	0	0	0	0	0	0	0	0

Institutional Decisions

	3Q'92	4Q'92	1Q'93
to Buy	178	153	179
to Sell	275	270	294
Hld'(000)	660208	658689	677823



Options: CBOE

1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	© VALUE LINE PUB., INC.	93-98
2.43	2.93	3.35	3.99	3.97	3.84	4.17	4.69	5.12	5.63	6.14	6.83	6.65	7.66	8.71	10.00	11.30	13.15	Sales per sh A	20.25
.29	.32	.36	.37	.40	.41	.44	.51	.55	.63	.72	.85	1.01	1.20	1.41	1.69	2.00	2.30	"Cash Flow" per sh	3.50
.22	.25	.28	.29	.30	.33	.34	.40	.43	.52	.61	.71	.85	1.02	1.22	1.43	1.70	2.00	Earnings per sh B	3.00
.13	.15	.16	.16	.19	.21	.22	.23	.25	.28	.28	.30	.34	.40	.43	.56	.68	.80	Div'ds Decl'd per sh ■ C	1.70
.18	.21	.22	.19	.22	.20	.23	.22	.32	.24	.20	.27	.34	.44	.60	.83	.95	1.08	Cap'l Spending per sh	1.50
1.03	1.17	1.29	1.40	1.53	1.71	1.79	1.77	1.93	2.28	2.16	2.15	2.38	2.82	3.33	2.98	3.56	4.25	Book Value per sh D	7.50
1488.4	1482.3	1482.7	1483.1	1483.5	1628.9	1636.2	1589.9	1543.9	1540.0	1489.4	1419.2	1348.1	1333.5	1329.0	1306.0	1294.0	1278.0	Common Shs Outst'g E	1210.0
14.3	13.7	11.4	9.7	9.6	9.8	12.6	12.2	13.6	17.3	18.0	13.9	17.8	20.4	24.4	28.7	Bold figures are Value Line estimates		Avg Ann'l P/E Ratio	20.0
1.87	1.87	1.65	1.29	1.17	1.08	1.07	1.14	1.10	1.17	1.20	1.16	1.35	1.52	1.53	1.75			Relative P/E Ratio	1.55
4.0%	4.2%	5.0%	6.5%	6.7%	6.5%	5.2%	4.8%	4.2%	2.9%	2.6%	3.0%	2.3%	1.9%	1.8%	1.4%			Avg Ann'l Div'd Yield	2.0%
6829.0	7364.0	7903.0	8668.0	7658.0	8337.0	8965.0	10236	11572	13074	14800	16700	Sales ($mill) A	24500
16.8%	16.6%	15.5%	17.2%	19.8%	21.2%	21.3%	21.4%	22.3%	23.7%	24.0%	24.0%	Operating Margin	24.0%
153.7	168.1	178.1	189.8	153.5	169.9	183.8	243.9	291.4	321.9	360	380	Depreciation ($mill)	550
558.3	628.8	677.8	800.3	916.1	1044.7	1182.8	1381.8	1618.0	1883.8	2215	2635	Net Profit ($mill)	3625
44.2%	41.1%	38.0%	39.2%	35.0%	34.0%	32.4%	31.4%	32.1%	31.4%	31.5%	31.5%	Income Tax Rate	31.5%
8.2%	8.5%	8.6%	9.2%	12.0%	12.5%	13.2%	13.5%	14.0%	14.4%	15.8%	16.3%	Net Profit Margin	15.0%
839.2	813.1	956.5	934.6	17.7	376.5	d54.4	d153.7	28.6	d1054	d1226	d1418	Working Cap'l ($mill)	6995
513.2	743.0	869.2	1011.2	903.4	781.1	648.7	535.9	985.3	1120.1	1329	1379	Long-Term Debt ($mill)	1525
2920.8	2778.1	2978.1	3515.0	3223.8	3345.3	3485.5	3849.2	4425.8	3883.4	4350	5425	Net Worth ($mill)	8600
17.1%	18.9%	18.7%	18.8%	23.8%	28.2%	30.2%	32.2%	30.6%	38.4%	38.0%	38.0%	% Earned Total Cap'l	36.0%
19.1%	22.6%	22.7%	22.8%	28.4%	31.2%	34.2%	35.9%	39.6%	48.4%	48.5%	47.0%	% Earned Net Worth	41.5%
6%	9%	9%	11%	15%	19%	22%	22%	22%	28%	28%	28%	% Retained to Comm Eq	25%
65%	59%	57%	50%	48%	42%	41%	40%	40%	36%	40%	40%	% All Div'ds to Net Prof	40%

CAPITAL STRUCTURE as of 6/30/93

Total Debt $3486.0 mill. LT Debt $1163.0 mill. LT Interest $78.0 mill. (Total interest coverage: 17x) (21% of Cap'l)

Pension Liability None

Pfd Stock None

Common Stock 1,302,750,241 shs. as of April 30, 1993 (79% of Cap'l)

CURRENT POSITION	1991	1992	6/30/93
Cash Assets	1117.2	1063.0	1060.0
Receivables	933.4	1055.2	1383.0
Inventory (Avg Cst)	987.8	1018.8	1115.0
Other	1105.8	1110.9	1298.0
Current Assets	4144.2	4247.7	4876.0
Accts Payable	1914.4	2253.0	2219.0
Debt Due	1302.3	2087.3	2323.0
Other	900.9	962.9	1169.0
Current Liab.	4117.6	5303.2	5711.0

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '90-'93 to '96-'98
Sales	9.5%	10.5%	15.0%
"Cash Flow"	14.0%	16.0%	16.0%
Earnings	15.0%	18.5%	16.0%
Dividends	9.5%	13.0%	16.5%
Book Value	7.0%	7.5%	15.5%

Calendar	QUARTERLY SALES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1990	2148	2739	2703	2556	10236
1991	2481	3039	3173	2879	11572
1992	2772	3350	3508	3244	13074
1993	3056	3800	3950	3695	14500
1994	3450	4550	4500	4200	16700

Calendar	EARNINGS PER SHARE B Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1990	.21	.31	.29	.21	1.02
1991	.24	.37	.35	.26	1.22
1992	.29	.43	.41	.30	1.43
1993	.35	.52	.50	.33	1.70
1994	.40	.60	.60	.40	2.00

Calendar	QUARTERLY DIVIDENDS PAID C ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1989	--	.085	.085	.17	.34
1990	--	.10	.10	.20	.40
1991	--	.12	.12	.24	.48
1992	--	.14	.14	.28	.56
1993	--	.17	.17		

BUSINESS: The Coca-Cola Company is the world's largest soft drink company. Distributes major brands (*Coca-Cola, Sprite, Fanta, TAB*, etc.) through bottlers throughout the world. Foreign operations accounted for about 67% of net sales and 81% of profits in 1992. Food division, world's largest distributor of juice products (*Minute Maid, Five Alive, Hi-C*, etc.). Coca-Cola Enterprises, 44%-owned soft drink bottler. Advertising costs, 8.5% of sales. Has approximately 31,300 employees; 110,000 stockholders. Berkshire Hathaway owns 7.1% (1993 Proxy). 1992 depreciation rate: 6.1%. Estimated plant age: 5 years. Chairman and Chief Executive Officer: Roberto C. Goizueta. Incorporated: Delaware. Address: One Coca-Cola Plaza, Atlanta, Georgia 30313. Tel.: 404-676-2121.

Coca-Cola's underlying business continues to improve. Worldwide unit case sales increased 6% in the second quarter of 1993. This compares with a 4% rise in the first quarter and a 3% gain for all of 1992. Sales were particularly strong in Eastern Europe and the Middle East, where volume was up more than 25%. Sales in the U.S. registered a 6% gain, much better than in either of the prior two years. It now looks as if the recession that hit the soft drink industry in late 1990 has ended. We look for continued improvement over the remainder of this year, and think that international growth may well approach the historical trend of 8%-10%. The long-term trend in the U.S. is considerably less, but we do expect that business was good this summer, particularly in comparison with 1992, when sales were hurt by extremely poor weather throughout much of the country.

Coke's future lies in the international markets. It already gets more than 80% of its profits abroad, where it has been selling soft drinks for decades, and the opportunities there seem almost endless. In most parts of the world, consumption of soft drinks is far less than it is in the U.S., and there are vast opportunities to expand the business. A wide variety of factors, including higher standards of living, improved distribution, and the wider availability of refrigeration all support increasing demand for cola drinks. Among other places, Coke is currently expanding rapidly in Eastern Europe, with plans to spend $1 billion for facilities and distribution; in China, where it will spend $150 million through 1995; and in India, where it will begin production this year.

The shares are ranked Above Average for the coming year. And while appreciation potential out to 1996-98 is below average, the likelihood of superior earnings growth for many years to come should appeal to some investors. Coke has the financial resources to expand its business at a rapid pace, and we feel confident that earnings will grow at least 15%/year. The company is also committed to repurchase up to 100 million of its own shares by the end of the decade; such action would obviously lend support to the price of the stock.

Stephen Sanborn, CFA August 20, 1993

(A) Includes Columbia Pictures: 7/82-12/88. (B) Based on average shares outstanding. Nov. earnings report due mid Oct. Excludes special gains: '81, 4¢; '86, 17¢; disc. op. gain (loss): '83, (1¢); '85, 5¢; '89, 3¢; nonrec. gain (loss): '89, 73¢; '92, (17¢). (C) Next div'd meeting about Oct. 15. Goes ex about Nov. 24. Div'd payment dates: April 1, July 1, Oct. 1, Dec. 15. ■ Div'd reinvestment plan available. (D) Incl. intangibles. In '92: $383.3 mill. 29¢/sh. (E) In millions, adjusted for stock splits.

Company's Financial Strength A++
Stock's Price Stability 95
Price Growth Persistence 55
Earnings Predictability 100

Consolidated Statements of Income

Year Ended December 31, (In thousands except per share data)	1992	1991	1990
Net Operating Revenues	**$13,073,860**	$11,571,614	$10,236,350
Cost of goods sold	**5,054,377**	4,648,385	4,208,850
Gross Profit	**8,019,483**	6,923,229	6,027,500
Selling, administrative and general expenses	**5,249,392**	4,604,184	4,075,936
Operating Income	**2,770,091**	2,319,045	1,951,564
Interest income	**163,784**	175,406	169,985
Interest expense	**171,351**	192,515	230,979
Equity income	**65,111**	39,975	110,139
Other income (deductions)—net	**(81,547)**	41,368	13,727
Income before Income Taxes and Change in Accounting Principle	**2,746,088**	2,383,279	2,014,436
Income taxes	**862,273**	765,277	632,532
Income before Change in Accounting Principle	**1,383,815**	1,618,002	1,381,904
Transition effect of change in accounting for postretirement benefits other than pensions			
Consolidated operations	**(146,364)**	—	—
Equity investments	**(73,069)**	—	—
Net Income	**1,664,382**	1,618,002	1,381,904
Preferred stock dividends	**—**	521	18,158
Net Income Available to Common Share Owners	**$ 1,664,382**	$ 1,617,481	$ 1,363,746
Income per Common Share			
Before change in accounting principle	**$ 1.43**	$ 1.21	$ 1.02
Transition effect of change in accounting for postretirement benefits other than pensions			
Consolidated operations	**(.11)**	—	—
Equity investments	**(.06)**	—	—
Net Income per Common Share	**$ 1.26**	$ 1.21	$ 1.02
Average Common Shares Outstanding	**1,316,758**	1,332,944	1,337,140

See Notes to Consolidated Financial Statements.

Consolidated Balance Sheets

December 31, *(In thousands except share data)*	1992	1991 (Restated)
Assets		
Current		
Cash and cash equivalents	$ 955,608	$ 1,058,250
Marketable securities, at cost	107,380	58,946
	1,062,988	1,117,196
Trade accounts receivable, less allowances of $32,512 in 1992 and $34,567 in 1991	1,055,170	933,448
Finance subsidiary receivables	30,466	36,172
Inventories	1,018,621	987,764
Prepaid expenses and other assets	1,080,432	1,069,664
Total Current Assets	4,247,677	4,144,244
Investments and Other Assets		
Investments		
Coca-Cola Enterprises Inc.	518,312	592,561
Coca-Cola Amatil Limited	548,077	570,774
Other, principally bottling companies	1,096,705	957,467
Finance subsidiary receivables	94,916	288,471
Long-term receivables and other assets	636,602	442,135
	2,894,692	2,851,408
Property, Plant and Equipment		
Land	203,247	172,781
Buildings and improvements	1,526,722	1,200,672
Machinery and equipment	3,137,121	2,680,446
Containers	373,785	390,737
	5,240,875	4,444,636
Less allowances for depreciation	1,716,614	1,554,754
	3,526,261	2,889,882
Goodwill and Other Intangible Assets	383,304	303,681
	$11,051,934	$10,189,215

December 31,	1992	1991 (Restated)
Liabilities and Share-Owners' Equity		
Current		
Accounts payable and accrued expenses	**$ 2,252,975**	$ 1,914,379
Loans and notes payable	**1,967,540**	845,823
Finance subsidiary notes payable	**104,950**	346,767
Current maturities of long-term debt	**14,794**	109,707
Accrued taxes	**962,963**	1,038,497
Total Current Liabilities	**5,303,222**	4,255,173
Long-Term Debt	**1,120,064**	985,258
Other Liabilities	**658,631**	493,765
Deferred Income Taxes	**81,629**	216,072
Share-Owners' Equity		
Common stock, $.25 par value— Authorized: 2,800,000,000 shares; Issued: 1,696,202,840 shares in 1992; 1,687,351,094 shares in 1991	**424,051**	421,838
Capital surplus	**871,349**	639,990
Reinvested earnings	**8,165,024**	7,238,643
Unearned compensation related to outstanding restricted stock	**(99,631)**	(114,909)
Foreign currency translation adjustment	**(271,211)**	(4,90[illegible]
	9,089,582	8,180,65[illegible]
Less treasury stock, at cost (389,431,622 common shares in 1992; 358,390,928 common shares in 1991)	**5,201,194**	3,941,706
	3,888,388	4,238,947
	$11,051,934	$10,189,215

See Notes to Consolidated Financial Statements.

olidated Statements of Cash Flows

nded December 31,	1992	1991	1990
usands)		(Restated)	(Restated)
rating Activities			
Net income	**$ 1,664,382**	$ 1,618,002	$1,381,904
ransition effect of change in accounting for postretirement benefits	**219,433**	—	—
Depreciation and amortization	**321,922**	261,427	243,888
Deferred income taxes	**(26,608)**	(94,313)	(74,755)
Equity income, net of dividends	**(30,249)**	(16,013)	(93,816)
Foreign currency adjustments	**23,611**	65,534	(77,068)
Gain on sale of investments	**—**	(34,577)	(60,277)
Other noncash items	**103,009**	33,338	97,752
Net change in operating assets and liabilities	**(43,130)**	251,003	(133,701)
Net cash provided by operating activities	**2,232,370**	2,084,401	1,283,927
vesting Activities			
Additions to finance subsidiary receivables	**(53,984)**	(210,267)	(31,551)
Collections of finance subsidiary receivables	**254,280**	51,942	58,243
Acquisitions and investments	**(717,487)**	(399,183)	(301,010)
Proceeds from disposals of investments and o[illegible]er assets	**247,052**	180,058	391,180
Decrease (increase) in marketable securities	**(52,191)**	2,735	16,733
Purchases of property, plant and equipment	**(1,083,270)**	(791,677)	(592,971)
P[illegible]ceeds from disposals of property, plant and equipment	**47,078**	43,958	19,208
Other investing activities	**(1,004)**	(2,246)	504
Net cash used in investing activities	**(1,359,526)**	(1,124,680)	(439,664)
Net cash provided by operations after reinvestment	**872,844**	959,721	844,263
nancing Activities			
Issuances of debt	**1,381,227**	989,926	592,417
Payments of debt	**(432,380)**	(1,246,664)	(81,594)
Preferred stock redeemed	**—**	(75,000)	(225,000)
Common stock issued	**131,2[illegible]4**	39,394	29,904
Purchases of common stock for treasury	**(1,259,488)**	(399,076)	(306,667)
Dividends (common and preferred)	**(738,001)**	(640,064)	(552,640)
Net cash used in financing activities	**(917,378)**	(1,331,484)	(543,580)
fect of Exchange Rate Changes on Cash and Cash Equivalents	**(58,108)**	458	32,852
ash and Cash Equivalents			
Net increase (decrease) during the year	**(102,642)**	(371,305)	333,535
Balance at beginning of year	**1,058,250**	1,429,555	1,096,020
Balance at end of year	**$ 955,608**	$ 1,058,250	$1,429,555

e Notes to Consolidated Financial Statements.

Consolidated Statements of Share-Owners' Equity

Three Years Ended December 31, 1992	Preferred Stock	Common Stock	Capital Surplus	Reinvested Earnings	Outstanding Restricted Stock	Foreign Currency Translation	Treasury Stock
(In thousands except per share data)							
Balance December 31, 1989	$ 300,000	$418,910	$437,324	$5,618,312	$ (45,892)	$ (7,206)	$(3,235,963)
Restatement for change in accounting principle for income taxes	—	—	—	(186,871)	—	—	—
Balance December 31, 1989 as restated	300,000	418,910	437,324	5,431,441	(45,892)	(7,206)	(3,235,963)
Sales of stock to employees exercising stock options	—	905	28,999	—	—	—	(2,762)
Tax benefit from employees' stock option and restricted stock plans	—	—	13,286	—	—	—	—
Translation adjustments (net of income taxes of $573)	—	—	—	—	—	11,237	—
Stock issued under restricted stock plans, less amortization of $11,655	—	429	33,094	—	(21,868)	—	—
Purchases of common stock for treasury	—	—	—	—	—	—	(303,905)
Redemption of preferred stock	(225,000)	—	—	—	—	—	—
Net income	—	—	—	1,381,904	—	—	—
Dividends							
Preferred	—	—	—	(18,158)	—	—	—
Common (per share—$.40)	—	—	—	(534,482)	—	—	—
Balance December 31, 1990 as restated	75,000	420,244	512,703	6,260,705	(67,760)	4,031	(3,542,630)
Sales of stock to employees exercising stock options	—	972	38,422	—	—	—	(2,421)
Tax benefit from employees' stock option and restricted stock plans	—	—	20,015	—	—	—	—
Translation adjustments (net of income taxes of $958)	—	—	—	—	—	(8,940)	—
Stock issued under restricted stock plans, less amortization of $22,323	—	622	68,850	—	(47,149)	—	—
Purchases of common stock for treasury	—	—	—	—	—	—	(396,655)
Redemption of preferred stock	(75,000)	—	—	—	—	—	—
Net income	—	—	—	1,618,002	—	—	—
Dividends							
Preferred	—	—	—	(521)	—	—	—
Common (per share—$.48)	—	—	—	(639,543)	—	—	—
Balance December 31, 1991 as restated	—	421,838	639,990	7,238,643	(114,909)	(4,909)	(3,941,706)
Sales of stock to employees exercising stock options	—	2,155	129,109	—	—	—	(34,552)
Tax benefit from employees' stock option and restricted stock plans	—	—	92,758	—	—	—	—
Translation adjustments (net of income taxes of $67)	—	—	—	—	—	(266,302)	—
Stock issued under restricted stock plans, less amortization of $24,828	—	58	9,492	—	15,278	—	—
Purchases of common stock for treasury	—	—	—	—	—	—	(1,224,936)
Net income	—	—	—	1,664,382	—	—	—
Common dividends (per share—$.56)	—	—	—	(738,001)	—	—	—
Balance December 31, 1992	$ —	$424,051	$871,349	$8,165,024	$ (99,631)	$(271,211)	$(5,201,194)

See Notes to Consolidated Financial Statements.

Selected Financial Data

Year Ended December 31, (In millions except per share data and ratios)	1992[1,4]	1991[4] (Restated)	1990[4] (Restated)	1989[4] (Restated)
Summary of Operations				
Net operating revenues	**$13,074**	$11,572	$10,236	$8,622
Cost of goods sold	**5,055**	4,649	4,208	3,548
Gross profit	**8,019**	6,923	6,028	5,074
Selling, administrative and general expenses	**5,249**	4,604	4,076	3,348
Provisions for restructured operations and disinvestment	**—**	—	—	—
Operating income	**2,770**	2,319	1,952	1,726
Interest income	**164**	175	170	205
Interest expense	**171**	192	231	308
Equity income	**65**	40[3]	110	75
Other income (deductions)—net	**(82)**	41	13	66
Income from continuing operations before income taxes and changes in accounting principles	**2,746**	2,383	2,014	1,764
Income taxes	**862**	765	632	553
Income from continuing operations before changes in accounting principles	**$ 1,884**	$ 1,618	$ 1,382	$1,211
Net income	**$ 1,664**	$ 1,618	$ 1,382	$1,537
Preferred stock dividends	**—**	1	18	21
Net income available to common share owners	**$ 1,664**	$ 1,617	$ 1,364	$1,516[4]
Average common shares outstanding[1]	**1,317**	1,333	1,337	1,384
Per Common Share Data[1]				
Income from continuing operations before changes in accounting principles	**$ 1.43**	$ 1.21	$ 1.02	$ .86
Net income	**1.26**	1.21	1.02	1.10[4]
Cash dividends	**.56**	.48	.40	.34
Market price at December 31	**41.88**	40.13	23.25	19.31
Balance Sheet Data				
Cash, cash equivalents and current marketable securities	**$ 1,063**	$ 1,117	$ 1,492	$1,182
Property, plant and equipment—net	**3,526**	2,890	2,386	2,021
Depreciation	**310**	254	236	181
Capital expenditures	**1,083**	792	593	462
Total assets	**11,052**	10,189	9,245	8,249
Long-term debt	**1,120**	985	536	549
Total debt	**3,208**	2,288	2,537	1,980
Share-owners' equity	**3,888**	4,239	3,662	3,299
Total capital[2]	**7,096**	6,527	6,199	5,279
Other Key Financial Measures[2]				
Total-debt-to-total-capital	**45.2%**	35.1%	40.9%	37.5%
Net-debt-to-net-capital	**31.9%**	19.2%	23.7%	14.7%
Return on common equity	**46.4%**	41.3%	41.4%	39.4%
Return on capital	**29.4%**	27.5%	26.8%	26.5%
Economic profit	**$ 1,369**	$ 1,046	$ 878	$ 821
Dividend payout ratio	**44.3%**	39.5%	39.2%	31.0%[4]

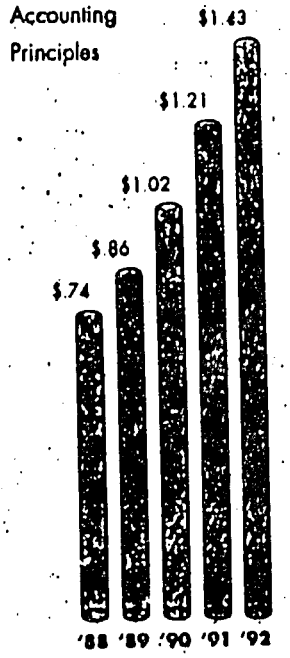
[1] *Adjusted for a two-for-one stock split in 1992, a two-for-one stock split in 1990 and a three-for-one stock split in 1986.*
[2] *See Glossary on page 70.*
[3] *In 1992, the Company adopted SFAS No. 106, "Employers' Accounting for Postretirement Benefits Other Than Pensions."*
[4] *The Company adopted SFAS No. 109, "Accounting for Income Taxes," in 1992 by restating financial statements beginning in 1989.*

1988	1987	1986	1985	1984	1983	1982
1,065	$7,658	$6,977	$5,879	$5,442	$5,056	$4,760
1,429	3,633	3,454	2,909	2,738	2,580	2,472
1,636	4,025	3,523	2,970	2,704	2,476	2,283
1,038	2,665	2,446	2,163	1,855	1,648	1,515
—	36	180	—	—	—	—
1,598	1,324	897	807	849	828	773
199	232	154	151	133	90	119
230	297	208	196	128	77	76
92	64	45	52	42	35	25
(33)	40	410	69	13	2	11
1,626	1,363	1,298	883	909	878	852
537	496	471	314	360	374	379
1,089	$ 867	$ 827	$ 569	$ 549	$ 504	$ 473
1,045	$ 916	$ 934	$ 722	$ 629	$ 559	$ 512
7	—	—	—	—	—	—
1,038	$ 916	$ 934	$ 722	$ 629	$ 559	$ 512
8	1,509	1,547	1,573	1,587	1,635	1,558
.74	$ .57	$ .53	$ .36	$ .35	$ .31	$ .30
.71	.61	.60	.46	.40	.34	.33
.30	.28	.26	.25	.23	.22	.21
11.16	9.53	9.44	7.04	5.20	4.46	4.33
1,231	$1,489	$ 895	$ 843	$ 768	$ 559	$ 254
1,759	1,602	1,538	1,483	1,284	1,247	1,233
167	152	151	130	119	111	104
387	304	346	412	300	324	273
7,451	8,606	7,675	6,341	5,241	4,540	4,212
761	909	996	801	631	428	423
2,124	2,995	1,848	1,280	1,310	520	493
3,345	3,187	3,479	2,948	2,751	2,912	2,779
5,469	6,182	5,327	4,228	4,061	3,432	3,272
38.8%	48.4%	34.7%	30.3%	32.3%	15.2%	15.1%
18.9%	15.4%	10.9%	15.6%	19.7%	5.6%	13.6%
34.7%	26.0%	25.7%	20.0%	19.4%	17.7%	18.7%
21.3%	18.3%	20.1%	16.8%	16.7%	16.4%	17.9%
$ 748	$ .417	$ 311	$ 269	$ 268	$ 138	$ 61
2.1%	46.0%	43.1%	53.8%	57.9%	65.3%	62.8%

...ity income in 1991 includes a reduction of $44 million related to restructuring charges recorded by Coca-Cola Enterprises Inc.

Net income available to common share owners in 1989 includes after-tax gains of $604 million ($.44 per common share) from the sale of the Company's equity interest in Columbia Pictures Entertainment, Inc. and the Company's bottled water business and the transition effect of $265 million related to the change in accounting for income taxes. Excluding these nonrecurring items, the dividend payout ratio in 1989 was 39.9 percent..

Earnings Per Share
From Continuing Operations Before Changes in Accounting Principles



Economic Profit
(In millions)

Management's Discussion and Analysis

Lines of Business

Soft Drinks: The Company is the largest manufacturer, marketer and distributor of soft drink concentrates and syrups in the world. It manufactures soft drink concentrates and syrups, which it sells to bottling and canning operations, and manufactures fountain/post-mix soft drink syrups, which it sells to authorized fountain wholesalers and some fountain retailers. The Company has substantial equity investments in numerous soft drink bottling and canning operations, and it owns and operates certain bottling and canning operations outside the United States.

Foods: The foods business sector's principal business is processing and marketing citrus and other juice and juice-drink products, primarily orange juice. It is the world's largest marketer of packaged citrus products.

Operations

Volume: The Company measures soft drink volume in two ways: gallon shipments of concentrates and syrups and equivalent unit cases of finished product. Gallon shipments represent the primary business of the Company since they measure concentrates and syrups sold by the Company to its bottling partners. Most of the Company's revenues are based on this measure of "wholesale" activity. The Company also monitors unit case volume, a measure of finished product sold by bottling partners to retail customers who make sales to consumers. Management believes unit case volume more accurately measures the underlying strength of the global business system because it measures trends at the retail level and is less impacted by inventory management practices at the wholesale level. Fountain/post-mix syrups sold by the Company directly to customers are included in both measures.

Worldwide soft drink volume increased in 1992, with unit case volume and gallon shipments increasing 3 percent. In 1991, both unit cases and gallon shipments increased 5 percent. In the United States, continued slow economic recovery impacted volume in 1992. Unit case volume and gallon shipments increased 2 percent in 1992, compared to growth of 2½ percent and 2 percent, respectively, in 1991. The increase in 1991 was due in part to full-year results from significant fountain customers added in 1990.

Outside the United States, unit case volume increased 4 percent in 1992, while gallon shipments increased 3 percent, reflecting the difficult economic environments in a number of markets, particularly Brazil. Approximately 69 percent of soft drink gallon shipments were made outside the United States in 1992, compared to 68 percent in 1991. In 1991, both unit case volume and gallon shipments outside the United States increased 6 percent.

In the European Community, unit cases increased 5 percent in 1992, including gains of 10 percent in the Benelux and Denmark Division and 6 percent in France and Germany. Gallon shipments increased 3 percent in 1992, compared to 6 percent in 1991.

In Northeast Europe/Africa, unit cases increased 14 percent in 1992, while gallon shipments increased 15 percent. Unit case growth was driven by expansion into new markets in East Central Europe and continued expansion of the Company's infrastructure in many existing markets. In 1991, gallon shipments increased 3 percent in Northeast Europe/Africa.

Unit case volume in the Pacific grew 3 percent in 1992. Gallon shipments grew 2 percent, compared to 4 percent in 1991. Unit cases increased 2 percent in Japan and 12 percent in the China Division, offsetting a 1 percent decrease in the Philippines, where natural disasters hampered distribution.

Unit case volume and gallon shipments in Latin America were even with the prior year, primarily because of an 18 percent decrease in unit cases and a 19 percent decrease in gallon shipments in Brazil, where severe economic conditions eroded consumer purchasing power. The decline in Brazil was offset by unit case volume growth of 3 percent in Mexico and 30 percent in Argentina. Gallon shipments in Latin America increased 8 percent in 1991.

In the foods business sector, 1992 unit volume for juice and juice-drink products was unchanged following the strong performance in 1991, when volume increased 12 percent. Frozen orange juice volume decreased 8 percent in 1992, following an increase of 27 percent in 1991. The 1992 decline in frozen orange juice volume was offset by a 4 percent increase in chilled product volume and an 8 percent increase in volume for shelf stable products.

Net Operating Revenues and Gross Margin: For the ompany's soft drink business, revenues grew 15 percent in 992, primarily due to gallon shipment increases, favorable xchange movement, price increases and continued expansion f bottling and canning operations. Revenues for the foods busiess sector in 1992 increased 2 percent due to price increases.

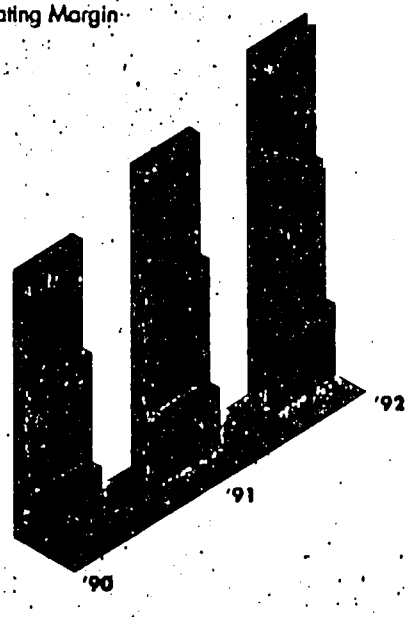
In 1991, revenues for the Company's soft drink business ncreased 15 percent, primarily due to gallon shipment growth, rice increases and continued expansion of bottling and anning operations. In the foods business sector, 1991 revenues ncreased 2 percent primarily due to volume increases, partially ffset by price decreases.

On a consolidated basis, the Company's worldwide revenues rew 13 percent in 1992 while gross profit grew 16 percent, xpanding the Company's gross margin from 60 percent 1991 to 61 percent in 1992. Gross profits grew 15 percent in 991 on consolidated revenue growth of 13 percent. Gross marins improved in both years due to price increases and lower aw material costs.

Selling, Administrative and General Expenses: Selling ses were $4.0 billion in 1992, $3.5 billion in 1991 and billion in 1990. The increases in 1992 and 1991 were due rimarily to higher marketing investments in line with expanion of the business.

Margin Analysis

■ Net Operating Revenues (In billions)
■ Gross Margin
■ Operating Margin



Administrative and general expenses were $1.2 billion in 1992, $1.1 billion in 1991 and $859 million in 1990. The 1992 increase was due primarily to expansion of the business, particularly newly formed, Company-owned bottling operations. The 1991 increase was due to the growth of the business and stock-related employee benefits. Administrative and general expenses, as a percentage of net operating revenues, were approximately 10 percent in 1992, 9 percent in 1991 and 8 percent in 1990.

Operating Income and Operating Margin: Operating income increased 19 percent in 1992 and 1991, and operating margins grew from 20 percent in 1991 to 21 percent in 1992. The expansion in operating margins resulted from gross margin expansion and a reduction in the costs of stock-related employee benefits.

Interest Income and Interest Expense: Interest expense declined in 1992 and 1991 due primarily to lower interest rates. Interest income in 1992 declined primarily due to lower interest rates. Interest income in 1991 was consistent with 1990 levels.

Equity Income: Equity income increased 63 percent, to $65 million, in 1992 due primarily to one-time charges recorded by Coca-Cola Enterprises in 1991, partially offset by increased start-up costs of Coca-Cola Nestle Refreshments Company in 1992.

Equity income decreased $70 million in 1991 due primarily to a decrease in earnings of Coca-Cola Enterprises. Coca-Cola Enterprises' 1991 results were less than 1990 earnings due to pretax restructuring charges of $152 million and a pretax charge of $15 million to increase insurance reserves in 1991 and a nonrecurring gain that was recorded by Coca-Cola Enterprises in 1990. The decrease in equity income from Coca-Cola Enterprises was partially offset by improved results of CC&SB, which successfully implemented a cost reduction program during 1991.

Other Income (Deductions)–Net: Other income (deductions)–net in 1992 was lower than 1991 due to nonrecurring gains recorded in 1991.

The $28 million favorable change in other income–net in 1991 resulted from a pretax gain of $69 million on the sale of property no longer required as a result of a consolidation of concentrate operations in Japan and a pretax gain of $27 million on the sale of the Company's 22 percent ownership interest in Johnston Coca-Cola Bottling Group, Inc. to Coca-Cola Enterprises. This favorable change was partially

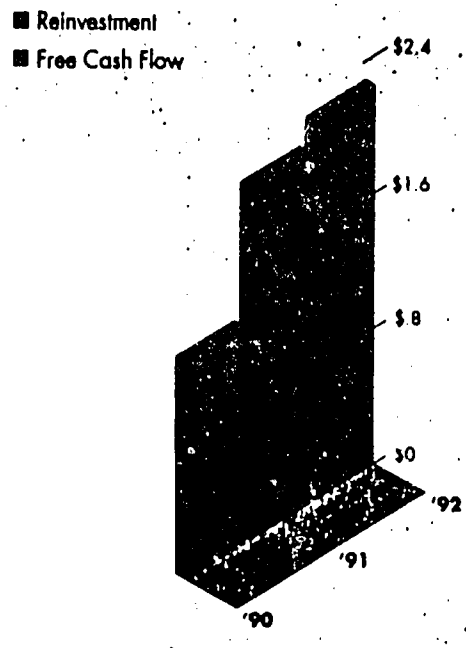
offset by an increase in net foreign exchange costs (including certain hedging costs) and a nonrecurring gain that was recorded in 1990.

Income Taxes: The Company's effective tax rate was 31.4 percent in 1992, 32.1 percent in 1991 and 31.4 percent in 1990.

Transition Effect of Change in Accounting Principle: As of January 1, 1992, the Company recognized a one-time, noncash after-tax charge of $219 million resulting from the adoption of Statement of Financial Accounting Standards No. 106, "Employers' Accounting for Postretirement Benefits Other Than Pensions" (SFAS 106). The cumulative charge consists of postretirement health care and life insurance benefit obligations to employees of the Company and the Company's portion of postretirement benefit obligations of its equity investees. The Company elected to absorb this charge immediately rather than amortizing the obligation over a period of up to twenty years.

Income Per Common Share: Accelerated by the Company's share repurchase program, income per common share before change in accounting principle grew 18 percent and 19 percent in 1992 and 1991, respectively. Net income per common share grew 4 percent in 1992, reflecting the $.17 per share impact of the adoption of SFAS 106 in 1992.

Cash Provided by Operations
(In billions)



Liquidity and Capital Resources

One of the Company's financial strengths is its ability to generate cash from operations in excess of requirements for capital reinvestment and dividends.

"Free Cash Flow": Free Cash Flow is the cash from operations remaining after the Company has satisfied its business reinvestment opportunities. Management focuses on growing Free Cash Flow to achieve management's primary objective, maximizing share-owner value. The Company uses Free Cash Flow, along with borrowings, to make share repurchases and dividend payments. The consolidated statements of cash flows are summarized as follows (in millions):

Year Ended December 31,	**1992**	1991	1990
Cash flows provided by (used in):			
Operations	**$2,232**	$ 2,084	$1,284
Investment activities	**(1,359)**	(1,124)	(440)
"Free Cash Flow"	**873**	960	844
Cash flows provided by (used in):			
Financing	**(917)**	(1,331)	(544)
Exchange	**(59)**	—	33
Increase (decrease) in cash	**$ (103)**	$ (371)	$ 333

Cash provided by operations continued to grow in 1992, reaching $2.2 billion, resulting from growth in net income before the noncash charges for depreciation, amortization and the change in accounting principle. Cash used in investment activities increased in 1992 due primarily to purchases of property, plant and equipment, investments and acquisitions of bottling operations, offset by the collection of certain finance subsidiary receivables added in 1991.

The payments collected by the finance subsidiary were used to reduce notes payable in 1992. The noncash charge for the change in accounting for postretirement benefits other than pensions resulted in an increase in other long-term liabilities and a decrease in deferred tax benefits. The increase in long-term receivables and other assets in 1992 is primarily attributable to an increase in marketable securities held in accordance with a negotiated income tax exemption grant.

Cash from operations grew 62 percent in 1991, resulting from growth in net income and a reduction in tax payments. Tax payments in 1990 reflect approximately $300 million related to the 1989 gain on the sale of Columbia Pictures Entertainment,

stock. In 1991, cash used in investment activities increased
: to purchases of property, plant and equipment, additions
inance subsidiary receivables and the impact of a disposal
ı temporary investment in 1990.

Financing: Financing activities primarily represent the
mpany's net borrowing activities, dividend payments and
ıre repurchases. Cash used in financing activities totaled
17 million in 1992, $1.3 billion in 1991 and $544 million
990. The change between years was due primarily to net
rowings in 1992 and 1990 compared to net reductions of
ıt in 1991. Cash used to fund the share repurchase program
eased to $1.2 billion in 1992, from $397 million in 1991.
The Company aggressively manages its mix of short-term
sus long-term debt to lower its overall cost of borrowing.
s process, coupled with the share repurchase program and
estment activity, resulted in an increase in loans and notes
/able and current liabilities exceeding current assets at
:emb er 31, 1992.

The Company manages its debt levels based on the
mpany's cash flows relative to fixed charges and debt and
entage of debt to the Company's total capital. The
mpany's ratio of earnings to fixed charges was 14.1 in 1992,
5 in 1991 and 8.5 in 1990. Debt levels are measured exclud-
the debt of the Company's finance subsidiary, and are net of
h, cash equivalents and marketable securities in excess of
rating requirements and temporary bottling investments. At
ember 31, 1992 and 1991, the Company's net debt totaled
8 billion and $1.0 billion. Net debt represented 31.9 percent
ıet capital at December 31, 1992, compared with 19.2 per-
t at December 31, 1991. The ratio of Free Cash Flow to the
npany's net debt was 48 percent at December 31, 1992,
ıpared to 95 percent at December 31, 1991.

At December 31, 1992, the Company had $1.6 billion in
s of credit and other short-term credit facilities contractually
ıilable, under which $171 million was outstanding. Included
e $1.3 billion in lines designated to support commercial
ıer and other borrowings, under which no amounts were
ıtanding at December 31, 1992.

Exchange: International operations are subject to certain
ortunities and risks, including currency fluctuations and
ernment actions. The Company closely monitors its methods of operating in each country and adopts strategies responsive to changing economic and political environments.

The Company uses approximately 42 functional currencies. For the Company, the weighted average annual exchange rates of foreign hard currencies, compared to the U.S. dollar, strengthened approximately 3½ percent in 1992 and weakened slightly during 1991. In 1992, 1991 and 1990, weighted average exchange rates for certain key foreign currencies strengthened (weakened) against the U.S. dollar as follows:

Year Ended December 31,	**1992**	1991	1990
Australian dollar	**(5)%**	1 %	0 %
British pound	**1 %**	(1)%	10 %
Canadian dollar	**(4)%**	1 %	2 %
German mark	**8 %**	(3)%	17 %
Japanese yen	**6 %**	8 %	(5)%

The foreign currency translation adjustment decreased in 1992 due primarily to the weakening of certain European currencies against the U.S. dollar in the fourth quarter of 1992. Exchange effects include costs of hedging certain balance sheet, translation and transaction exposures, net gains or losses on foreign currency transactions and the remeasurement of certain currencies into functional currencies. Exchange losses recorded in other income (deductions)–net amounted to $25 million in 1992, $22 million in 1991 and $.5 million in 1990.

Impact of Inflation and Changing Prices

Inflation is a factor in many markets around the world and consequently impacts the way the Company operates. In general, management believes that the Company is able to adjust prices to counteract the effects of increasing costs and generate sufficient cash flows to maintain its productive capability.

In highly inflationary countries, the Company has benefited from its net monetary liability position. This position is viewed as a hedge against the effects of high inflation, since net liabilities will ultimately be paid with devalued currency.

Additional Information

For additional information concerning the Company's operations, cash flows, liquidity and capital resources, this analysis should be read in conjunction with the inform..tion on poges 48 through 66 of this Annual Report. Additional information concerning operations in different lines of business and geographic areas is presented on pages 63 and 64.

7. SELECTED DATA FROM ANHEUSER-BUSH 1992 ANNUAL REPORT

ANHEUSER-BUSCH NYSE-BUD

RECENT PRICE	P/E RATIO	(Trailing / Median)	RELATIVE P/E RATIO	DIV'D YLD	VALUE LINE
46	12.3	(Trailing: 13.1; Median: 14.0)	0.76	3.1%	1527

TIMELINESS (Relative Price Performance Next 12 Mos.) 3 Average

SAFETY 1 Highest

(Scale: 1 Highest to 5 Lowest)

BETA 1.10 (1.00 = Market)

1996-98 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	85	(+85%)	19%
Low	70	(+50%)	13%

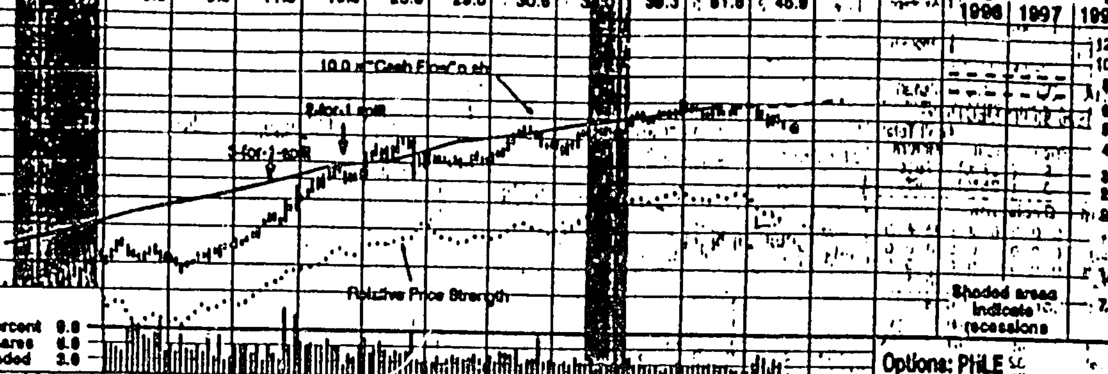
Insider Decisions

	S	O	N	D	J	F	M	A	M
to Buy	0	0	0	0	0	0	0	0	0
Options	3	1	3	7	0	11	1	0	0
to Sell	3	1	3	6	0	9	0	0	1

Institutional Decisions

	3Q'92	4Q'92	1Q'93
to Buy	168	158	147
to Sell	142	158	217
Hld's(000)	148341	150445	149237

High	12.8	12.4	22.9	29.1	40.1	34.4	46.0	4?	62.0	60.8	60.3
Low	9.8	9.0	11.8	19.8	25.8	29.0	30.6	3?	39.3	51.8	45.9



1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	© VALUE LINE PUB., INC.
6.79	8.34	10.22	12.16	14.10	15.80	20.79	23.02	25.27	28.55	22.10	Sales per sh A
.57	.65	.81	1.00	1.19	1.41	1.74	2.01	2.30	2.66	3.11	"Cash Flow" per sh
.34	.41	.53	.53	.90	.93	1.08	1.24	1.42	1.69	2.04	Earnings per sh B
.12	.14	.15	.17	.19	.23	.27	.32	.37	.46	.57	Div'ds Decl'd per sh C
.58	.84	1.59	2.10	1.54	1.23	1.47	1.84	2.17	2.69	2.81	Cap'l Spending per sh
2.51	2.79	3.35	3.83	4.42	5.22	6.04	6.66	7.80	8.56	9.87	Book Value per sh D
270.83	270.83	271.57	271.10	272.93	269.75	290.37	282.47	277.04	268.87	283.00	Common Shs Outst'g E
11.1	9.5	7.4	7.0	7.7	8.3	10.2	8.7	10.9	14.7	16.7	Avg Ann'l P/E Ratio
1.45	1.29	1.07	.93	.94	1.02	.89	.81	.89	1.00	1.12	Relative P/E Ratio
3.1%	3.5%	3.0%	3.7%	3.1%	2.6%	2.4%	3.0%	2.4%	1.8%	1.7%	Avg Ann'l Div'd Yield

© VALUE LINE PUB., INC.	1988	1989	1990	1991	1992	1993	1994	96-98
Sales per sh A	31.40	33.50	38.03	36.59	40.95	42.30	46.85	56.00
"Cash Flow" per sh	3.79	4.16	4.74	5.17	5.70	5.65	6.25	8.20
Earnings per sh B	2.45	2.68	2.95	3.25	3.58	3.75	4.05	5.45
Div'ds Decl'd per sh C	.69	.80	.94	1.06	1.20	1.24	1.44	1.80
Cap'l Spending per sh	3.55	3.60	3.18	2.49	3.25	2.50	2.55	3.00
Book Value per sh D	10.95	10.95	13.03	15.57	16.60	18.25	20.85	28.60
Common Shs Outst'g E	283.41	282.59	282.31	285.05	278.40	269.00	264.00	250.00
Avg Ann'l P/E Ratio	12.7	14.4	13.4	15.6	15.8	Bold figures are Value Line estimates		14.0
Relative P/E Ratio	1.05	1.09	1.00	1.00	.95			1.10
Avg Ann'l Div'd Yield	2.2%	2.1%	2.4%	2.1%	2.2%			2.4%

CAPITAL STRUCTURE as of 3/31/93
Total Debt $2629.3 mill. Due in 5 Yrs $652.0 mill.
LT Debt $2534.7 mill. LT Interest $190.0 mill.
Includes $237.2 million 8% debentures (due 1996) each convertible into a 5% convertible preferred stock at a price of $47.60 per preferred share.
Includes $115.6 million capitalized leases.
(LT interest earned: 9.7x;
total interest coverage: 9.4x) (36% of Cap'l)
Pension Liability None

Pfd Stock None

Common Stock 272,062,949 shs. (64% of Cap'l)
(...1 million fully diluted shares)

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994		96-98
	6034.2	6501.2	7000.3	7677.2	8258.4	8924.1	9481.3	10744	10996	11394	11650	12100	Sales ($mill) A	[illegible]
	14.7%	14.7%	13.3%	16.7%	17.5%	18.2%	18.3%	19.5%	20.5%	20.9%	22.5%	22.5%	Operating Margin	21.0%
	187.3	203.4	238.1	277.5	315.5	359.0	410.3	495.7	534.1	567.0	635	610	Depreciation ($mill)	700
	348.0	391.5	443.7	518.0	614.7	715.9	767.2	842.4	939.8	1029.2	1030	1035	Net Profit ($mill)	1345
	43.5%	43.2%	43.2%	45.0%	41.8%	38.3%	37.5%	37.7%	38.2%	38.4%	38.5%	38.5%	Income Tax Rate	38.5%
	5.8%	6.0%	6.3%	6.7%	7.4%	8.0%	8.1%	7.8%	8.5%	9.0%	8.8%	8.8%	Net Profit Margin	9.5%
	175.1	80.3	127.7	5.0	82.9	16.2	25.7	14.4	224.9	358.0	135	45.0	Working Cap'l ($mill)	285
	961.4	835.8	861.3	1126.8	1398.5	1615.3	1307.3	3147.1	2644.9	2642.5	2495	2345	Long-Term Debt ($mill)	1200
	2052.5	2237.9	2460.6	2600.8	2892.2	3102.9	3099.9	3679.1	4438.1	4620.4	5235	5090	Net Worth ($mill)	7400
	13.3%	14.3%	14.7%	15.2%	15.7%	16.6%	13.5%	14.4%	14.9%	16.4%	14.5%	15.0%	% Earned Total Cap'l	15.5%
	17.0%	17.5%	18.0%	19.9%	21.3%	23.1%	24.7%	22.9%	21.2%	22.3%	18.5%	19.0%	% Earned Net Worth	18.0%
	13.7%	14.2%	14.5%	16.1%	15.4%	17.0%	17.5%	16.7%	14.4%	15.0%	13.0%	12.5%	% Retained to Comm Eq	12.0%
	31%	30%	29%	29%	27%	28%	29%	31%	32%	33%	33%	36%	% All Div'ds to Net Prof	33%

CURRENT POSITION ($MILL.)	1991	1992	3/31/93
Cash Assets	97.3	215.0	104.1
Receivables	654.8	649.8	755.4
Inventory (LIFO)	635.6	660.7	719.5
Other	240.0	290.3	281.8
Current Assets	1627.7	1815.8	1860.8
Accts Payable	709.8	737.4	650.9
Debt Due	261.0	--	94.6
Other	432.0	722.4	881.1
Current Liab.	1402.8	1459.8	1626.6

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '90-'92 to '96-'98
Sales	11.0%	7.5%	7.0%
"Cash Flow"	16.0%	13.5%	8.0%
Earnings	15.5%	13.5%	9.0%
Dividends	18.5%	18.0%	9.0%
Book Value	13.0%	11.5%	11.0%

Calendar	QUARTERLY SALES ($ mill.) A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1990	2392	2778	2888	2686	10744
1991	2541	2845	2944	2666	10996
1992	2621	2953	3093	2727	11394
1993	2500	2991	3250	2909	11650
1994	2620	3100	3375	3005	12100

Calendar	EARNINGS PER SHARE B Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1990	.64	.90	.91	.50	2.95
1991	.70	.99	1.01	.55	3.25
1992	.77	1.09	1.11	.61	3.58
1993	.80	1.11	1.20	.75	3.78
1994	.90	1.20	1.25	.90	4.05

Calendar	QUARTERLY DIVIDENDS PAID C■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1989	.18	.18	.22	.22	.80
1990	.22	.22	.25	.25	.94
	.25	.25	.28	.28	1.06
..1	.28	.28	.32	.32	1.20
..93	.32	.32	.36		

BUSINESS: Anheuser-Busch Companies, Inc. is the nation's largest brewer (1992 shipments: 86.8 million barrels, an estimated 44.3% of industry total). Brands: *Budweiser*, *Michelob*, and *Busch* families of beer. Also, *Natural Light*, *Classic Dark*, and *O'Doul's*. Has 12 breweries with about 87 million barrels of capacity. Non-beer businesses include: baked goods, edible oils, frozen prepared foods (Campbell Taggart), snack foods (*Eagle Snacks*), metal containers, and theme parks. Has 44,871 employees, 67,273 shareholders. Officers and directors own 2.0% of common stock (3/93 Proxy). Chairman and President: August A. Busch, III. Incorporated: Missouri. Address: One Busch Place, St. Louis, Missouri 63118. Telephone: 314-577-2000.

Anheuser-Busch's share earnings will likely grow by about 5% to 8% annually in 1993 and 1994. Many consumers seem to be trading down to less expensive brews like *Heileman* and A-B's own lower-margin *Natural Light*. A leading casualty of this move to cheaper suds is the *Budweiser* brand. In the second quarter, for example, its volume dropped 10% in supermarkets. In this environment, meaningful price increases are out of the question. However, aluminum costs have fallen, helping margins. The company is also using its considerable free cash flow to buy back shares. It's on schedule to retire about 3% of its common this year, with more repurchases likely next year.

Demographics are not in Bud's favor. Although the U.S. population of young adults 18-24 is expected to remain flat at 25 million between 1990 and 2000, the number of 25-34 year olds is projected to decline a whooping 38%, from 43.7 million to 27 million. Heavy beer drinkers are disproportionately younger and account for most of the volume within the category. Since A-B generates virtually all of its volume domestically, we believe that this demographic trend is bad news for the company and the entire domestic industry, long term. The aging of the U.S. population may explain why ...

Anheuser-Busch is accelerating its international efforts. In the second quarter alone, the company bought a 5% equity stake in Tsingtao, China's largest brewer, and a 17.7% interest in Grupo Modelo, Mexico's biggest beer company. Both markets have large, young populations. A-B's partners will benefit from the company's marketing prowess and provide a distribution network through which the company can sell its various brands.

Anheuser-Busch stock is neutrally ranked for Timeliness. Likewise, looking out to 1996-98, we believe that the shares' appreciation potential is only average, given U.S. demographic trends. (Although, as the dominant U.S. brewer with the lowest costs, we expect A-B to fare better than its rivals). The future internationally is bright, yet overseas sales are now immaterial. Even with additional acquisitions, it will probably take years before they make a significant contribution.

Jim Barrett *August 20, 1993*

(A) Excludes excise taxes. Includes Campbell Taggart as of 11/82. (B) Fully diluted earnings beginning 1990. Prior years based on average shares outstanding. Excludes special gains: '79, 36¢; '82, 9¢. Next earnings report due late Oct. (C) Next dividend meeting about Oct. 25th. Goes ex-dividend about Nov. 3. Dividend payment dates: second week of March, June, September, December. ■ Dividend reinvestment plan available. (D) Includes intangibles. In '92: $505.7 million, $1.82/share. (E) In millions, adjusted for stock splits.

Company's Financial Strength	A+
Stock's Price Stability	85
Price Growth Persistence	95
Earnings Predictability	100

CONSOLIDATED STATEMENT OF INCOME

Anheuser-Busch Companies, Inc., and Subsidiaries

(In millions, except per share data)

YEAR ENDED DECEMBER 31,	1992	1991	1990
Sales	$13,062.3	$12,634.2	$11,611.7
Less federal and state excise taxes	1,668.6	1,637.9	868.1
Net sales	11,393.7	10,996.3	10,743.6
Cost of products and services	7,309.1	7,148.7	7,093.5
Gross profit	4,084.6	3,847.6	3,650.1
Marketing, distribution and administrative expenses	2,308.9	2,126.1	2,051.1
Operating income	1,775.7	1,721.5	1,599.0
Other income and expenses:			
Interest expense	(199.6)	(238.5)	(283.0)
Interest capitalized	47.7	46.5	54.6
Interest income	7.1	9.2	7.0
Other income/(expense), net	(15.7)	(18.1)	(25.5)
Income before income taxes	1,615.2	1,520.6	1,352.1
Provision for income taxes:			
Current	561.9	479.1	429.9
Deferred	59.1	101.7	79.8
	621.0	580.8	509.7
Net income, before cumulative effect of accounting changes	994.2	939.8	842.4
Cumulative effect of changes in the method of accounting for postretirement benefits (FAS 106) and income taxes (FAS 109), net of tax benefit of $186.4 million	(76.7)	—	—
NET INCOME	$ 917.5	$ 939.8	$ 842.4
PRIMARY EARNINGS PER SHARE:			
Net income, before cumulative effect	$ 3.48	$ 3.26	$ 2.96
Cumulative effect of accounting changes	(.26)	—	—
Net income	$ 3.22	$ 3.26	$ 2.96
FULLY DILUTED EARNINGS PER SHARE:			
Net income, before cumulative effect	$ 3.46	$ 3.25	$ 2.95
Cumulative effect of accounting changes	(.26)	—	—
Net income	$ 3.20	$ 3.25	$ 2.95

The accompanying statements should be read in conjunction with the Notes to Consolidated Financial Statements appearing on pages 49-61 of this report.

NOTE: During 1992 the company elected to early adopt the new Financial Accounting Standards pertaining to Postretirement Benefits (FAS 106) and Income Taxes (FAS 109). This decision affects the comparability of 1992 reported results with those of prior years. Management believes that readers of the company's financial statements need to be fully aware of the impact the adoption of these Standards has on 1992 operating results and earnings per share. Excluding the financial impact of these Standards, 1992 operating income, income before income taxes, net income and fully diluted earnings per share would have been $1,830.8 million, $1,676.* million, $1,029.2 million and $3.58, respectively.

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LIABILITIES AND SHAREHOLDERS EQUITY *(In millions)*

DECEMBER 31,	***1992***	***1991***
CURRENT LIABILITIES:		
Accounts payable	$ 737.4	$ 709.8
Accrued salaries, wages and benefits	257.3	223.3
Accrued interest payable	52.4	58.5
Due to customers for returnable containers	48.2	44.5
Accrued taxes, other than income taxes	117.0	110.9
Estimated income taxes	38.8	45.2
Other current liabilities	208.7	210.6
Total current liabilities	1,459.8	1,402.8
POSTRETIREMENT BENEFITS	538.3	—
LONG-TERM DEBT	2,642.5	2,644.9
DEFERRED INCOME TAXES	1,276.9	1,500.7
COMMON STOCK AND OTHER SHAREHOLDERS EQUITY:		
Common stock, $1.00 par value, authorized 400,000,000 shares	341.3	338.5
Capital in excess of par value	762.9	654.5
Retained earnings	5,794.9	5,209.8
Foreign currency translation adjustment	(1.4)	20.7
	6,897.7	6,223.5
Treasury stock, at cost	(1,842.9)	(1,324.2)
ESOP debt guarantee offset	(434.4)	(461.2)
	4,620.4	4,438.1
COMMITMENTS AND CONTINGENCIES	—	—
	$10,537.9	$9,986.5

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CONSOLIDATED BALANCE SHEET

Anheuser-Busch Companies, Inc., and Subsidiaries

ASSETS *(In millions)*

DECEMBER 31,	1992	1991
CURRENT ASSETS:		
Cash and marketable securities	$ 215.0	$ 97.3
Accounts and notes receivable, less allowance for doubtful accounts of $4.9 in 1992 and $5.5 in 1991	649.8	654.8
Inventories—		
Raw materials and supplies	417.7	397.2
Work in process	88.7	92.5
Finished goods	154.3	145.9
Total inventories	660.7	635.6
Other current assets	290.3	240.0
Total current assets	1,815.8	1,627.7
INVESTMENTS AND OTHER ASSETS:		
Investments in and advances to affiliated companies	171.6	116.9
Investment properties	164.8	159.9
Deferred charges and other non-current assets	356.3	365.6
Excess of cost over net assets of acquired businesses, net	505.7	519.9
	1,198.4	1,162.3
PLANT AND EQUIPMENT:		
Land	273.3	308.9
Buildings	3,295.2	3,027.8
Machinery and equipment	7,086.9	6,583.9
Construction in progress	729.7	669.0
	11,385.1	10,589.6
Accumulated depreciation	(3,861.4)	(3,393.1)
	7,523.7	7,196.5
	$10,537.9	$ 9,986.5

The accompanying statements should be read in conjunction with the Notes to Consolidated Financial Statements appearing on pages 49-61 of this report.

CONSOLIDATED STATEMENT OF CASH FLOWS

Anheuser-Busch Companies, Inc., and Subsidiaries

(In millions)

YEAR ENDED DECEMBER 31,	1992	1991	1990
CASH FLOW FROM OPERATING ACTIVITIES:			
Net income	$ 917.5	$ 939.8	$ 842.4
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	567.0	534.1	495.7
Increase in deferred income taxes	62.0	104.5	80.3
Cumulative effect of accounting changes	76.7	—	—
Decrease/(increase) in non-cash working capital	(13.4)	(208.5)	122.8
Other, net	18.9	24.8	(24.3)
Cash provided by operating activities	1,628.7	1,394.7	1,516.9
CASH FLOW FROM INVESTING ACTIVITIES:			
Capital expenditures	(737.2)	(702.5)	(898.9)
Business acquisitions	(41.4)	(15.7)	(12.1)
Cash used for investing activities	(778.6)	(718.2)	(911.0)
CASH FLOW FROM FINANCING ACTIVITIES:			
Increase in long-term debt	351.3	.6	178.6
Decrease in long-term debt	(343.8)	(479.1)	(427.8)
Dividends paid to shareholders	(338.3)	(301.1)	(265.0)
Acquisition of treasury stock	(518.7)	(1.1)	(86.3)
Shares issued under stock plans and conversion of Convertible Debentures	117.1	106.2	53.5
Cash (used for) financing activities	(732.4)	(674.5)	(547.0)
Net increase/(decrease) in cash and marketable securities during the year	117.7	2.0	58.9
Cash and marketable securities at beginning of year	97.3	95.3	36.4
Cash and marketable securities at end of year	$ 215.0	$ 97.3	$ 95.3

The accompanying statements should be read in conjunction with the Notes to Consolidated Financial Statements appearing on pages 49-61 of this report.

CONSOLIDATED STATEMENT OF CHANGES IN SHAREHOLDERS EQUITY

Anheuser-Busch Companies, Inc., and Subsidiaries

SHAREHOLDERS EQUITY *(In millions, except per share data)*

	COMMON STOCK	CAPITAL IN EXCESS OF PAR VALUE	RETAINED EARNINGS	TREASURY STOCK	ESOP DEBT GUARANTEE OFFSET	FOREIGN CURRENCY TRANSLATION ADJUSTMENT
BALANCE AT DECEMBER 31, 1989	$333.9	$507.2	$3,985.9	$(1,236.8)	$(500.0)	$ 9.7
Net income			842.4			
Common dividends ($.94 per share)			(265.0)			
Shares issued under stock plans	1.8	51.7				
Reduction of ESOP debt guarantee					15.0	
Treasury stock acquired				(86.3)		
Foreign currency translation adjustment						19.6
BALANCE AT DECEMBER 31, 1990	335.7	558.9	4,563.3	(1,323.1)	(485.0)	29.3
Net income			939.8			
Common dividends ($1.06 per share)			(301.1)			
Shares issued under stock plans	2.7	92.2	7.8			
Conversion of Convertible Debentures	.1	3.4				
Reduction of ESOP debt guarantee					23.8	
Treasury stock acquired				(1.1)		
Foreign currency translation adjustment						(8.6)
BALANCE AT DECEMBER 31, 1991	338.5	654.5	5,209.8	(1,324.2)	(461.2)	20.7
Net income			*917.5*			
Common dividends ($1.20 per share)			*(338.3)*			
Shares issued under stock plans	*2.8*	*107.6*	*5.9*			
Conversion of Convertible Debentures		*.8*				
Reduction of ESOP debt guarantee					*26.8*	
Treasury stock acquired				*(318.7)*		
Foreign currency translation adjustment						*(22.1)*
BALANCE AT DECEMBER 31, 1992	*$341.3*	*$762.9*	*$5,794.9*	*$(1,842.9)*	*$(434.4)*	*$ (1.4)*

The accompanying statements should be read in conjunction with the Notes to Consolidated Financial Statements appearing on pages 49-61 of this report.

FINANCIAL SUMMARY—OPERATIONS

Anheuser-Busch Companies, Inc., and Subsidiaries

(In millions, except per share data)

	1992	1991	1990
CONSOLIDATED SUMMARY OF OPERATIONS			
Barrels sold	86.8	86.0	86.5
Sales	$13,062.3	$12,634.2	$11,611.7
Federal and state excise taxes	1,668.6	1,637.9	868.1
Net sales	11,393.7	10,996.3	10,743.6
Cost of products and services	7,309.1	7,148.7	7,093.5
Gross profit	4,084.6	3,847.6	3,650.1
Marketing, distribution and administrative expenses	2,308.9	2,126.1	2,051.1
Operating income	1,775.7(1)	1,721.5	1,599.0
Interest expense	(199.6)	(238.5)	(283.0)
Interest capitalized	47.7	46.5	54.6
Interest income	7.1	9.2	7.0
Other income/(expense), net	(15.7)	(18.1)	(25.5)
Gain on sale of Lafayette plant	—	—	—
Income before income taxes	1,615.2(1)	1,520.6	1,352.1
Income taxes	621.0	580.8	509.7
Net income, before cumulative effect of accounting changes	994.2(1)	939.8	842.4
Cumulative effect of changes in the method of accounting for postretirement benefits (FAS 106) and income taxes (FAS 109), net of tax benefit of $186.4 million	(76.7)	—	—
NET INCOME	$ 917.5	$ 939.8	$ 842.4
PRIMARY EARNINGS PER SHARE:			
Net income before cumulative effect	$ 3.48(1)	$ 3.26	$ 2.96
Cumulative effect of accounting changes	(.26)	—	—
Net income	$ 3.22	$ 3.26	$ 2.96
FULLY DILUTED EARNINGS PER SHARE:			
Net income before cumulative effect	$ 3.46(1)	$ 3.25	$ 2.95
Cumulative effect of accounting changes	(.26)	—	—
Net income	$ 3.20	$ 3.25	$ 2.95
Cash dividends paid:			
Common stock	338.3	301.1	265.0
Per share	1.20	1.06	.94
Preferred stock	—	—	—
Per share	—	—	—
Average number of common shares:			
Primary	285.8	287.9	284.6
Fully diluted	290.8	292.9	289.7

NOTES TO FINANCIAL SUMMARY—OPERATIONS

***Note:** All per share information and average number of common shares data reflect the September 12, 1986 two-for-one stock split and the June 14, 1985 three-for-one stock split. All amounts reflect the acquisition of Campbell Taggart, Inc. as of November 2, 1982 and the acquisition of Sea World as of December 1, 1989. Financial information prior to 1988 has been restated to reflect the adoption in 1988 of Financial Accounting Standards No. 94, Consolidation of Majority-Owned Subsidiaries.*

1989	1988	1987	1986	1985	1984	1983	1982
80.7	78.5	76.1	72.3	68.0	64.0	60.5	59.1
$10,283.6	$9,705.1	$9,110.4	$8,478.8	$7,756.7	$7,218.8	$6,714.7	$5,251.2
802.3	781.0	760.7	724.5	683.0	657.0	624.3	609.1
9,481.3	8,924.1	8,349.7	7,754.3	7,073.7	6,561.8	6,090.4	4,642.1
6,275.8	5,825.5	5,374.3	5,026.5	4,729.8	4,464.6	4,161.0	3,384.3
3,205.5	3,098.6	2,975.4	2,727.8	2,343.9	2,097.2	1,929.4	1,257.8
1,876.8	1,834.5	1,826.8	1,709.8	1,498.2	1,338.5	1,226.4	758.8
1,328.7	1,264.1	1,148.6	1,018.0	845.7	758.7	703.0	499.0
(177.9)	(141.6)	(127.5)	(99.9)	(96.5)	(106.0)	(115.4)	(93.2)
51.5	44.2	40.3	33.2	37.2	46.8	32.9	41.2
12.6	9.8	12.8	9.6	21.3	22.8	12.5	17.0
11.8	(16.4)	(9.9)	(13.6)	(23.3)	(29.6)	(14.8)	(5.8)
—	—	—	—	—	—	—	20.4
1,226.7	1,160.1	1,064.3	947.3(2)	784.4	692.7	618.2	478.6
459.5	444.2	449.6	429.3	340.7	301.2	270.2	191.3
767.2	715.9	614.7	518.0(2)	443.7	391.5	348.0	287.3(3)
—	—	—	—	—	—	—	—
$ 767.2	$ 715.9	$ 614.7	$ 518.0(2)	$ 443.7	$ 391.5	$ 348.0	$ 287.3(3)
$ 2.68	$ 2.45	$ 2.04	$ 1.69(2)	$ 1.42	$ 1.23	$ 1.08	$ 1.00(3)
—	—	—	—	—	—	—	—
$ 2.68	$ 2.45	$ 2.04	$ 1.69(2)	$ 1.42	$ 1.23	$ 1.08	$ 1.00(3)
$ 2.68	$ 2.45	$ 2.04	$ 1.69(2)	$ 1.42	$ 1.23	$ 1.08	$ .98(3)
—	—	—	—	—	—	—	—
$ 2.68	$ 2.45	$ 2.04	$ 1.69(2)	$ 1.42	$ 1.23	$ 1.08	$ .98(3)
226.2	188.6	148.4	120.2	102.7	89.7	78.3	65.8
.80	.66	.54	.44	.36⅔	.31⅓	.27	.23
—	—	20.1	26.9	27.0	27.0	29.7	—
—	—	3.23	3.60	3.60	3.60	3.60	—
286.2	292.2	301.5	306.6	312.6	317.4	321.0	288.6
286.2	292.2	301.5	306.6	312.6	317.4	321.0	294.5

(1) 1992 operating income, income before income taxes, net income and earnings per share reflect the 1992 adoption of the new Financial Accounting Standards pertaining to Postretirement Benefits (FAS 106) and Income Taxes (FAS 109). Excluding the financial impact of these Standards, 1992 operating income, income before income taxes, net income and fully diluted earnings per share would have been $1,830.8, $1,676.0, $1,029.2 and $3.58, respectively.

(2) Effective January 1, 1986, the company adopted the provisions of Financial Accounting Standards No. 87 (FAS 87), Employers' Accounting For Pensions. The financial effect of FAS 87 adoption was to increase 1986 income before income taxes $45 million, net income $23 million and earnings per share $.08.

(3) Net income and net income per share include a nonrecurring gain on the sale of the corn refining plant in Lafayette, Ind. This nonrecurring gain increased net income $13.3 million, primary earnings per share $.05 and fully diluted earnings per share $.04.

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FINANCIAL SUMMARY—BALANCE SHEET AND OTHER INFORMATION

Anheuser-Busch Companies, Inc., and Subsidiaries

(In millions, except per share and statistical data)

	1992	*1991*	*1990*
BALANCE SHEET INFORMATION			
Working capital (deficit)	*$ 356.0*	$ 224.9	$ 14.4
Current ratio	*1.2*	1.2	1.0
Plant and equipment, net	*7,523.7*	7,196.5	7,063.8
Long-term debt	*2,642.5*	2,644.9	3,147.1
Total debt to total debt plus equity	*36.4%*	37.3%	46.1%
Deferred income taxes	*1,276.9*	1,500.7	1,396.2
Convertible redeemable preferred stock	—	—	—
Shareholders equity	*4,620.4*	4,438.1	3,679.1
Return on shareholders equity	*22.0%(2)*	23.2%	24.9%
Book value per share	*16.60*	15.57	13.03
Total assets	*10,537.9*	9,986.5	9,634.3
OTHER INFORMATION			
Capital expenditures	*737.2*	702.5	898.9
Depreciation and amortization	*567.0*	534.1	495.7
Effective tax rate	*38.4%*	38.2%	37.7%
Price/earnings ratio	*16.9 (3)*	18.9	14.6
Percent of pretax profit on net sales	*14.2%*	13.8%	12.6%
Market price range of common stock (high/low)	*60½-52⅛*	61½-39⅝	45-34¼

NOTES TO FINANCIAL SUMMARY—BALANCE SHEET AND OTHER INFORMATION

Note: All per share information reflects the September 12, 1986 two-for-one stock split and the June 14, 1985 three-for-one stock split. All amounts reflect the acquisition of Campbell Taggart, Inc. as of November 2, 1982 and the acquisition of Sea World as of December 1, 1989. Financial information prior to 1988 has been restated to reflect the adoption in 1988 of Financial Accounting Standards No. 94, Consolidation of Majority-Owned Subsidiaries.

(1) This percentage has been calculated by including convertible redeemable preferred stock as part of equity because it was convertible into common stock and was trading primarily on its equity characteristics.

(2) This percent has been calculated based on net income before the cumulative effect of accounting changes.

(3) This ratio has been calculated based on fully diluted earnings per share before the cumulative effect of accounting changes.

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1989	1988	1987	1986	1985	1984	1983	1982
$ (25.7)	$ 15.2	$ 75.8	$ (3.7)	$ 116.0	$ 71.5	$ 173.1	$ 60.2
1.0	1.0	1.1	1.0	1.1	1.1	1.2	1.1
6,671.3	5,467.7	4,994.8	4,494.9	3,960.8	3,579.5	3,269.8	3,057.3
3,307.3	1,615.3	1,422.6	1,164.0	904.7	879.5	1,003.1	1,029.9
52.4%	34.2%	33.0%	31.6%(1)	26.9%(1)	28.2%(1)	32.8%(1)	36.8%(1)
1,315.9	1,212.5	1,164.3	1,094.0	964.7	757.9	574.3	455.2
—	—	—	286.9	287.6	286.9	286.0	285.0
3,099.9	3,102.9	2,892.2	2,313.7	2,173.0	1,951.0	1,766.5	1,526.6
24.7%	23.9%	22.4%	20.5%(1)	18.9%(1)	18.2%(1)	18.0%(1)	19.9%(1)
10.95	10.95	9.87	8.61	7.84	6.91	6.09	5.27
9,025.7	7,109.8	6,547.9	5,898.1	5,192.9	4,592.5	4,386.8	3,965.2
1,076.7	950.5	841.8	796.2	611.3	532.3	441.3	380.9
410.3	359.0	320.1	281.2	240.0	207,9	191.3	136.9
37.5%	38.3%	42.2%	45.3%	43.4%	43.5%	43.7%	40.0%
14.4	12.9	16.4	15.5	14.9	9.8	9.6	11.0
12.9%	13.0%	12.7%	12.2%	11.1%	10.6%	10.2%	10.3%
45⅛-30⅛	34⅛-29⅛	39¼-26⅛	28⅛-20	22⅞-11⅞	12⅛-8⅛	12⅞-9¼	11⅞-6½

Anheuser-Busch, Inc., the company's brewing subsidiary and largest contributor to consolidated sales and profits, sold an all-time industry record of 86.8 million barrels of beer in 1992.

Management's Discussion and Analysis of Operations and Financial Condition

INTRODUCTION

This discussion summarizes the significant factors affecting the consolidated operating results, financial condition and liquidity/cash flows of Anheuser-Busch Companies, Inc. during the three-year period ended December 31, 1992. This discussion should be read in conjunction with the Letter to Shareholders, financial statements and financial statement footnotes included in this annual report.

As more fully discussed in Note 2 to the consolidated financial statements, effective January 1, 1992, the company adopted the financial accounting standards for postretirement benefits (FAS 106) and income taxes (FAS 109). The financial impact of these accounting changes is reflected in the company's 1992 earnings in two components.

The first component is related to an increase in annual ongoing pretax expense principally due to accruing postretirement benefits to be paid in future years. This amount is $55.1 million, or $.12 per share, in 1992 and is not separately identified in the company's consolidated income statement. The 1992 impact is based on benefit levels currently in effect. It is anticipated that certain changes to these benefit levels will be implemented in the future, thereby reducing the ongoing pretax expense level in 1993.

The second component is a one-time cumulative effect adjustment, pertaining to years prior to 1992, which decreases net income and earnings per share from normal operations

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by $76.7 million and $.26, respectively. These amounts are separately identified in the company's consolidated income statement. The 1992 quarterly results with and without the adoption of the new financial accounting standards are disclosed in Note 15 on page 60 of this annual report.

FAS 109 should not have a significant ongoing financial impact on the company if income tax rates remain constant. However, when tax rates change, the deferred tax liability must be revalued and the financial effect recognized at the time the tax rate change is enacted. Revaluing the deferred tax liability to include the effect of a 2% increase in the federal income tax rate would result in an additional one-time non-cash FAS 109 related increase in income tax expense approximating $66 million, equivalent to $.24 per share.

OPERATIONS

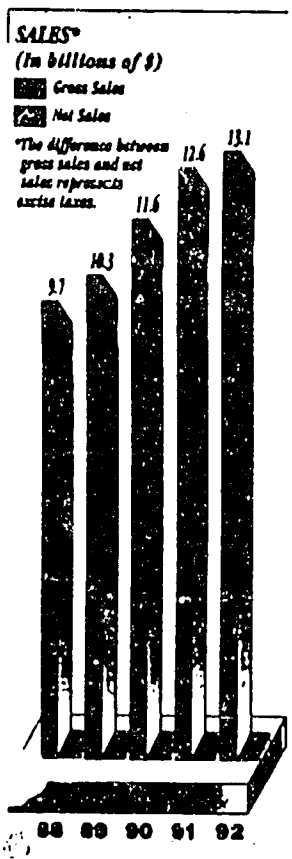
Sales

Anheuser-Busch Companies, Inc. achieved record gross sales during 1992 of $13.06 billion, an increase of $430 million or 3.4% over 1991 gross sales of $12.63 billion. Gross sales for 1991 were 8.8% higher than 1990. Gross sales for 1990 were $11.61 billion, an increase of 12.9% over 1989. Gross sales included $1.67 billion, $1.64 billion and $868.1 million, respectively, in federal and state excise taxes for 1992, 1991 and 1990. The large increase in excise taxes in 1992 and 1991 as compared to 1990 is due to the January 1, 1991 100% increase in the federal excise tax on beer.

Net sales for 1992 were also a record $11.39 billion, an increase of $397 million or 3.6% over 1991 net sales of $11.0 billion. Net sales during 1990 were $10.74 billion.

The increase in sales over the three-year period (1990-1992) primarily results from higher revenue per barrel and higher beer sales volume (1990 and 1992), as well as higher overall sales by the company's food products subsidiaries.

Anheuser-Busch, Inc., the company's brewing subsidiary and largest contributor to consolidated sales and profits, sold an all-time industry record of 86.8 million barrels of beer in 1992, an increase of one percent compared to 1991 beer volume of 86.0 million barrels. The company's 1992 beer volume gains, built from the largest volume base in the industry, were achieved despite the lingering effect of the 1991 federal excise tax increase, the second-coldest summer in two decades, and continued weak economic conditions, particularly in key selling areas, such as the Northeast and California.



The company's 1991 beer sales volume was 86.0 million barrels, a slight decrease of 462,000 barrels, or five-tenths of a percent, compared to 1990 beer volume of 86.5 million barrels. The sales volume decline was due to the 100% increase in the federal excise tax, effective January 1, 1991. The company's sales volume decline in 1991 was considerably less than the 2.0% volume decline for the brewing industry.

Anheuser-Busch, Inc. 1992 sales volume represents approximately 44.3% of total brewing industry sales in the U.S. (including imports), as estimated based on information provided by The Beer Institute. This represents an increase of .4 share point as compared to 1991 market share of 43.9% and was the largest market share increase in the industry. Anheuser-Busch has led the brewing industry in market share every year since 1957, and 1992 marks the 13th consecutive year the company has increased its market share lead over its nearest competitor. Market share for 1990 was 43.4%.

The company will open its 13th brewery in the spring of 1993 in Cartersville, Ga. The Cartersville brewery will be the most modern and efficient of the company's breweries and, when fully operational, will produce 6.5 million barrels of beer. The company has historically built inventories at the wholesaler level in the first half of each year to meet peak consumer demand during the summer. Availability of the incremental capacity of Cartersville reduces shipping requirements during the first two quarters of 1993.

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Accordingly, Anheuser-Busch expects to report first quarter 1993 beer sales volume slightly below that of the first quarter 1992. It is further anticipated that volume in the second half of 1993 will be substantially higher than the second half of 1992, providing full-year volume growth of one to two percent. These 1993 quarterly sales volume shifts are also anticipated to lead to an unusual quarter-to-quarter earnings pattern, but are not expected to impact the company's overall earnings growth for the year. Higher volume, higher revenue per barrel, and controlled material costs and marketing expenses should result in good earnings growth. Anheuser-Busch's double-digit earnings per share growth objective remains unchanged.

Anheuser-Busch's continuing success in the beer industry is primarily attributable to an uncompromising emphasis on quality, the dedication of the company's employees, a solid wholesaler distribution system and a total marketing effort. During 1993, the company's key objectives are to extend its position as the world's leading brewer of quality products by enhancing its position in the domestic market and increasing its presence in the international market.

Cost of Products and Services

Cost of products and services for 1992 was $7.31 billion, a 2.2% increase over the $7.15 billion for 1991. This increase follows an .8% and 13.0% increase in 1991 and 1990, respectively. These increases primarily relate to higher production costs for the company's brewing subsidiary and other beer-related operations, higher sales of the company's food products subsidiaries and the 1992 adoption of FAS 106. Such increases, however, have been partially offset by the company's ongoing productivity improvement and cost reduction programs. During the last 12 years, these programs have generated total cost reductions approximating $720 million.

As a percent of net sales, cost of products and services was 64.2% in 1992 (63.8% excluding the adoption of FAS 106) as compared to 65.0% in 1991 and 66.0% in 1990.

Marketing, Distribution and Administrative Expenses

Marketing, distribution and administrative expenses for 1992 were $2.31 billion, an increase of 8.6% over 1991. This increase compares to increases of 3.7% for 1991 and 9.3% for 1990. These expenses include approximately $726.0 million, $722.5 million and $735.7 million in 1992, 1991 and 1990, respectively, of selling, delivery and general operating expenses associated with the company's wholesale baking operations and its company-owned beer and snack foods wholesale operations. These expenses increased .5% in 1992 as compared to 1991 (excluding FAS 106 these expenses would have decreased .8%) and decreased 1.8% in 1991 as compared to 1990. The reduced expense level (excluding FAS 106) is due primarily to divestiture of the company's snack foods wholesale operations during 1991 and the sale of a company-owned beer wholesale operation in the last half of 1991.

Marketing, distribution and administrative expenses have increased over the past three years as a result of the higher level of marketing activity; continuing development of new products and beer brands together with related new advertising and marketing programs; the introduction of new entertainment attractions; and the adoption of FAS 106 in 1992. Areas significantly affected by these factors since 1989 include media advertising, point-of-sale materials and developmental expenses associated with new advertising and marketing programs for established as well as new products; bakery and snack foods selling, delivery and general operating expenses; payroll and related costs; business taxes; depreciation; supplies; and general operating expenses.

Taxes and Payroll Costs

The company is significantly impacted by federal, state and local taxes. Taxes applicable to 1992 operations (not including the many indirect taxes included in materials and services purchased) totaled $2.56 billion and highlight the burden of taxation on the company and the brewing industry in general. Taxes for 1992 increased $87.7 million or 3.5% over 1991 taxes of $2.47 billion. This increase follows increases of 53.1% in 1991 and 9.2% in 1990. The increase in total taxes for 1992 is due primarily to the company's increase in beer sales volume and higher earnings level. The increase for 1991 over 1990 results principally from increased beer excise taxes related to the increased federal excise tax.

Payroll costs during 1992 totaled $2.43 billion, an increase of $151.2 million or 6.6% over 1991 payroll costs of $2,28 billion. Payroll costs increased 4.4% in 1991 and 11.9% in 1990. The increase in payroll costs reflects the 1992 adoption of FAS 106 and normal increases in salary and wage rates and benefit costs.

Salaries and wages paid during 1992 totaled $1.93 billion. Pension, life insurance and healthcare benefits amounted to $337.5 million and payroll taxes were $169.1 million. Employment at December 31, 1992 was 44,871 compared to 44,836 at December 31, 1991.

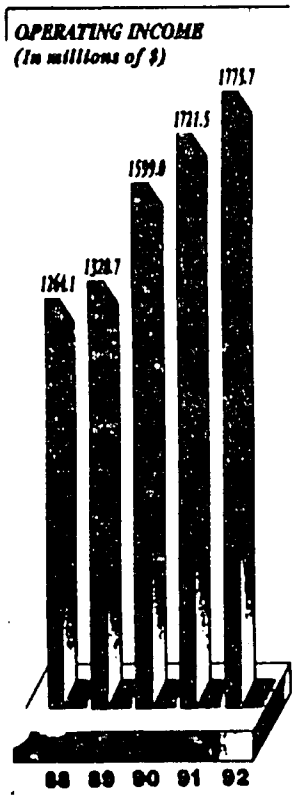
Operating Income

Operating income, the measure of the company's financial performance before interest costs and other non-operating items, was $1.78 billion in 1992, a $54.2 million or 3.1% increase over 1991. Operating income for 1992 was unfavorably impacted by the adoption of FAS 106. Excluding the financial impact of FAS 106, operating income would have been $1.83 billion, an increase of 6.3% over 1991. Operating income was $1.72 billion in 1991 and $1.60 billion in 1990, representing increases of 7.7% and 20.3% over the previous year, respectively. Operating income as a percent of net sales was 15.6% in 1992 (16.1% excluding FAS 106) as compared to 15.7% in 1991 and 14.9% in 1990.

Net Interest Cost/Interest Capitalized

Net interest cost, or interest expense less interest income, was $192.5 million in 1992, a decrease of $36.8 million when compared to 1991 net interest cost of $229.3 million. Net interest cost in 1990 was $276.0 million. The decrease in net interest cost during 1992 and 1991 is due primarily to lower average debt balances outstanding during the year ended December 31, 1992 and a $502.2 million, or 16.0%, reduction in total debt during the year ended December 31, 1991. The increase in net interest cost in 1990 is due primarily to a net increase in debt to finance a variety of activities/projects, including the Sea World acquisition and the establishment of a leveraged ESOP during 1989. Specific information regarding company financing (including the level of debt activity and the leveraged ESOP) and the company's capital expenditures program is presented in the Liquidity and Capital Resources section of this discussion.

Interest capitalized increased $1.2 million in 1992 as compared to 1991. This compares to an $8.1 million decline in 1991 compared to 1990 and an increase of $3.1 million in 1990 compared to 1989. Interest capitalized fluctuates from year to year depending upon the level of qualified construction-in-progress and the weighted-average capitalization rate.



Other Income/(Expense), Net

This category was a net expense of $15.7 million in 1992, compared to $18.1 million in 1991 and $25.5 million in 1990. Other income/(expense), net, includes numerous items of a non-operating nature which do not have a material impact on the company's consolidated results of operations (either individually or in the aggregate).

Net Income Before Cumulative Effect of Accounting Changes

Net income before cumulative effect of accounting changes for 1992 was $994.2 million, an increase of 5.8% compared with $939.8 million for 1991. Excluding the ongoing expense impact of FAS 106, net income would have been $1.03 billion, an increase of 9.5% over 1991. Net income for 1990 was $842.4 million. Net income for 1991 and 1990 represent increases of 11.6% and 9.8%, respectively, over the preceding year.

The effective tax rate was 38.4% in 1992, 38.2% in 1991 and 37.7% in 1990. The increase in the effective tax rate in 1992 is primarily due to the absence in 1992 of non-recurring 1991 tax credits and higher state tax rates.

Earnings Per Share Before Cumulative Effect of Accounting Changes

Fully diluted earnings per share before cumulative effect of accounting changes was $3.46 for 1992, an increase of 6.5% compared with $3.25 for 1991. Excluding the ongoing expense impact of FAS 106, fully diluted earnings per share, before the cumulative effect, would have been $3.58, an increase of 10.2% over 1991. Fully diluted earnings per share for 1990 were $2.95, an increase of 10.1% over 1989. Fully diluted earnings per share assume the conversion (as of January 1, 1990) of the company's 8% Convertible Debentures due 1996. In calculating fully diluted earnings per share, weighted average shares outstanding are increased by the assumed conversion of the debentures and net income is increased by the after-tax interest expense on the debentures.

FINANCIAL POSITION

Liquidity and Capital Resources

The company's primary sources of liquidity are cash provided from operating activities and certain financing activities. Information on the company's consolidated cash flows (operating activities, financing activities and investing activities) for the past three years is set forth in the Consolidated Statement of Cash Flows on page 48 of this report.

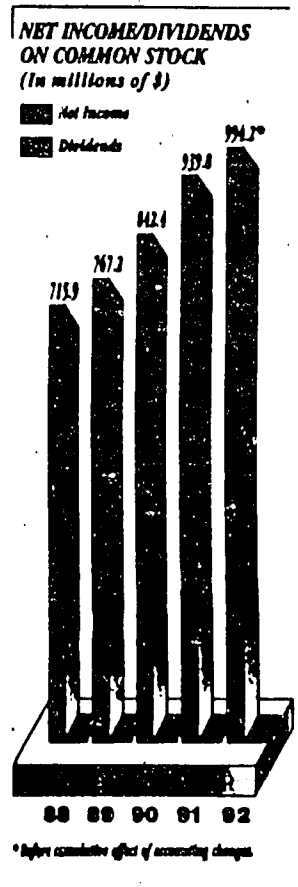
Working capital at December 31, 1992 was $356.0 million as compared to $224.9 million at December 31, 1991.

During 1992, the company issued the following debt:

- $150 million medium-term notes, due 1995, at a weighted-average interest rate of 4.7%—issued during the third quarter 1992; and
- $200 million, 6.9% 10-year notes issued in October 1992;

During 1992, the company reduced long-term debt as follows:

- Redeemed $100 million, 8.875% notes;
- Redeemed $86 million, 8.55% sinking fund debentures;
- Redeemed $25 million, 7.95% sinking fund debentures;



- Lower commercial paper borrowings of $24.7 million;
- $26.8 million reduction in the ESOP debt guarantee; and
- $90.9 million of scheduled sinking fund debenture repurchases and other miscellaneous transactions.

During 1991, the company reduced long-term debt as follows:

- Lower commercial paper borrowings of $201.4 million;
- Redeemed $109.3 million, 6% Dual Currency Swiss Franc/U.S. Dollar Bonds;
- Redeemed $100 million, 9.2% sinking fund debentures;
- $23.8 million reduction in the ESOP debt guarantee; and
- $67.7 million of scheduled sinking fund debenture repurchases and other miscellaneous transactions.

Gains/losses on these debt reduction activities (either individually or in the aggregate) were not material to the company's consolidated financial statements.

At December 31, 1992 and 1991 there were $79.7 million and $104.4 million, respectively, of commercial paper borrowings outstanding classified as long-term debt. The commercial paper is intended to be maintained on a long-term basis, with ongoing credit provided by the company's domestic revolving credit agreements (discussed below).

The company has fully hedged its foreign currency exposure for debt service payments on its foreign currency denominated debt through agreements with various lending institutions.

The company believes its strong beer wholesaler network is a major factor in its long-term growth. Therefore, the company believes that affording beer wholesalers the opportunity to invest in the company will further this goal. In 1989, the company registered with the Securities and Exchange Commission (SEC) a total of $300 million of seven-year convertible debentures (convertible into common stock) as part of its Wholesaler Investment Program. A total of $241.7 million of the debentures were issued. The debentures are subject to mandatory redemption at the end of seven years, optional redemption/repurchase at the company's or holder's discretion after three years, and special redemption/repurchase based on the occurrence of certain redemption events with respect to particular holders.

The company utilizes SEC shelf registration statements to provide financing flexibility. At December 31, 1991 a total of $165 million was available for debt issuance under shelf registration statments. In 1992, the company registered an additional $735 million in debt securities with the SEC and issued $350 million of debt. As of December 31, 1992, the company had a total of $550 million remaining available for issuance under shelf registration statements.

During the next five years, the company plans to continue capital expenditure programs designed to take advantage of growth and productivity improvement opportunities for its beer and beer-related, food products and entertainment segments. Cash flow from operating activities will provide the principal support for these capital investments.

However, a capital expenditure program of this magnitude (together with the company's previously announced share repurchase program) may require external financing from time to time. The nature and timing of external financing will vary depending upon the company's evaluation of existing market conditions and other economic factors.

In addition to its long-term debt financing, the company has access to the short-term capital market utilizing its bank credit agreements and commercial paper. The company has formal bank credit agreements which are discussed in Note 4 to the Consolidated Financial Statements. These agreements provide the company with immediate and continuing sources of liquidity.

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The company's ratio of total debt to total debt plus equity was 36.4%, 37.3% and 46.1% at December 31, 1992, 1991 and 1990, respectively. The company's fixed charge coverage ratio was 7.8 for the year ended December 31, 1992 and 6.4 and 5.1 for the years ended December 31, 1991 and 1990, respectively.

As more fully described in Note 7 to the Consolidated Financial Statements, during 1989 the company added an employee stock ownership plan (ESOP) feature to its existing Deferred Income Stock Purchase and Savings Plans. Approximately 60% of total salaried and hourly employees are eligible for participation in the ESOP. In 1989 the ESOP borrowed $500 million, guaranteed by the company, and used the proceeds to buy approximately 11.3 million shares of common stock from the company. The ESOP shares are being allocated to participants over 15 years as contributions are made to the plan. Through the various company stock ownership plans, employees of Anheuser-Busch control approximately 10% of the company's outstanding common stock.

In accordance with generally accepted accounting principles, the unpaid principal portion of the ESOP debt is reflected on the company's balance sheet as long-term debt with an equal, offsetting reduction to Shareholders Equity. In addition, total ESOP expense is allocated to interest expense and operating expense based upon the ratio of interest and principal payments on the debt.

Capital Expenditures

The company has a formalized and intensive review procedure for all capital expenditures. The most important measure of acceptability of a capital project is its projected discounted cash flow return on investment.

Capital expenditures in 1992 amounted to $737.2 million as compared with $702.5 million in 1991. During the past five years capital expenditures totaled $4.4 billion.

Capital expenditures for 1992 for the company's beer and beer-related operations were $490.4 million. Major expenditures by the company's brewing subsidiary included continuing construction of the company's new brewery in Cartersville, Ga., and numerous modernization projects designed to improve productivity at all breweries.

The remaining 1992 capital expenditures totaling $246.8 million were made by the company's food products and entertainment operations. Major expenditures include numerous Campbell Taggart and Eagle Snacks modernization and productivity improvement projects, as well as new Busch Entertainment and Sea World attractions.

The company expects its capital expenditures in 1993 to approximate $800 million. Capital expenditures during the five-year period 1993-1997 are expected to approximate $4.0 billion.

Environmental Matters

The company is subject to federal, state and local environmental protection laws and regulations and is operating within such laws or is taking action aimed at assuring compliance with such laws and regulations. Compliance with these laws and regulations is not expected to materially affect the company's competitive position. The company has not been identified as a Potentially Responsible Party (PRP) at an Environmental Protection Agency designated clean-up site which could have a material impact on the company's consolidated financial statements.

CAPITAL EXPENDITURES/ DEPRECIATION AND AMORTIZATION (In millions of $)

In recognition of the importance of environmental laws and regulations, the company has established an Environmental Policy Committee. This Committee, which reports directly to the Audit Committee of the Board of Directors, is comprised of senior company executives.

The mission of the Committee is to (a) monitor and interpret environmental policies to insure high standards of corporate responsibility; (b) establish a framework to assure strict compliance in the operation of all of the company's businesses with all environmental regulations; (c) provide adequate resources—human, financial and physical—required to assure compliance with all environmental laws and policies; and (d) exercise oversight responsibilities of company environmental programs.

Other Matters

During April 1992, the company completed a joint venture agreement with Tibidabo S.A. of Spain for the development of a theme park and resort complex near Barcelona, Spain. Construction on the theme park began in May 1992, and opening is planned for 1995.

Anheuser-Busch contributed its existing investment in land, design and engineering to the joint venture, and continues to provide technical assistance. Tibidabo invested $114 million to acquire an 80.1% interest in the joint venture and is responsible for arranging construction financing. However, the total construction financing has not yet been arranged. All obligations with respect to completion of the project have been assumed by the joint venture.

Dividends

Cash dividends paid to common shareholders were $338.3 million in 1992 and $301.1 million in 1991. Dividends on common stock are paid in the months of March, June, September and December of each year. In the second quarter of 1992, effective with the September dividend, the Board of Directors increased the quarterly dividend rate by 14.3%, from $.28 to $.32 per share. Annual dividends per common share increased 13.2% in 1992 to $1.20 per share compared to $1.06 per share in 1991. In 1992 dividends were $.28 for each of the first two quarters and $.32 for the last two quarters, as compared to $.25 for the first two quarters and $.28 for the last two quarters of 1991.

The company has paid dividends in each of the past 60 years. During that time, the company's stock has split on seven different occasions and stock dividends were paid three times.

At December 31, 1992, common shareholders of record numbered 67,273 compared with 65,390 at the end of 1991.

EARNINGS PER SHARE–FULLY DILUTED

*Before cumulative effect of accounting changes.

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Price Range of Common Stock

The company's common stock is listed on the New York Stock Exchange (NYSE) under the symbol "BUD." The table below summarizes the high and low closing prices on the NYSE.

PRICE RANGE OF COMMON STOCK

	1992		1991	
QUARTER	*HIGH*	*LOW*	*HIGH*	*LOW*
First	*60-1/2*	*54-7/8*	52-7/8	39-5/8
Second	*56-7/8*	*52-1/8*	53 7/8	48
Third	*57 3/4*	*53*	54-1/2	48-1/4
Fourth	*60*	*53-5/8*	61-1/2	51-3/4

The closing price of the company's common stock at December 31, 1992 and 1991 was $58.50 and $61.50, respectively.

Common Stock and Other Shareholders Equity

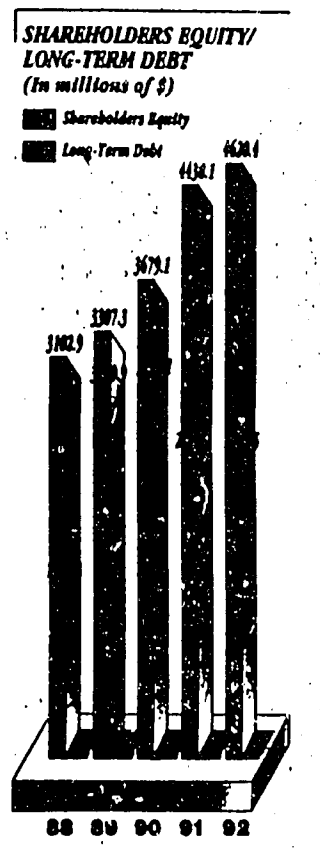
Shareholders equity was $4.62 billion at December 31, 1992, as compared with $4.44 billion at December 31, 1991. The increase in 1992 equity primarily represents the retention of $579.2 million of earnings in the business, the reduction in ESOP debt and the effect of shares issued under stock plans offset by the repurchase of shares under the company's share repurchase program. The book value of each common share of stock at December 31, 1992 was $16.60, as compared to $15.57 at December 31, 1991.

In 1992, the return on average shareholders equity was 22.0% as compared to 23.2% in 1991.

The Board of Directors has approved various resolutions in recent years authorizing the company to repurchase shares of its common stock for investment purposes and to meet the requirements of the company's various stock purchase and savings plans. The most recent resolution was approved in June 1992 authorizing the repurchase of 20 million shares. The company has acquired 9.6 million, 23,500 and 2.4 million shares of common stock in 1992, 1991, and 1990 for $513.7, $1.1 and $86.3 million, respectively. At December 31, 1992, approximately 17.7 million shares were available for repurchase under existing Board of Directors resolutions.

Inflation

General inflation has not had a significant impact on the company over the past three years nor is it expected to have a significant impact in the foreseeable future.



8. UNDERSTANDING AND USING FINANCIAL STATEMENTS

COMMON FINANCIAL RATIOS

THEIR USES AND LIMITATIONS

Current Ratio: $\frac{\text{Current Assets}}{\text{Current Liabilities}}$

Acid Test Ratio: $\frac{\text{Cash+Cash Equivalents+Receivables}}{\text{Current Liabilities}}$

Receivable Collection Period: $\frac{\text{Accounts Receivable}}{\text{Sales/360}}$

Inventory Turnover: $\frac{\text{Cost of Goods Sold}}{\text{Average Inventory During Period}}$

Total Debt To Total Capital: $\frac{\text{Current+Long-Term Liabilities}}{\text{Equity Capita+Total Liabilities}}$

Long-term Liabilities to Equity: $\frac{\text{Long-term Liabilities}}{\text{Equity Capital}}$

Times Interest Earned: $\frac{\text{Income Before Interest And Taxes}}{\text{Interest}}$

Return On Assets: $\frac{\text{Net Income+Interest Expense(1-Tax Rate)}}{\text{Average Total Assets}}$

Return On Equity: $\frac{\text{Net Income}}{\text{Average Equity Capital}}$

Gross Margin: $\frac{\text{Gross Profit}}{\text{Sales}}$

Operating Margin: $\frac{\text{Operating Profit}}{\text{Sales}}$

Pretax Margin: $\frac{\text{Pretax Income}}{\text{Sales}}$

Net Margin: $\frac{\text{Net Income}}{\text{Sales}}$

Sales To Cash $\frac{\text{Sales}}{\text{Cash+Cash Equivalents}}$

Sales To Receivables: $\frac{\text{Sales}}{\text{Accounts Receivable}}$

Sales To Inventories: $\frac{\text{Sales}}{\text{Inventories}}$

Sales To Working Capital: $\frac{\text{Sales}}{\text{Working Capital}}$

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Sales To Fixed Assets: $\frac{\text{Sales}}{\text{Fixed Assets}}$

Sales To Total Assets: $\frac{\text{Sales}}{\text{Total Assets}}$

Price-Earnings Ratio: $\frac{\text{Market Price}}{\text{Earnings Per Share}}$

Earnings Yield: $\frac{\text{Earnings Per Share}}{\text{Market Price}}$

Price-To-Book Ratio: $\frac{\text{Market Price}}{\text{Book Value Per Share}}$

Price-To-Cash Flow: $\frac{\text{Market Price}}{\text{Cash Flow Per Share}}$

Dividend Yield: $\frac{\text{Dividends Per Share}}{\text{Market Price}}$

Dividend Payout Ratio: $\frac{\text{Dividends Per Share}}{\text{Earnings Per Share}}$

1992 FINANCIAL RATIOS

	Initials	Date
Prepared By		
Approved By		

	1	2	3	4	5	6
SHORT-TERM LIQUIDITY RATIOS						
CURRENT RATIO	KO	4,248 ÷	5,303			0.80
	BUD	1,816 ÷	1,460			1.24
ACID TEST RATIO	KO	155 + 107 + 1086 ÷	3,303			0.41
	BUD	215 + 650 ÷	1,460			0.59
RECEIVABLE COLL. PERIOD	KO	1,086 ÷	13,074/360			30 DAYS
	BUD	650 ÷	11,394/360			21 DAYS
INVENTORY TURNOVER	KO	5,054 ÷	988 + 1,049/2			5.0 x
	BUD	7,309 ÷	636 + 661/2			11.2 x
LONG-TERM SOLVENCY RATIOS						
TOTAL DEBT TO TOTAL CAP.	KO	5,303 + 1960 ÷	11,051			0.65
	BUD	1,460 + 4,457 ÷	10,537			0.56
LONG-TERM LIABILITIES TO EQUITY	KO	1,960 ÷	3,988			0.49
	BUD	4,457 ÷	4,620			0.96
TIMES INTEREST EARN.	KO	2,917 ÷	171			17.1 x
	BUD	1,815 ÷	200			9.1 x
RETURN ON INVESTMENT RATIOS - OPERATING PERFORMANCE RATIOS						
RETURN ON ASSETS	KO	1,893 + 171 (.61) ÷	8,189 + 11,053/2			10.5%
	BUD	994 + 200 (.62) ÷	9,987 + 10,539/2			11.0%
RETURN ON EQUITY	KO	1,893 ÷	4,239 + 3,988/2			46.4%
	BUD	994 ÷	4,438 + 4,620/2			21.9%
GROSS MARGIN	KO	8,219 ÷	13,074			63.3%
	BUD	4,085 ÷	11,394			35.8%
OPERATING MARGIN	KO	2,770 + 164 ÷	13,074			22.4%
	BUD	1,777 + 7 ÷	11,394			15.7%
PRETAX MARGIN	KO	2,746 ÷	13,074			21.1%
	BUD	1,615 ÷	11,394			14.2%

	Initials	Date
Prepared By		
Approved By		

		1	2	3	4	5	6
NET MARGIN	KO		1,664	÷ 13,074			12.7%
	BUD		994	÷ 11,394			8.7%
ASSET UTILIZATION RATIOS							
SALES TO CASH	KO		13,074	÷ 1,063			12.3
	BUD		11,394	÷ 215			53.0
SALES TO RECEIVABLES	KO		13,074	÷ 1,055			12.4
	BUD		11,394	÷ 650			17.5
SALES TO INVENTORIES	KO		13,074	÷ 1,018			12.8
	BUD		11,394	÷ 661			17.2
SALES TO WORKING CAP.	KO		13,074	÷ 4,348 - 5,302			-
	BUD		11,394	÷ 1,815 - 1,359			-
SALES TO FIXED ASSETS	KO		13,074	÷ 3,526			3.7
	BUD		11,394	÷ 7,524			1.5
SALES TO TOTAL ASSETS	KO		13,074	÷ 11,951			1.1
	BUD		11,394	÷ 10,538			1.1
MARKET MEASURES (A)							
PRICE-EARNINGS RATIO	KO		41 7/8	÷ 1.73			24.2x
	BUD		58 1/2	÷ 3.48			16.8x
EARNINGS YIELD	KO		1.73	÷ 41 7/8			4.1%
	BUD		3.48	÷ 58 1/2			5.9%
PRICE-TO-BOOK RATIO	KO		41 7/8	÷ 3.95			10.6x
	BUD		58 1/2	÷ 16.17			3.6x
DIVIDEND YIELD	KO		0.68	÷ 41 7/8			1.6%
	BUD		1.28	÷ 58 1/2			2.2%

(A) BASED ON 1992 RESULTS AND 1992 YEAR-END MARKET PRICE.

CASH - BY FAR THE MOST IMPORTANT CURRENT ASSET

CASH = CASH + CASH EQUIVALENTS + INVESTMENTS HELD AS CURRENT ASSETS.

HOW CASH IS GENERATED AND UTILIZED

THE CONCEPT OF FREE CASH FLOW AS AN INDICATOR OF SOLVENCY AND AS A MEASURE OF VALUE OF THE COMPANY'S COMMON STOCK

Year ended December 31, (In thousands)	1992	1991 (Restated)	1990 (Restated)
Operating Activities			
Net income	**$ 1,664,382**	$ 1,618,002	$1,381,904
Transition effect of change in accounting for postretirement benefits	**219,433**	—	—
Depreciation and amortization	**321,922**	261,427	243,888
Deferred income taxes	**(26,608)**	(94,313)	(74,755)
Equity income, net of dividends	**(30,249)**	(16,013)	(93,816)
Foreign currency adjustments	**23,611**	65,534	(77,068)
Gain on sale of investments	**—**	(34,577)	(60,277)
Other noncash items	**103,009**	33,338	97,752
Net change in operating assets and liabilities	**(43,130)**	251,003	(133,701)
Net cash provided by operating activities	**2,232,370**	2,084,401	1,283,927
Investing Activities			
Additions to finance subsidiary receivables	**(53,984)**	(210,267)	(31,551)
Collections of finance subsidiary receivables	**254,280**	51,942	58,243
Acquisitions and investments	**(717,487)**	(399,183)	(301,010)
Proceeds from disposals of investments and other assets	**247,052**	180,058	391,180
Decrease (increase) in marketable securities	**(52,191)**	2,735	16,733
Purchases of property, plant and equipment	**(1,083,270)**	(791,677)	(592,971)
Proceeds from disposals of property, plant and equipment	**47,078**	43,958	19,208
Other investing activities	**(1,004)**	(2,246)	504
Net cash used in investing activities	**(1,359,526)**	(1,124,680)	(439,664)
Net cash provided by operations after reinvestment	**872,844**	959,721	844,263
Financing Activities			
Issuances of debt	**1,381,227**	989,926	592,417
Payments of debt	**(432,380)**	(1,246,664)	(81,594)
Preferred stock redeemed	**—**	(75,000)	(225,000)
Common stock issued	**131,264**	39,394	29,904
Purchases of common stock for treasury	**(1,259,488)**	(399,076)	(306,667)
Dividends (common and preferred)	**(738,001)**	(640,064)	(552,640)
Net cash used in financing activities	**(917,378)**	(1,331,484)	(543,580)
Effect of Exchange Rate Changes on Cash and Cash Equivalents	**(58,108)**	458	32,852
Cash and Cash Equivalents			
Net increase (decrease) during the year	**(102,842)**	(371,305)	333,535
Balance at beginning of year	**1,058,250**	1,429,555	1,096,020
Balance at end of year	**$ 955,608**	$ 1,058,250	$1,429,555

See Notes to Consolidated Financial Statements.

QUESTION 9 IS COMPOSED OF TWO PARTS, FOR A TOTAL OF 25 MINUTES

9. The cash flow data of Palomba Pizza Stores for the year ended December 31, 1991, is as follows:

Cash payment of dividends	$ 35,000
Purchase of land	14,000
Cash payments for interest	10,000
Cash payments for salaries	45,000
Sale of equipment	38,000
Retirement of common stock	25,000
Purchase of equipment	30,000
Cash payments to suppliers	85,000
Cash collections from customers	250,000
Cash at beginning of year	50,000

A. **Prepare** a statement of cash flows for Palomba in accordance with SFAS 95 showing:

- net cash provided by operating activities,
- net cash provided by or used in investing activities, and
- net cash provided by or used in financing activities.

(15 minutes)

B. **Discuss**, from an analyst's viewpoint, the purpose of classifying cash flows into the three categories listed above.

(10 minutes)

QUESTION 9 - MORNING SECTION (I-'92)

(25 points)

(Reading References: Bernstein, Ch. 13; Largay and Stickney Article; Bernstein and Siegel Article)

A.

PALOMBA PIZZA STORES
Statement of Cash Flows
For Year Ended December 31, 1991

Cash Flows from Operating Activities		
Cash Collections from Customer	$250,000	
Cash Payments to Suppliers	(85,000)	
Cash Payments for Salaries	(45,000)	
Cash Payments for Interest	(10,000)	
Net Cash Provided by Operating Activities		$110,000
Cash Flows from Investing Activities		
Sale of Equipment	38,000	
Purchase of Equipment	(30,000)	
Purchase of Land	(14,000)	
Net Cash Used by Investing Activities		(6,000)
Cash Flows from Financing Activities		
Retirement of Common Stock	(25,000)	
Payment of Dividends	(35,000)	
Net Cash Used by Financing Activities		(60,000)
Net Increase in Cash		44,000
Cash at Beginning of Year		50,000
Cash at End of Year		$ 94,000

B. The Cash Flow from Operations (CFO) focuses on measuring the liquidity of operations and not on measuring the profitability. If used as a measure of performance, the CFO is less subject to distortion than the net income figure. Analysts use the CFO as check on the quality of earnings. The CFO then becomes a check on the reported net earnings figure but not as a substitute for net earnings. Companies with high net income and low CFO may be using income recognition techniques that are suspect. The ability of a firm to generate cash from operations on a consistent basis is one indication of the financial health of the firm. For most firms, CFO is the "life blood" of the firm. Analysts search for trends in CFO to indicate future cash conditions and the potential for cash flow troubles.

Cash Flow from Investing Activities (CFI) is an indication of how the firm is investing its excess cash. The analyst must consider the ability of the firm to continue to grow and expand activities and CFI is a good indication of the attitude of management in this area. Analysis of this component of total cash flow indicates the type of capital expenditures being made by management to either expand or maintain productive activities. CFI is also an indicator of the firm's financial flexibility and ability to generate sufficient cash to respond to unanticipated needs and opportunities. A decreasing CFI may be a sign of a slowdown in growth of the firm.

Cash Flow from Financing (CFF) presents the feasibility of financing, the sources of financing, and an indication of the types of financing sources management supports. Continued debt financing may signal a future cash flow problem. The dependency of a firm on external sources of financing (either borrowing or equity financing) may present troubles in the future such as debt servicing and maintaining dividend policy. Continued financing from equity will cause future earnings per share dilution. Analysts use CFF also as an indication of the quality of earnings. It offers insights into the financial habits of management and resulting potential future policies.

FREE CASH FLOW (FCF)

Free cash flow is computed as follows, using Coca-Cola's 1992 Consolidated Statement of Cash Flows (see page 6 of this section) as an example.

Net cash provided by operating activities	$2,232
Deduct: Capital expenditures required to maintain productive capacity used up in the production of income	(1,083) ?
Deduct: Desired common stock dividends	(738) ?
Balance equals FCF	$ 411

FCF is that amount which provides management the flexibility to spend/invest on other than basic corporate necessities, for example purchase of common stock on open market for treasury account.

FCF of $411 = 31¢ per common share.
In comparison, market price at 1992 year-end was about $42 per share.

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DEPRECIATION - DEFERRED TAXES

DEPRECIATION IS A NON-CASH CHARGE TO EARNINGS (BEFORE TAXES) DESIGNED TO RECAPTURE THE COST (LESS SALVAGE VALUE) OF PLANT AND EQUIPMENT OVER ITS USEFUL LIFE. INVESTMENT IN LAND IS NOT SUBJECT TO DEPRECIATION UNDER GAAP AND TAX RULES.

THREE DEPRECIATION METHODS: STRAIGHT LINE
SUM-OF-THE-YEARS'-DIGITS
DOUBLE DECLINING BALANCE

ASSUME: PURCHASE OF EQUIPMENT FOR $55,000
USEFUL LIFE OF FIVE YEARS
SALVAGE VALUE OF $5,000 = $50,000 TO BE DEPRECIATED

	YEAR 1	2	3	4	5	TOTAL
STRAIGHT LINE	$10,000	$10,000	$10,000	$10,000	$10,000	$50,000
SUM-OF-YEARS (A)	$16,666	$13,333	$10,000	$6,666	$3,333	$50,000
DOUBLE-DEC. BALANCE (B)	$22,000	$13,200	$7,920	$4,752	$2,128	$50,000

(A) 5+4+3+2+1 = 15 FIRST YEAR 5/15, SECOND YEAR 4/15, ETC.

(B) 40% (DOUBLE STRAIGHT LINE OF 20% PER YEAR) OF DECLINING BALANCE, USING TOTAL VALUE OF $55,000. FIRST YEAR 40% OF $55,000 = $22,000; SECOND YEAR 40% OF $55,000 - $22,000 = $13,200, ETC.

DEFERRED TAXES

DEFERRED TAXES ARE PROVIDED TO REFLECT TIMING DIFFERENCES IN CHARGING(CREDITING) AMOUNTS TO THE PROFIT & LOSS STATEMENT FOR BOOK VS. TAX PURPOSES. FOR EXAMPLE:

	BOOK ACCOUNTING	TAX ACCOUNTING
PRETAX PROFIT BEFORE DEPR.	$100,000	$100,000
DEPRECIATION	10,000	22,000
PRETAX INCOME	$ 90,000	$ 78,000
INCOME TAXES @50%	(45,000)	(39,000)
DEFERRED TAX ON DIFFERENCE IN DEPRECIATION	(6,000)	
NET INCOME	$ 39,000	$ 39,000

A PROVISION FOR DEFERRED TAXES IS A NON-CASH CHARGE. AS LONG A COMPANY KEEPS EXPANDING AND INVESTING MORE AND MORE EACH YEAR IN PLANT AND EQUIPMENT, AND USES DIFFERENT DEPRECIATION METHODS FOR BOOK VS. TAX ACCOUNTING, THE DEFERRED TAX NEVER WILL BE PAID. HOWEVER, IF EXPENDITURES DECLINE OVER TIME AND TAX DEPRECIATION EVENTUALLY DROPS BELOW BOOK DEPRECIATION, THE DEFERRED TAX MUST BE PAID AND THIS IS A CASH CHARGE ON THE PROFIT & LOSS STATEMENT.

DEFERRED TAXES ARE A LIABILITY AND APPEAR AS SUCH ON THE BALANCE SHEET. GENERALLY, THE DEFINITION OF "LONG-TERM LIABILITIES" INCLUDES THE AMOUNT UNDER DEFERRED TAXES.

(13)

INVENTORY ACCOUNTING

FIFO VS. LIFO

The valuation of inventories impacts the Cost of Goods Sold expense in the Profit & Loss Statement.

INVENTORY AND COST OF GOODS SOLD

Beginning inventory
\+ Additions during period

= Cost of goods available
\- Ending inventory

= Cost of goods sold

Note that the higher the value assigned to ending inventory, the lower the amount of cost of goods sold, and the higher is net income; conversely, the lower the value assigned to ending inventory, the higher the amount of cost of goods sold, and the lower is net income.

FIFO (First In-First Out) assigns the cost of earliest units acquired to goods transferred out and cost of most recent acquisitions to ending inventory.

LIFO (Last In-First Out) assigns the cost of most recent acquisitions to goods transferred out and the cost of earliest units acquired to ending inventory.

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A VERY SIMPLE ILLUSTRATION OF FIFO VS. LIFO ACCOUNTING

ABC Company makes boxes that it sells for $2.00 each. In the first day of production the company made one box at a cost of $1.00; the second day one box at a cost of $1.10; etc. as shown in the following table. At the end of the sixth day, there were six boxes in inventory at the production costs shown. At the beginning of the seventh day, one box was sold out of inventory for $2.00. The table shows the profit recorded under FIFO and LIFO accounting.

	COST OF PRODUCTION PER BOX	FINISHED BOXES		FIFO ACCOUNTING	LIFO ACCOUNTING
1					
2					
3					
4	$1.50		SELLING PRICE	$2.00	$2.00
5	1.40		COST OF GOODS	1.00	1.50 ←
6	1.30				
7	1.20		TAXABLE INCOME	$1.00	0.50
8	1.10		TAX @ 50%	0.50	0.25
9	1.00		NET INCOME	$0.50	$0.25
10					
11					

Which earnings figure is the more accurate given most recent cost conditions? Since the most recent cost of manufacturing one box is much closer to $1.50 than to $1.00, the LIFO earnings figure is the more accurate measure of true earnings in an inflationary cost climate. The use of FIFO in an inflationary climate causes an overstatement of reported earnings and an increase in taxes.

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FINANCIAL STATEMENT ANALYSIS

*CALCULATION OF EARNINGS PER SHARE

*IMPORTANCE OF BOOK VALUE

*ACQUISITION ACCOUNTING

*THE CONCEPT OF SUSTAINABLE GROWTH

*USE OF FINANCIAL RATIOS IN CALCULATING ROE

Supporting documentation for discussion of the above and related subjects will be made available at time of meeting.

9. A VIEW ON DEVELOPMENT OF GLOBAL CAPITAL MARKETS

A VIEW ON DEVELOPMENT OF GLOBAL CAPITAL MARKETS

The author holds the strong opinion that over the longer term, meaning the next 5-10 years, global investors will have an increasing number of alternatives for international investing as more and more countries further develop their capital markets and open their borders to capital inflow and outflow. Recent examples include Brazil, China and India, among many others.

In this more competitive climate, it is highly likely that global investors will shy away from markets in which they do not have full confidence, as there probably will be many alternative markets in which they do have confidence.

The level of confidence will be influenced by a number of factors, chief among them being:

*Fair and orderly markets with all participants playing by the same rules, meaning no manipulation, insider trading, etc.

*Liquid two-sided markets, and along with this effective transaction, settlement, custody and reporting procedures.

*Full, consistent and timely disclosure of corporate financial information.

*Professional analysis and research of economic, industry and individual company results and prospects, and translating this into effective and rewarding portfolio management.

Alfred C. Morley CFA
September 1993

10. WHAT'S SO SPECIAL ABOUT BECOMING A CFA?

THE LEVEL I 1992 CFA EXAMINATION

WHAT'S SO SPECIAL ABOUT BECOMING A CFA?

On 5 June 1993, some 15,000 investment professionals all over the world sat for a rigorous six-hour examination. They were tested at more than 100 examination sites throughout Asia, Europe, North and Latin America, and other global locations. All devoted many hours of study preparing for, and hoping to pass, the examination. Each of these 15,000 investment professionals has one thing in common, namely to ultimately obtain the distinction of becoming a Chartered Financial Analyst (CFA).

What is a CFA, and what is so special about becoming a CFA?

The Institute of Chartered Financial Analysts (ICFA) was organized as a non-profit entity in 1962 to enhance, and to maintain at the highest levels, the professional and ethical standards of practice of those involved in all aspects of the investment decision-making process. It does so by developing, maintaining, and disseminating an applicable body of knowledge; recognizing those who master the body of knowledge through CFA certification; and accrediting that certification through a continuing education program.

SPECIFIC OBJECTIVES OF THE ICFA:

(1) Sponsor, enforce and maintain the integrity of a Code of Ethics and Standards of Professional Conduct.

(2) Identify, create and disseminate literature to further define and record an applicable body of knowledge.

(3) Design and administer the candidate curriculum examination preparation process, and conduct examinations to test individual competency in mastery of the body of knowledge.

(4) Establish professional recognition via the award of the Chartered Financial Analyst designation.

(5) Provide ongoing accreditation of the CFA designation by offering continuing education of CFAs through formal professional development programs, and for enhancement of professional knowledge and its application throughout the investment community.

The past and continuing success of the Institute meeting, if not exceeding, its missions and purposes as identified above perhaps is best illustrated by a few numbers.

*Since the program started 30 years ago, over 100,000 examinations have been given and more than 18,000 Charters have been earned and awarded.

*The number of candidates enrolling in the program has more than doubled over the past five years.

*While much of the Institute's historical growth has been centered in North America, international interest has exploded from a small base during the past several years. Nearly 25% of the 1993 candidates are from outside the United States and Canada, up from less than 10% as recently as five years ago. International candidates are from nearly all parts of the world, with heaviest concentration in Singapore, Hong Kong, Japan, Switzerland and England. The program was introduced in Indonesia, Malaysia, Thailand and Sri Lanka within the past two years.

The specific procedures in becoming a CFA are to complete three six-hour examinations over a minimum three year period, and to meet experience, educational and other requirements before award of the designation. The curriculum against which the examinations are prepared covers seven basic disciplines: Economics, Financial Statement Analysis, Quantitative Techniques, Equity Security Analysis, Fixed Income Security Analysis, Portfolio Management, and last, but not least, Ethical Standards of Practice.

The initial examination, Level I, is a test of the candidate's understanding of the tools used in the investment decision-making process. Level II covers the basic application of these tools to analysis and evaluation. The Level III examination is designed to incorporate the tools into more advanced practical and comprehensive analytical and portfolio management applications.

Historically, the pass rate (the percentage of candidates passing) has averaged about 60% at Level I, 70% at Level II, and 80% at Level III. Candidates who do not pass the respective examinations is sequence, must re-take thee examination in its entirety in the following year.

These are imposing numbers - over 18,000 already holding the CFA Charter, and an additional 18,000 currently enrolled in the program at all three Levels, and further expansion expected in the future! Why the interest?

First, consider the dynamics of the investment decision-making business and process as measured by:

*The expanding number of asset classes from which to construct portfolios for a variety of purposes and objectives. Not too many years ago, common stocks, bonds and cash were considered the only principal asset classes. This list has been expanded to include, among others, real estate, international securities, venture capital, and on and on.

*The development of new instruments to control risk and add value. Such terms as options, futures, options on futures, and synthetics are comparatively new to the industry, and these and like instruments are becoming increasingly understood and applied to the portfolio management process.

*The development of new investment techniques. Starting with modern portfolio theory, additional quantitative approaches, such as capital asset pricing models, dividend discount models, arbitrage pricing theory, dedication and immunization, and others have been incorporated into the investment decision-making process.

All of the above-listed and many other dynamics of the business should be viewed within the framework of the still-growing total pool of investment assets worldwide, both at the institutional level and in the form of personal funds.

A primary reason for the growing number if investment professionals being attracted to the CFA program is the continuing development of a curriculum by the Institute for both candidates and for charter holders in need of continuing education which fully reflects the dynamics of the business. In fact, the Institute's curriculum not only reflects, but also contributes to, the dynamics of the business.

The ICFA finds and develops additions and enhancements to the body of knowledge and its practical application that enable candidates and CFAs to stay abreast of the leading edge of the dynamics of the business. For example, the Institute over the past several years has sponsored more than thirty seminars on such subjects as venture capital, quantitative techniques, international investing, mortgage-backed securities, futures and options, and management of the investment organization, from which proceedings are printed and sent to all CFAs, introduced into the Candidate Study Program, and made available to others in the global investment community. Also, the Institute has sponsored the creation of text books, one on Portfolio Management and the other on Quantitative Methods, which are part of the candidate curriculum and are used by

many universities.

A second reason for the success of the Institute's activities is the increasing awareness, especially by employers who in some cases pay candidate fees and membership dues, that the rigorous study and examination program leading to the award of the CFA charter is a near equivalent to a Master of Finance degree. There is no other known program designed to provide such a learning/educational/training process to investment professionals, and all that this means in real-time, state-of-the-art knowledge, at a relatively nominal cost.

Third, an expanding recognition that the CFA designation has real meaning to clients, peers, employers, the public, regulators and other groups. And with this comes job security, compensation and advancement advantages that otherwise might not be available. For example, it is not uncommon for classified advertisements for security analysts and portfolio managers appearing in the business press containing a statement such as "CFA or currently enrolled in the CFA Program preferred". In fact, some investment organizations require that certain of their key people have the CFA charter.

A fourth reason is the quality of the various ICFA programs. Much of that quality emanates from the strong support and contribution of an enormous volunteer effort involving both investment practitioners and academicians, all renowned in their respective fields of interest. These volunteer groups focus on development of the curriculum, design of the examination, and research and publication efforts.

The Institute is member-driven and issue-driven, which really are one and the same. That is, the needs of the members revolve around their desire, if not demand, to be kept abreast of new information contributing to the ever-changing and ever-expanding body of knowledge applicable to the investment-decision making process. The Institute's continuing education program in behalf of CFAs is dedicated to this proposition. CFAs have the opportunity of voluntarily participating in the formalized and comprehensive continuing education program offered by the Institute by selecting from an extensive menu of activities. However, in every instance, the educational involvement and activity is serious and rigorous, as is the Candidate Study and Examination Program, and is designed to bring the participant to a higher level of understanding of investment theory and the application of that theory to practice. While voluntary, an increasing number of CFAs are participating in the continuing education program, and those that reach established goals are awarded a Certificate of Achievement.

The CFA Study and Examination Program is the same worldwide; that is, candidates in Japan, Singapore, Europe and elsewhere study the same material and take the same examination as do candidates in North America. In this regard, curriculum content of the CFA program is increasingly global in nature. That is, less North American specific. And, the Institute's committees having responsibility for curriculum development, construction of the examination, and grading of the exams have representation from outside North America.

The CFA designation is becoming a global designation, and there is no doubt that CFAs are making a measurable contribution to further development of capital markets around the world.

September 1993

PORTFOLIO MANAGEMENT AND EQUITY ANALYSIS

Ronald E. Copley, Ph.D., C.F.A.

Karachi, Pakistan
September 1993

TYPES OF INVESTMENTS

I. Stock Selection/Analysis

A. valuation--conceptually, all assets are valued the same way. that is, the intrinsic value equals the present value of the cash flows accruing to the security over the life of the security.

intrinsic value--true value of the security

market value--what the security is currently selling for on the open market

1. if the market is efficient, the intrinsic value equals the market value

a) security selection is unimportant

b) diversification is important across multiple asset classes, across multiple sectors (i.e., consumer durables, consumer non-durables, defense, technologies, etc.)

c) the bet is that you have no special knowledge. you know only as much as the rest of the market

d) in an efficient market and if you have no special knowledge, you would

(1) totally diversify. conceptually, you would own a small portion of all risky assets in the world (perfect diversification)

(2) because this is, obviously, impractical, you would:

(a) broadly sample the most important asset classes

(b) within each asset class you would broadly sample multiple sectors

(c) within each sector, you would broadly sample multiple securities

(d) your sample would depend on the correlation between and among assets.

e) steps you would follow in selecting securities in an efficient market

(1) assume that you want to construct your portfolio with only 2 asset classes. which 2?

(2) conceptually, you would select the 2 asset classes that are the most uncorrelated. now suppose further that you wish to add a 3rd asset class to the existing 2-asset portfolio. how would you do this?

(3) conceptually, you would select the asset class that is the most uncorrelated with the existing 2-asset portfolio

(4) you would continue this process until the marginal (extra) benefits of adding additional asset classes are no longer attractive. at that point, the transaction costs, bookkeeping costs and other related costs offset the marginal benefits of diversification. you are now diversified across multiple asset classes.

(5) the next step is to diversify within each asset class. again, you would follow the same conceptual process

(6) you would begin with 2 sectors within a particular asset class, add a 3rd sector, a 4th sector and so on until the marginal costs exceed the marginal benefits

(7) you would do this for each of the asset classes you selected

(8) the final step is to diversify within each sector. again, you would follow the same conceptual process

(9) you would begin with 2 individual securities within a particular sector, add a 3rd security, a 4th security and so on until the marginal costs exceed the marginal benefits

(10) you would do this for each of the sectors you selected.

f) after you have created your diversified portfolio, you would

(1) continually rebalance the portfolio in order to maintain the proper weights for each asset class, for each sector and for each security. but what are the proper weights?

(2) conceptually, the weight for each asset class is the proportion of wealth in the world represented by that asset class

(3) the weight for each sector within each asset class is the proportion of wealth in that asset class represented by that sector

(4) finally, the weight for each security within each sector is the proportion of wealth in that sector represented by that security.

g) the point is that in an efficient market

(1) the value of any security is determined by the level of risk of that security relative to the entire market

(2) selection of any security is unimportant because you will always be perfectly diversified

2. if the market is inefficient

a) the intrinsic value does not equal the market value

b) security selection is important

c) diversification is unimportant

d) the bet is that you know something the rest of the market does not know. you have special insights (not necessarily inside knowledge) due to your ability to process information better the rest of the investors in the market

e) if you have special knowledge and you have absolute confidence in that knowledge, you would own only one security--the ultimate undiversified portfolio

f) you are an active investor. the greater your confidence in your special knowledge, the less you would diversify

g) if you have no confidence in your special knowledge, you effectively have no special knowledge and you would pursue a passive investment strategy of diversification.

h) the point is that in an efficient market

(1) the value of any security is not determined by the level of risk of that security relative to the entire market. as a consequence, securities are mispriced

(2) selection of securities is important because you can beat the market

3. the debate as to whether or not the market is efficient will never be resolved. the reason is that nobody knows how to accurately measure risk. as a consequence, nobody knows what a true risk-adjusted rate of return is. this means that your perception of market efficiency rules your investment attitudes

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4. price/earnings ratio

example

required rate of return = k = .16 (CAPM)

k = .08 + 1.15 (.15 - .08)
= .16

current price = $35 (1/1993)

estimated earnings (12/1993) = $4.00

estimated p/e ratio (12/1993) = 11

estimated dividend (12/1993) = $.40

based on this input, the expected price (p*) of the stock at the end of 1993 is:

p* = 11 x 4.00
= 44

and the expected holding period return (hpr) is:

e(hpr) = .40/35 + (44 - 35)/35
= .011 + .257
= .268

alpha = .268 - .16 = .108

in this case, the stock is mispriced--it has a positive alpha of .108. in other words, the stock has an excess risk-adjusted rate of return of 10.8%. (note: be careful not to get this alpha mixed up with Jensen's alpha, an ex post measure of portfolio performance also based on the CAPM)

you could use either the p/e (earnings multiple) or the dividend discount model (discussed below) to value a security. oftentimes, it is easier to use the earnings model

because a firm does not pay dividends and will not anytime in the near future

5. cash flows

   a) stocks--dividends plus expected selling price at some point in the future

   b) bonds--periodic interest plus selling price at some point in the future, which could be the maturity value

   c) cash flows determine value of a security

6. dividend discount model

   $p_o = d_1 / (k - g)$

   where

   p_o = the intrinsic value of the stock

   d_1 = the dividend per share at the end of the next year

   k = the required rate of return to the stockholders (from the capital asset pricing model)

   g = the dividend growth rate

   a) the assumption is constant growth forever

   b) the model is actually much more complicated than it looks.

      (1) $p_o = d_1 / (k - g)$ is the result of a mathematical proof that shows p_o as the present value of all future dividends where the dividends grow at a constant rate forever

      (2) conceptually, the life of a stock is forever because investors can pass it forward from

generation to generation. the practicality is that the present value of distant future dividends is rather small so most analysts project dividends out over approximately the next 15 years (no golden rule here, just some common sense).

(3) note that the expected selling price of a stock at some point in the future (i.e., end of year 1) represents, to the next buyer, the value of dividends plus his expected selling price at some point in the future (i.e., end of year 2). as the stock is bought and resold by future buyers and sellers, the current intrinsic value of the stock equals the present value of all future dividends

(4) note also that (k - g) is referred to at the market capitalization rate

(a) if both k and g change by the same amount, the intrinsic value of the stock will remain unchanged assuming no change in d1

(b) if g increases faster than k, meaning the capitalization rate declines, the value of the stock will increase, holding d1 constant, and vice versa.

c) this all looks so simple, but the problem is that all 3 variables on the right hand side of the equality sign are related

(1) as g changes due, perhaps, to changes in the firm's expected earnings, k most likely will also change

(2) because nobody knows exactly how to evaluate all of these changes, one analyst's estimate will differ from another analyst's estimates

(3) logic suggests that great variation in many analysts' estimates will cause great volatility in the price of the stock depending on which analyst the market believes at the time

(4) likewise, small variation in analysts' estimates leads to relatively low volatility in the price of the stock

(5) you will note that volatility is another way of saying high risk where the risk comes from estimates of what future growth will be

(6) low growth stocks (i.e., utilities) are low risk stocks because analysts are better able to estimate future earnings

B. risk

1. beta--is a measure of risk for a stock relative to the risk of the market

a) beta affects k in the dividend discount model

b) beta is an expectational concept, although most people measure it using historical data. the implicit assumption is that the future will look like the past

c) true betas are not observable

d) statistical estimates of beta are unstable (unreliable) through time for individual stocks, but more stable for portfolios of stocks

e) different brokerage firms calculate beta using different statistical assumptions. you should not be surprised to see a value line beta differ significantly from a Merril Lynch beta

2. industry risk

a) industries go through 3 growth cycles

(1) phase 1--high growth in sales and profits. firm characteristics include:

(a) low dividends

(b) high leverage

(2) phase 2--increasing growth at a declining rate

(3) phase 3--no growth. firm characteristics include:

(a) high dividends

(b) low leverage

3. standard deviation--a statistical measure of variation around the mean

a) higher standard deviation means more risk, and vice versa

b) high standard deviation means a greater chance of high returns, but also a greater chance of lower returns

c) a measure of total risk, which includes both systematic (undiversifiable or macro) and unsystematic (diversifiable or micro)

d) standard deviation divided by mean equal coefficient of variation--a measure of risk per unit of return. you would use this measure of risk to compare 2 stocks when the means of each stock are not equal

4. company risk--specific to the company

a) it is unsystematic (diversifiable or micro)

b) an example is the health of a company's CEO

c) the market does not price company risk because it is diversifiable. an analogy is that you have no incentive to leave your car unlocked in a bad area. you are taking unnecessary risk. likewise, the market has no incentive to reward you for taking company risk. again, you are taking unnecessary risk.

II. Bond Selection And Analysis

A. Treasury issues--the U.S. government issues 3 basic types of bonds:

t-bills--maturity less than 1 year

notes--maturity 2 to 10 years

long-term bonds--maturity over 10 years (noncallable)

1. Treasury issues are subject to federal taxes, but not state and local taxes

2. the Federal Reserve regularly issues treasury securities on an auction basis through primary dealers. the fed expects dealers to participate in every auction and also to be active in the secondary market

3. the secondary market is an OTC market. dealers profit from

a) bid-ask spread

b) appreciation of securities in inventory

c) the difference between interest earned and carrying the inventory

d) dealers trade through bond brokers who display the prevailing bid-ask prices

(1) brokers do not trade for themselves

(2) dealers typically finance the purchase of treasury securities by using repurchase agreements or the repo market where they borrow and use the security as collateral.

B. corporate bonds

1. in the case of default the bondholders have prior claims over stockholders

2. corporate bonds generally are issued in $1,000 denominations, so a 6% coupon bond will pay $60 a year in interest, or $30 semiannually

3. the corporate trustee is the person responsible for enforcing corporate promises as established in the bond indenture

a) the corporate trustee is the representative of the bondholders.

b) the trustee is responsible for seeing that all provisions of the indenture are carried out. as an example, if the issuer misses an interest payment, the trustee would declare the company bankrupt and take action to protect the bondholders

4. terms established in the indenture represent a compromise between the issuer and the investor

a) the issuer wants low interest and few covenants

b) the investor wants high interest rates and many protective covenants.

5. corporate debt maturity--the date when the principal and any accrued interest is due

a) instead of paying off the bonds at maturity, the company may use:

(1) sinking funds

(2) call features

(3) thus, the maturity date may not be an accurate method of classifying maturities. in general, classifications follow maturities:

(a) money market: less than one year

(b) short-term: one to five years

(c) intermediate-term: five to twelve years

(d) long-term: over twelve years

6. because of increased volatility since the late 1970s, the average maturity of new domestic corporate debt has declined from about 20 years to 11 years

a) this trend makes it harder for corporate financial managers to match long-term liabilities with long-term assets (i.e., plant and equipment)

b) it also requires more frequent refinancing at unknown rates that, in turn, introduces additional risk. greater uncertainty leads to reduced investment in plant and equipment firms

7. corporations pay interest on:

a) straight coupon bonds, which may be:

(1) bearer bonds with the coupons attached

(2) registered bonds when interest is paid by check

(3) book-entry bonds where holders receive receipts from a global certificate

(4) most straight coupon bonds have a fixed-rate coupon for the life of the bond and interest is paid semi-annually.

b) zero coupon bonds

(1) that are sold at deep discounts with all the interest paid at maturity

(2) no coupon

(3) no income

(4) no reinvestment risk for the investor

(a) good in periods of declining rates

(b) not good when rates are rising.

c) floating-rate or variable-rate bonds

d) two somewhat unique bonds are:

(1) participating bonds--that share in profits or assets when they reach a specified level

(2) income bonds--that pay interest only if the firm earns sufficient income

(a) cumulative where unpaid interest accumulates

(b) noncumulative

(c) income bonds are mainly issued by firms in reorganization.

8. security for bonds

a) mortgage bonds--secured by specific pieces of property or equipment and the bondholders have a lien on the property in case of default.

b) general and refunding mortgage bonds--typically mean that the bonds have first mortgages on some property, but second mortgages on the rest of the property.

c) collateral trust bonds--secured by securities the firm owns. this collateral is delivered to a trustee who holds them for the benefit of the bondholder.

d) equipment trust certificates (etc)--issued by railroad companies to finance the purchase of railway rolling stock (cars and locomotives):

(1) railroad orders rolling stock from manufacturer

(2) manufacturer transfers legal title to trustee

(3) trustee leases rolling stock to railroad and sells etc equal to approximately 80% of cost of equipment

(4) proceeds from sale of etc plus 20% from railroad goes to manufacturer who is paid off

(5) trustee collects periodic lease payments from railroad and uses money to pay interest to certificate holders

(6) certificates paid off in around 15 years at which time trustee sells equipment to railroad and terminates lease

e) debenture bonds--unsecured bonds

(1) most corporate debt is unsecured

(2) debenture holders have the claim of general creditors on all assets of the issuer not

specifically pledged on other debt, or any excess value on pledged assets.

(3) debentures are typically issued by financially strong firms, but when issued by weaker firms, it should be recognized that they rank behind mortgage bonds or collateral trust certificates.

(4) subordinated and convertible debentures

(a) subordinated means that in case of default, the owner of a subordinated debenture ranks behind secured debt, debentures and some general creditors

(b) because of the higher risk, the yield must be higher

(c) in some cases, holder given an option to convert the bond for the common stock of the issuer.

(d) alternatively, they can be converted into stock of other firms or into other assets (such as silver).

f) guaranteed bonds

(1) a guaranteed bond is one that is guaranteed by a firm other than the issuer such as Exxon corporation guaranteeing the bonds of Exxon pipeline company.

(2) the rating on the guaranteed bond depends on the issuer, but more so on the credit quality of the guarantor

9. provisions for paying off bonds

a) call and refund provisions

(1) issuers want the right to call a bond issue if interest rates decline and replace it with a bond with a lower interest cost.

(2) in contrast, investors do not want this to happen because it requires reinvesting the proceeds at a lower rate.

(3) the compromise is that issuers cannot redeem a bond using lower cost debt (referred to as refunding) during the first 5 or 10 years after issuance. in this case, it is possible to call the bond using other funds.

(4) deferred call provision

(a) the issuer cannot call the bond for any reason during some period like the first 5 years

(b) this is more restrictive and protective than a refunding provision.

(c) corporate bonds are callable at a premium that declines with time

(5) approaches to evaluating callable corporate bonds--because the call feature gives the issuer the right to call the bond, the bondholder has two disadvantages:

(a) reinvestment risk of reinvesting the proceeds at lower interest rates

(b) price compression because the price will not increase as it should when rates decline because of the call price.

(c) an investor will accept these risks if the higher yield compensates for it.

b) investors calculate a yield-to-call (ytc) and use it if it is lower than yield-to-maturity (ytm)

c) the ytc assumes the investor will hold until the call date, and that the issuer will call on that date

10. financial risk or credit risk related to bond issues

a) most investors do not analyze issues, but depend upon ratings by five rating agencies, which are meant as measures of credit risk or probability of default.

b) higher yields for lower ratings reflect risk aversion

11. the bond markets

a) new bonds are sold in the primary market

b) the secondary market where outstanding issues are bought and sold is composed of an exchange market such as

(1) the NYSE

(2) the Over-The-Counter market

c) in the secondary markets

(1) brokers buy and sell as agents for their customers, but never own the asset

(2) dealers buy and sell for their own account

(a) maintain quotes that are bids (the price they will pay to buy)

(b) offers (the price they will accept to sell). the difference is the spread.

d) the exchange markets

(1) many bonds are listed on the NYSE

(2) most trading is by institutions, who dominate this market, and takes place on the OTC market

(3) the NYSE market provides liquidity for small orders less than 10 bonds and the quotes in the wall street journal are useful. the quotes indicate:

(a) company name

(b) coupon

(c) maturity

(d) current yield

(e) whether it is convertible (cv)

(4) the otc market is made up of wholesale dealers who mainly trade large orders of bonds (100 or more) with institutions

(5) there is a computerized quote system (NASDAQ)

(6) the quality of markets is typically judged by the size of the bid-ask spread

(a) the narrower the better

(b) the major determinant of the spread is the volume of trading in the bond, which also is related to the number of dealers

(c) with more volume, less risk for the dealer and costs are spread over more volume.

(7) a bond's marketability will influence its required return (lower yield for a liquid bond)

C. municipal bonds

1. to compare municipal and corporate bonds, you must compute the tax equivalent yield which is the yield that must be earned on a taxable bond in order to produce the same yield as a tax-exempt municipal bond

a) tax equivalent yield (tey) = tax-exempt yield divided by (1 - marginal tax rate)

example

tax rate 28%
years 10
muni yield 7.2%

tey = .072/(1 - .28) = .10 = 10%

2. the tey does not allow for differences in reinvestment rates.

D. valuation

1. coupon rate is typically set close to the prevailing market yield at the time of issue so the bond will sell close to par. there is an inverse relationship between coupon and bond price volatility

2. the principal of the bond determines the dollar value of the interest payment and is the amount paid at maturity. typical principal on bonds is:

a) government: $10,000

b) municipals: $5,000

c) corporate: $1,000

3. yields

a) current yield--ratio of coupon to current price. this yield measure neglects the principal to be paid at maturity.

b) yield to maturity--the rate of interest an investor would have to earn if an investment equal to the price of the bond made coupon and principal payments promised by the bond.

c) yield to call--the same as yield to maturity except that it is assumed that the bond is called at the first call date at the stipulated call price.

4. price quotes--prices are quoted as a percent of the par or face value

a) treasury bonds and notes are quoted in thirty-seconds of a percentage point--102.24 = 102 24/32 = 102 3/4

b) corporate and municipals in eighths of a point

5. bond pricing--the price of a bond equals the present value of the expected cash flows. therefore, you need to determine the expected cash flows and the required yield, which is the discount rate

a) cash flows equal interest payments, which are typically semiannual, and the principal. both are discounted using the same compounding assumption:

b) the required yield is the discount rate that is determined by investigating the yields available on noncallable bonds with comparable credit quality and maturity.

c) when pricing the bond, use half the annual rate for double the periods.

d) determining the price--the price is equal to the sum of the present value of the interest payments (semi-

annual payments at one-half the required yield) plus the maturity value

example

par $1,000

coupon 9%

term = 20 year bond

semiannual interest = .045 x $1,000 = $45

principal = $1,000, received in 20 years or 40 six month periods away

yield 12%

present value of $45 annunity for 40 periods at 6.0% = $45 x 15.0463 = $677.08

present value of $1,000 for 40 periods at 6.0% = $1,000 x .097222 = $97.22

total value = $677.08 + $97.22 = $774.30

e) pricing a zero coupon bond--it is the same as a regular non-callable bond except that there are no coupon payments. thus the value is the present value of the principal.

example

par $1,000

years 10

zero coupon

yield 8.6%

present value of $1,000, 20 periods into the future at 4.3% = $1,000 x .43083 = $430.83.

f) a bondholder can expect to receive a dollar return from one or more of the following sources:

(1) the coupon interest payments

(2) any capital gain or loss when the bond matures, is called or is sold

(3) income from reinvestment of the interest payments (interest-on-interest)

g) current yield--equals the annual dollar coupon interest divided by current price

example

par $1,000

years 18

coupon 6%

market price $700.89

current yield = $60/$700.89 = .0856 = 8.56%

this calculation only considers current coupon. it does not consider capital gain or loss or reinvestment of income.

h) yield to maturity (ytm)--is the interest rate that will make the present value of the cash flow equal to the current price of the bond.

example

par $1,000

years 18

coupon 6%

price = $700.89

you find the yield-to-maturity by iteration beginning with a rate above 6%. the ytm must be greater than 6% since the bond is selling at a discount

the ytm considers coupon income, capital gain or loss at maturity, and reinvestment at the yield-to-maturity rate. in the above example, the yield-to-maturity equals 9.50%.

i) if you must sell the bond before maturity, you will be uncertain of the price you will receive because it depends upon prevailing market rates.

j) yield-to-call--is the same computation as ytm, except that the cash flows are only to the first call date and the final payment is not par value, but the call price which is typically a premium over par.

example

par $1,000

years 18

coupon 6%

price $700.89

callable in 5 years at $1,030

if called at the end of year 5, total cash flow equal 10 coupon payments of $30 (every 6 months) plus $1,030.

k) investors supposedly compute both ytm and ytc and use the one that is lower because this is more conservative. some compute ot all subsequent call

dates and use "yield-to-worst" assumption of yield-to-call: the assumptions are:

(1) all cash flows can be reinvested at ytc rate

(2) the investor will hold bond until the first call date

(3) the issuer will call the bond at first call date

E. risk

1. cash flow equals future interest payments plus the expected maturity value of the bond

a) interest payments come from the coupon rate stated on the face of the bond. because the coupon rate does not change, the interest payment does not change. thus, the security is referred to as a fixed income bond

b) the maturity value of the bond also does not change after the bond is issued

c) what does change, however, is the market's perception of whether the issuer of the bond will continue paying interest and actually pay the holder of the bond the promised maturity value.

2. to evaluate risk, an important equation is:

interest rate = rf + market risk premium+ issuer risk premium

where

rf is the risk free rate

a) market risk premium is the extra reward investors receive from macro forces that affect the value of all securities

b) issuer risk premium is micro risk--don't forget that you can eliminate this risk in a diversified portfolio

c) as the market changes it perception of the issuer's ability to meet interest and principal payments, the value of the bond changes:

(1) the value increases as the market becomes more positive about the issuer's future

(2) value decreases as the market becomes more negative

(3) the market depends on rating services (moody's and standard & poors) for guidance on evaluating the quality of a bond

(a) if the rating services reduce the quality of a bond, the price of that bond falls. as the price falls, the promised yield on the bond increases because investors can now buy the bond more cheaply than before

(b) a quality increase generates the opposite effect

d) the point is that issuer risk premium is micro risk driven by factors unique to the issuer such as amount of leverage, efficient use of assets, and product appeal.

e) Rf--composed of 2 components: the real rate and an inflationary premium. the inflationary premium is affected by inflationary expectations and Federal Reserve monetary policy.

(1) the real rate is the rate of productivity in the economy. it is a reward for postponing consumption

example

suppose you have $100 and the government asks to borrow your $100 for 1 year. you could do one of 2 things with your money: you could either consume it (spend it on dinner and a play), or you could lend it to the government. by lending it to the government, you are postponing consumption and, as such, you demand a reward of maybe 5%. this means that you want $105 back at the end of the year

inflationary premium is the extra reward in addition to the real rate you demand as compensation for your loss of purchasing power over the next year

(a) if you expect that inflation will equal 3% over the next year, you will demand Rf of 8% rate of interest on your money (excluding tax impact)

(b) note that your expectation may or may not materialize next year. that is, inflation may actually measure 4% in which case your real rate of return would be 4%

(c) the point is that after the fact, your real rate may differ from the real rate you demanded before the fact. the real rate is, therefore, both an ex ante and an ex post concept depending on how you use it. many people get this very important point quite confused

f) interest rate risk--the relationship between yield and price at a given time is inverse--the higher the yield, the lower the price, and vice versa the relationships between coupon rate, required yield, and price are:

(1) if coupon rate = required yield => price = par

(2) if coupon rate > required yield => price > par (bond is selling at a premium)

(3) if coupon rate < required yield => price < par (bond is selling at a discount)

g) reasons for change in the price of a bond:

(1) change in level of interest rates in economy

(2) change in price of premium or discount bond

(3) change in required yield due to change in spread to treasuries

(4) change in perceived credit quality of corporate bond

3. duration is the weighted average term-to-maturity of the security's cash flow when the weights are the relative present value of cash flows. duration is computed as follows:

$$\text{duration} = \sum_{t=1}^{n} [(t) \times (pvcf_t)/(k) \times (pvtcf)]$$

where

t = time period cash flow is received

k = number of payments per year

$pvcf_t$ = the present value of cash flow in period t discounted at the yield to maturity

pvtcf = the present value of the total cash flows

a) for a coupon bond, duration is less than maturity

b) for a zero coupon bond, duration = maturity

c) duration and risk

% change price = -duration x yield change x 100

example

duration = 10.40

if yield go from 9% to 9.1%

% change in price = -10.40 x (+.0010) x 100 = 1.04%

duration is an approximation for small changes in interest rates, but not for large changes.

F. yield curve

1. is a graph of the relationship between the yield on treasury securities for different maturities

2. the term structure of interest rates is the relationship between the yield on zero-coupon treasuries and their maturities

3. note the difference between the yield curve and the term structure of interest rates

4. in 1982, Merrill Lynch and Salomon Brothers created stripped securities. the treasury does not issue zero-coupon notes or bonds

5. there are 2 theroies that attempt to explain the observed shapes of the term structure of interest rates:

a) expectations theory

(1) pure expectations theory--states that the shape of the yield curve is determined only by market participants expectations of future interest rates

(a) if interest rates are expected to increase in the future, the yield curve will rise with maturity

(b) if rates are expected to decrease in the future, the yield curve will declin',

(2) biased expectations theory--based on both expectations of future interest rates plus an extra premium investors demand for tying up their money for longer periods of time. this extra premium may be explained by:

(a) liquidity premium theory--states that investors prefer to invest short-term because there is more price volatility in long-term bonds

(b) preferred habitat theroy--states that there is an additional premium required for investors to shift out of their "prefered" maturity sectors (i.e., insurance companies who have issued 5-year guaranteed investment contractw will not want to invest in 6-month t-bills)

b) market segmentation theory--states that the shape of the yield curve is determined by the asset/liability constraints of investors or borrowers. this means that investors will not shift between maturities, so yields in each maturity segment are determined by the supply and demand within that segment.

III. **Convertible** Or Exchangeable Debt--can be exchanged for a specified number of shares of common stock. the ratio is referred to as the conversion ratio or conversion price

example

bond can be converted into 40 shares (its conversion ratio)
conversion price is 1,000/40 = $25

A. the conversion ratio can decline over time and is always adjusted for stock dividends. these bonds always have a call provision that allows the issuer to force conversion if the stock price rises above the conversion price.

B. an exchangeable bond can be exchanged for the stock of a company that did not issue the bond. an example is a dart & kraft bond can be exchanged for 3m stock held by Dart & Kraft.

C. valuation

1. value of a convertible bond represents the combination of a fixed income security and a call option on the firm's common stock

2. the bond value generally establishes the floor value of the convertible

3. the converted value of the stock extablishes the upper value of the convertible

4. the difference between the floor value and the upper value is the value of the call option

5. basic generalizations about the value of convertibles:

a) the greater the volatility of the stock, the greater the value of the option component of the convertible

b) convertibles with greater call protection are more valuable than securities with less call protection

c) the longer the time in which you can exercise your option, the greater the value of the convertible

d) the value of conversion increases as the dividend on the underlying common stock approaches or exceeds the yield on the bond

IV. Money Market Mutual Fund--a mutual fund that pools the capital of a great number of investors and uses it to invest exclusively in high-yielding, short-term securities, such as treasury bills, corporate commercial paper, jumbo certifidates of deposit, and the like

A. highly liquid

B. almost every major brokerage firm has a money fund

C. they are not federally insured

D. their history has been virtually free of even the threat of failure

E. defulat risk is almost zero. since the securities the fund purhcases are very low in risk and diversification lowers risk even more

F. tax-exempt money fund

1. limits its investment to tax-exempt municipal securities with very short maturities

2. other than this difference, they are just like standard money market funds

a) highly liquid

b) offer checkwriting privileges

c) income is free from federal income tax

d) yield is less than fully taxable money funds

e) appeal to higher tax bracket investors

V. Mutual Funds

A. today, there are more mutual funds than stocks on the New York Stock Exchange

B. advantages include:

1. pooled diversification

2. automatic reinvestment of dividends

3. withdrawal plans

4. exchange privleges

5. checkwriting privileges

6. convenience

C. disadvanteges include

1. management fees

2. the average equity mutual fund does not appear to outperform the S&P 500 index--note that in an efficient market, this must occur because of management fees

D. in an open-end investment company (mutual fund) you actually buy your shares and sell them back to the mutual fund. there is no limit to how many shares a mutual fund can issue. the only limitation is investor demand

1. net asset value (nav) is calculated daily and represents the value of a share of stock in a particular mutual fund

2. nav is found by taking the total market value of all shares, subtracting out the liabilities, and dividing the result by the number of shares outstanding

E. in a closed end-mutual fund, the company operates with a fixed number of shares and do not regularly issue new shares of stock. they opperate like any other company except they invest in financial assets (stocks and bonds) instead of bricks and mortar

1. shares of closed-end companies are determined not only by their nav, but also by the supply and demand for those shares

2. the shares may sell at either a discount or a premium

a) shares sell at a discount if the market believes that management is not capable of wisely investing the accumulated money

b) shares sell at a premium if the market believes management will wisely utilize the accumullated money, or if the fund enables investors to invest in otherwise illiquid shares (i.e., the korea fund)

F. load funds are sold through a brokerage firm

G. no-load funds are sold directly from the fund without a commission because there is no broker

1. some brokers will transact no-load funds if tney believe they can also make money from commission transactions in the account

2. low-load funds may charge a commission as low as 1%

3. back-end load charge 1 to 2% commission on the sale of shares instead of up-front

4. (b)-1 funds charge an annual fee to cover marketing and distribution expenses

H. the Security Exchange Commission (SEC) is currently considering allowing investors to invest in mutual funds without first receiving a prospectus

I. the SEC is also considering new rules on requiring funds to more clearly state who the portfolio manager is

J. trust departments use mutual funds when they do not have the resources to create the selection of comingled funds their customers demand

VI. Common Trust Funds--the same concept as mutual funds except common trust do not trade publicly

A. this type of fund permits individual trusts to have representative holdings in a greater number of issues without the expense involved in odd-lot trading of small holdings

B. most individual trust agreements contain language the allows the assets of the trust to be invested in a common trust fund. some states, however, do not permit the use of common trust funds--the state of residency of the client governs

C. commingled funds--open only to a bank's pension or employeed benefit clients

1. avaliable only if the trust is tax-exempt

2. the bank trustee is responsible for purchasing (from clients wishing to redeem their holdings) and selling (to other clients) units or shares of the commingled fund based on the composite of individually priced securities within the fund

VII. Closely-Held Corporations--Black's law dictionary defines a closely-held corporation as a corporation whose shares, or at least voting shares, are held by a single shareholder or closely-knit group of shareholders. generally, there are no public investors and its sharesholders are active in the conduct of the business.

A. valuation--the intrinsic value of closely-held corporations is derived jus. like publicy-held stock. the only difference between the two is that there is no market price per share for the closely-held stock

B. 4-step approach to valuation using market approach:

1. analysis of the economy--for example, inflation

2. analysis of the industry--relation of industry to economy

3. analysis of the subject company--the firm's competitive and financial position including r&d, sales trend, profit margins, management team, strategic plan, market niche, leadership position in industry, reason for success.

4. selection of comparables--after making adjustments, can use comparables to value company

a) use good judgment

b) consideration of whether valuation is for control purpose (affecting strategic decisions) or minority interests (not affecting strategic decisions) makes difference

C. financial analysis of the subject and comparable companies:

1. financial statements (historical) of both subject company and comparables are reviewed to identify similarities and differences;

2. adjustments (normalizations as to how a typical third party owner would operate the firm) are made to make the two as compatible as possible--i.e., inventory valuation, depreciation, and capital structure

3. adjustments differ by purpose:

a) controlling interest-involved in corporate policy

b) minority interest--not involved in corporate policy

4. historical analysis of financials typically involves 5 to 10 years of data;

5. analysis of multiples

a) typical multiples include price/earnings per share, price/cash flow, price/earnings before interest and taxes, price/sales, price/book value;

b) use 3 to 5 year averages;

c) typically, the latest 12 months earnings or cash flow are used;

d) if available, use multiples that reflect estimates for the next 12 months to factor in growth;

6. conclusion: the valuation--the final step is to decide where the subject company fits relative to the comparable companies. a range of relevant multiples may be applied to the subject company's base to determine its value

7. you may use the discounted cash flow (dcf) model in valuing a closely-held corporation

a) the dcf model state that the value of a stock equals the present value of all future cash flows accumulating to that stock.

b) theoretically, cash flows extend out infinitely. practically, the assumption is that the stock will be sold at the end of 5 or 10 years (the holding period)

c) estimation of cash flows--cash flows are calculated as free cash flow or net cash flow defined as the sum of all sources of cash less the capital expenditures necessary to stay in business and continue to grow at the expected rate. to do this, you would use adjusted historical accounting date where adjustments occur for:

(1) owner's compensation--is owner's compensation economically correct?

(2) contracts with related parties--is the lease contract accurate in terms of market values?

(3) nonoperating assets--is that airplane really necessary?

(4) nonrecurring income and expenses--will that legal expense annually recur over the next 5 to 10 years?

(5) capital deficiency (or surplus)--is the firm adequately capitalized?

(6) reconcile different accounting methods--do the data conform to the data of the comparable publicly held firms?

d) discount rate--the discount rate is impacted by:

(1) external factors (macro) such as inflation expectations

(2) internal factors (micro) such as

(a) management/labor relations

(b) financial risk--leverage and liquidity risk

(c) operating risk--management's capability

(d) estimation risk--uncertainty of future earnings

(3) the discount rate equation is:

discount rate = risk-free rate + macro risk + micro risk

(a) selection of the risk-free rate should match the time horizon of the investment with the maturity of the security.

(b) you would calculate the macro risk premium as the difference between the expected return on the stock market and the risk-free rate, you could estimate the stock market return from the historical stock market return data

(4) terminal value (tv)--estimated value of the security at the end of the holding period. one way to estimate tv in period t is to take the present value of all future cash flows accruing to the firm

from period t + 1 through infinity. this technique is known as capitalizing future cash flows and equals

tv = (cash flows in period t + 1) / k - g

where

k = discount rate

g = growth rate of cash flows

(a) although theoretically correct, this technique for estimating tv is very sensitive to small changes in the input values. growth should at least equal inflation plus population growth.

(b) an alternative is to estimate tv as book value of the firm. you could use various industry rules of thumb.

e) conclusions--although the dcf model is the most theoretically correct, it requires many subjective judgements. estimation of tv is perhaps the most crucial which, in turn, requires growth and cap rate estimates.

D. minority interest discounts and control premia in valuing a closely-held corporation

1. minority interests are usually worth less than a proportionate share of the total enterprise value. minority-interest discount is the reverse image of a control premium

2. controlling interest allows the owner to set policy on such issues as executive compensation, dividends, and changes in bylaws. this control is affected by:

a) contractual restrictions--i.e., limits on dividends in loan agreements

b) effect of regulation--government may restrict rights

c) financial condition of business--not enough money with which, for example, to declare dividends

d) effect of state statutes--varies from state to state

e) effect of distribution of ownership--power of "swing vote" in case of 49%/49%2% distribution

f) each situation must be analyzed individually.

g) control premium tends to increase as the overall stock market declines in value, and vice versa.

h) premia paid for minority-interest acquisitions usually not as great as premia paid for controlling-interest acquisitions

i) sales of minority interests generally show an average discount to book value of 40%. although caution must be exercised in interpreting these results due to the unique nature of each sale, the conclusion that the typical discount is not of token size, but of substantial magnitude.

E. discount for lack of marketability

1. minority-interest discounts and discounts for lack of marketability are similar but different

a) minority-interest is concerned with the degree of control

b) marketability is concerned with liquidity

c) they are similar in that minority shareholders suffer more than majority shareholders from lack of marketability. compared to publicly traded shares, the discount averages between 35 and 50 percent

2. if a minority interest in a closely held business is valued by reference to day-to-day trading prices of publicly held stock, minority interests are being compared with other minority interests

a) the closely-held-stock value should be discounted for marketability with respect to the publicly held stock, but not for minority interest

b) the key is to compare minority to minority and controlling interests to controlling interests of private and public companies.

3. marketability discount studies

a) restricted-stock studies--prices of public stocks not registered for public trading (letter stock), trading hands in private placements, compared to prices of comparable publicly traded stocks show discounts of 30 to 35 percent

b) studies of private transactions prior to public offerings--data show that a discount of about 43 percent

F. other discounts

1. in several estate-tax cases, the loss of a key-person resulted in a discount of up to 25 percent

2. a portfolio discount of about 15 percent may apply when purchasing a company that has multiple lines of business rather than a single line. in other words, the actual p/e ratio is less than the blended p/e ratios of the various industries that make up the business.

conclusions--because the magnitude of premia and discounts may be so substantial, it is important to be familiar with the extensive empirical evidence available when attempting to quantify premia or discounts in any particular situation.

VIII. Real Estate

A. valuation--it is difficult to know value at any given point in time

1. individual real estate investments do not trade on an organized exchange

2. limited number of buyers and sellers

3. properties sell infrequently

4. each property is unique

5. slightly different locations

6. different physical characteristics

7. different lease structure

B. market value--the most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale

1. buyer and seller each acting prudently and knowledgeably

2. assumes the price is not affected by undue stimulus

3. important points of definition

a) typical buyer and seller both well informed or well advised

b) sale as of a specific date

c) reasonable time--sale not too long, not too short

d) no special or creative financing

C. investment value versus market value--market value refers to a typical investor

1. investment value refers to a particular investor who has a unique

a) tax status

b) need for diversification

c) risk aversion

d) existing portfolio

2. investment value can differ significantly from market value

D. approaches to measuring value

1. cost approach--based on the premise that the value of the property is equal to the sum of the land value plus the depreciated replacement cost of the building.

a) depreciation includes

(1) physical depreciation--repairs need to be done

(2) functional obsolescence outdated design

(3) external obsolescence--bad location

b) difficulties in applying cost approach

(1) need adjustments for depreciation

(2) entrepreneurial profit must be estimated and included

(3) assumption that the buyer can lease the property at current market rents

2. sales comparison approach--estimates value by comparing the subject property to other comparable properties which have recently sold

a) best used when an adequate number of sales of similar properties exist and data can be retrieved from accurate sources

b) the sale price of the comparable properties is adjusted for differences between the comparable property and the property being appraises

c) usually based on a small sample of the market of 3 to 5 properties where appraiser uses judgment

3. income approach--an attempt to determine what the typical investor would be willing to pay for the stream of ne operating income (noi) that is expected from the property usually on a before-tax basis. income estimate comes from comparable properties

a) market derived capitalization rates = noi/sales price

value = noi/cap rate

b) noi for the first year after the property is assumed to be purchased

c) cap rate comes from several comparable sales

d) advantage--income approach simple to use. it requires no forecasting

e) disadvantage--difficult to find comparable sales for noi and cap rate

(1) cap analogous to reciprocal of a stock's p/e ratio. it is dependent on projected growth

(2) cap rates come from historical sales. ideally those sales were very recent

(3) capitalization rate formulas

cap rate = discount rate - growth rate

value = noi/(discount rate - growth rate)

(a) analogous to dividend discount model for stocks

(b) this formula works only if income and property value are both assumed to be increasing in value at the same compound rate each year

(4) holding period--should not affect value of property because the value still depends on income potential over its entire economic life. expected resale price includes the present value of the benefits for the remaining economic life

f) valuation of a leased fee estate

(1) properties are often purchased subject to existing leases and the terms in these leases must be honored by the investor. these are "leased fee" estates

(2) if existing leases allow tenant lower rent for first several years, value of leased fee estate will be lower than market value (fee simple estate)

(3) leased fee estates may be more or less risky than fee simple estate--thus, the discount rate will be affected

g) mortgage-equity capitalization--if debt is used in purchase, discount rate must reflect rates of return expected on both debt and on equity invested

value = equity investment + mortgage financing

where

discount rate used to find value of equity component will be higher to reflect higher risk

note that in theory financing does not create value. it just determines how the investment benefits are divided

4. conclusions about three approaches to measuring value

a) in a perfect market, all approaches to estimating value should give the same answer if markets are in equilibrium

b) depending on availability of data and the type of property being valued, one approach may be more reliable than another

IX. Foreign Investments

A. asset allocation

1. for international investing, the asset allocation decision into three parts:

a) the decision between domestic and international assets;

b) the decision between international stocks and bonds;

c) the decision between international assets and currency return.

d) although individual foreign country returns have been more risky than portfolio returns of U.S. equities or fixed income securities, a diversified world portfolio of either stocks or bonds has been less risky than a portfolio comprised of only U.S. stocks or bonds;

e) from 1978 to 1987, currency return has been small and rather unsystematic in the sense that it has been positive for one market and negative for another;

f) on a diversified basis over all non-U.S. markets (japan, the united kingdom, and west germany), currency risk does not diversity away;

g) the inclusion of foreign stocks and bonds to an existing portfolio of U.S. stocks and bonds improves diversification and portfolio efficiecy;

B. currency exposure may be eliminated or reduced by selling the currency forward (short hedge) thus producing a return to a fully hedged portfolio equal to the local market return plus the forward premium;

1. hedged and unhedged returns will be the same in the long run due mainly to the rational expectation that real rates should be approximately equal across markets in the long run

2. the academic literature states that currency risk should not be rewarded.

C. measuring the opportunity

1. accounts for 36% of gnp and 20% of world capitalization

2. rest of world cannot be ignored.

D. the international experience: the bottom line

1. from 1979 to 1988, the U.S. was never the top performing stock market;

2. a portfolio composed of securities from Europe, Australia and the far east (EAFE) returned 23% vs. U.S. 16%;

a) Japan dominates EAFE at 65% of total capitalization;

b) Japanese importance is distorted by cross-holdings;

3. asset allocation decisions are crucial.

4. it does not make sense to put a lot of international fixed-income into a portfolio that already has international equities--the correlation is too high;

5. experience indicates that international diversification increase returns while decreasing risk;

a) international investing is increasing globally;

b) the U.S. has been a leader in this area by promoting free markets;

c) free trade increases the living standards of all countries by promoting specialization;

d) the U.S. must address its twin deficits;

e) special interest groups can pressure politicians for protectionism in a democratic society.

E. analysis of returns

1. total return = currency component + dividend component + market component + security selection component;

2. mature economies have higher yield basis than fast-growing oriental markets especially japan;

3. active management requires liquidity or marketability (no distinction made between the two);

a) exchange rate risk is important;

b) while the EAFE index has problems, it is an accepted proxy for the non-U.S. markets.

F. the contribution of international investment:

1. greater return and lower volatility;

2. allocation to internationals is acceptable;

3. the efficient frontier is pushed out to the left.

4. the diversification argument--low correlations for most countries with U.S. market.

5. is there adequate liquidity in the international equity markets?

6. of total world capitalization is non-U.S. as of the end of 1988;

7. non-U.S. greater than U.S. in market capitalization and total trading volume.

G. what are the incremental costs of investing in equity markets outside the U.S.?

1. withholding taxes--average 15% on dividends and interest depending on tax treaties;

2. transactions costs from commissions and stamps--about three times as much as in the U.S.;

3. management fees--higher than U.S. but hard to be exact;

4. custody costs--higher than U.S. but hard to be exact.

5. the conclusion is that the costs are higher, though in the past they have been offset by higher returns.

H. how does corporate disclosure compare with the U.S.?

1. on average, not as high;

2. many foreign executives do not view shareholders as important sources of financing.

3. foreign earnings would be higher if presented on U.S. standards;

4. some large companies use both local and U.S. standards;

5. foreign security analysis is more qualitative than in the U.S.

6. there is no evidence that lack of disclosure correlates with greater market risk.

7. how does market regulation compare with the U.S.? none have the size and power of the S.E.C.

I. are foreign governments politically stable?

1. difficult to measure, but the larger non-U.S. countries have been remarkably stable;

2. democracy is well-entrenched in almost all countries;

3. political stability leads to less market risk;

J. are adequate benchmark indices available in the international markets?

1. EAFE index is consistent in its methodology

2. Salomon Brothers/Frank Russell and Financial Times are also now available;

3. indices have a large cap bias and do not include emerging markets;

4. some indices trying to deal with government/corporate ownership and cross-holdings that affect liquidity;

5. cross-ownership in Japan affects total market capitalization that, in turn, affects country rates of return in index.

K. is South-Africa-free international investing possible?

1. investors responsibility research center (irrc) has identified more than 150 non-North American companies with employees in South Africa.

2. it is possible, using third party guidelines, to invest in non-South African companies, but problems exist:

3. exclusion of South African securities distorts benchmark index in a meaningful way;

L. how can one deal with pro-American investment sentiment?

1. fiduciary responsibility to diversify;

2. countries that restrict free capital flows will eventually be less efficient and less competitive.

3. diversification requirements of ERISA;

4. diversification due to countercyclical nature of foreign economies;

5. inefficiencies in foreign markets;

6. weaker U.S. dollar.

M. can you do it? three obstacles;

1. legal prohibition

2. parochial views

3. higher costs

4. mutual funds may get around some of these obstacles;

5. higher costs for in-house expertise may be required.

N. how much to allocate?

1. efficient frontier (world capitalization) implies up to 60%--currently at 5-10%);

2. allocation depends on risk tolerance of plan with respect to liabilities to be funded;

3. transaction costs must be considered for active managers;

4. an argument against international investing is the mismatch in liabilities (dollar denominated) and assets (non-dollar denominated)--an argument with more impact on retired lives than any other group;

O. how to implement

1. core strategy--highly diversified across multiple countries, industries, and stocks--either active or passive. (example of active core may be portfolio of pacific basin countries);

2. specialized--undiversified with narrow focus on, for example, a certain region--either active or passive;

3. passive management--no superior information, indexed. example of passive specialized is an index fund of small international stocks:

a) low cost

b) no value added

P. active management--superior information where manager "bets" on certain stocks or groups of stocks, or specific asset classes:

a) value added

b) more volatility

c) strategies:

(1) top-down--macro then micro

(2) bottom up--micro with macro byproduct--

(3) bet on market inefficiencies.

Q. active/passive--tactical asset allocation through country selection combined with diversified security selection. this style has two problems:

a) large amounts of money to achieve economies of scale

b) newness of style where most managers are foreign based involved in active management.

R. international fixed income--based on yield spreads:

1. differing monetary policies across countries

2. could be active or passive

3. added value over last three years

4. few indices in non-dollars

5. global (including U.S.) or international (excluding U.S.):

6. currency fluctuations affect fixed income more than equities

7. duplication/correlation between U.S. bonds and global bonds, but less so with u. s. bonds and international bonds

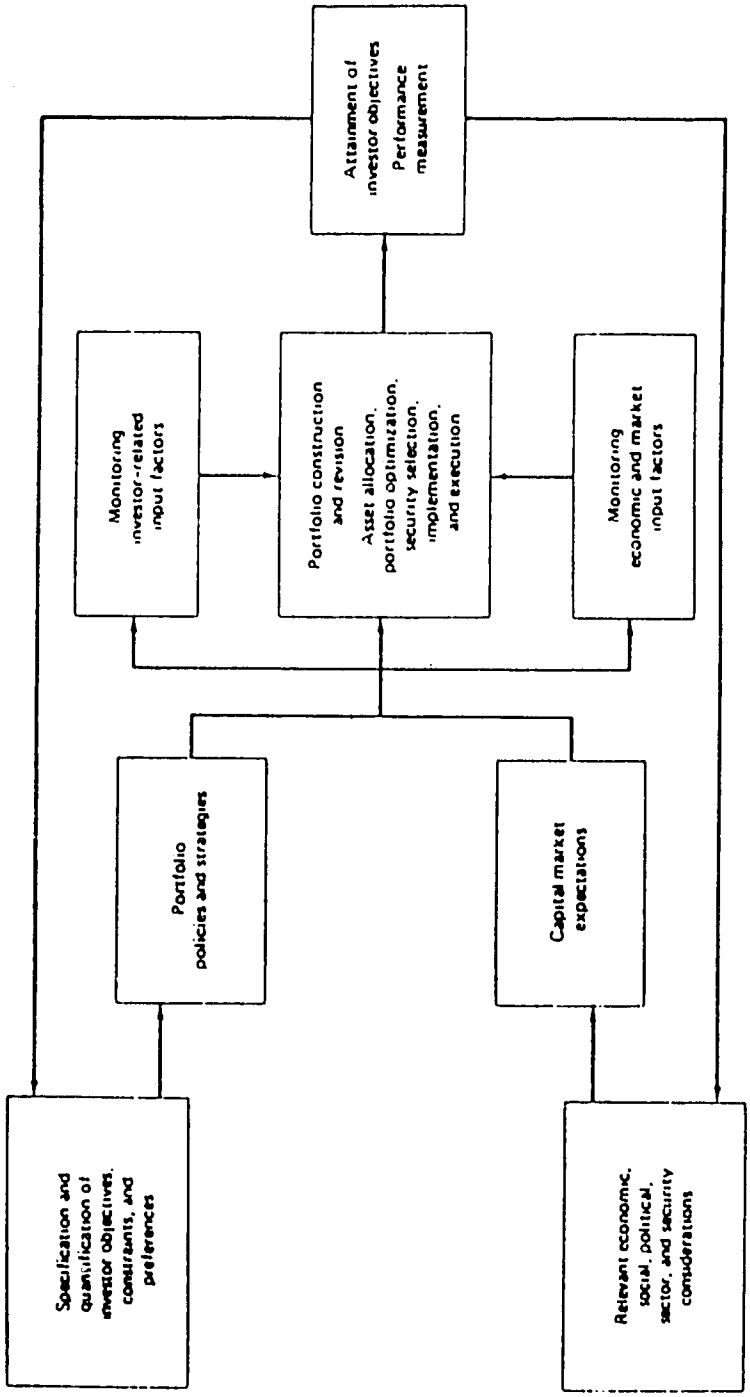

Figure 1-1. The Portfolio Construction, Monitoring, and Revision Process

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PORTFOLIO MANAGEMENT THEORIES AND CONCEPTS

I. Principles Of Financial Asset Management

A. return calculation

1. total return = yield + price appreciation

where:

yield = cash flow / price

price appreciation = [price (end) - price (begin)] / price (begin)

cash flow (stock) = dividends

cash flow (bond) = interest

be sure to distinguish between an expected return (ex ante) and an historical return (ex post). because pricing models such as the capital asset pricing model (capm) are concerned with the future, they express returns as expectations. performance appraisal, however, is based on historical results.

2. the CAPM:

a) provides the required rate of return based on the level of risk (beta)

b) the model does not guarantee that the actual returns (historical) will equal expectations. over time, you would think that reasonable return expectations would align with actual returns. otherwise, something is wrong with the model

c) empirical analysis in academic studies show that no model accurately captures expectations. thus, the investments world stays interesting.

3. arithmetic mean return--simply the average return

example

end of period	value	rate of return
0	100	
1	150	(150-100) / 100 = 50%
2	100	(100- 150) / 150 = -33%

arithmetic mean return = [50% + (-33%)] / 2

= 8.5%

obviously, you had a zero return because you began with $100 and ended with $100. thus, the arithmetic mean return can be misleading

4. geometric mean return--the effective compound rate of return

example (same as above)

geometric mean return = r

future value at the end of period 2 = 100

present value = 100

fv (2) = pv (1+r)^2

= 100 (1 + r)^2

(1+ r)^2 = 100 / 100

(1+ r) = (100/100)^ 1/2

r = 1 - 1 = 0

1. the geometric mean return is the "true" rate of return over some historical period. it is, thus, used for evaluating historical performance such as for a mutual fund.

2. the arithmetic mean return is an "unbiased" estimate of future performance. this means that with repeated sampling, the mean of all sample averages is the population mean.

3. the arithmetic mean is used for estimating future performance

4. the geometric mean is used for measuring past performance

5. Ibbotson Associates presents data on both the arithmetic mean and the geometric mean (see Table 1).

5. expected return--a statistical measure based on probabilities

example

you believe there is a 50/50 chance of either a 15% return (economic boom) or a 5% return (economic bust). the expected return (ex ante) equals the weighted average of the two returns:

expected return = .5(15%) + .5(5%)

= 10%

actual calculation of an expected return depends on how many economic scenarios you are forecasting. typically, analysts use at least 3 scenarios

Table 1
Historical Rates of Return

asset class	geometric return	arithmetic return
large-cap stocks	10.0%	12.1%
small-cap stocks	12.3%	17.8%
lt corp. bonds	5.0%	5.3%
lt govt. bonds	4.4%	4.7%
t-bills	3.5%	3.6%
inflation	3.1%	3.2%

Source: Ibbotson Associates, Chicago, Stocks, Bonds, Bills and Inflation: 1989 Yearbook.

note that the sum of the probabilities must equal 100%.

rate of return after taxes--equals the return before taxes multiplied by (1 - tax rate)

B. risk--again, be careful to distinguish between ex ante (before the fact) and ex post (after the fact) risk. which one your use depends on your purpose. measures of risk include:

1. standard deviation--a statistical measure of volatility around the mean

a) if you are measuring historical risk for performance appraisal, a high standard deviation implies high volatility in the investment (a roller coaster ride)

b) if you are interested in the future, a high standard deviation implies high uncertainty

either way, a large standard deviation implies a large chance of gain, but also a large chance of loss. on the other hand, a small standard deviation means a small chance of gain, but also a small chance of loss

small-cap common stocks have historically had a large standard deviation, while t-bill have had a very small standard deviation. thus, your would consider small-cap stocks much more risky than t-bills.

2. range--another measure of risk defined as the difference between the highest return and the lowest return

a) the range is an easier measure of risk to use than the standard deviation

b) it tends to give the same signal of risk

c) note that one outlying data point can distort your perception of risk if you strictly rely on the range

example

assume you have 10 years of data where the investment generated between a 10% and a 12% rate of return for years 1 through 9 and 20% in year 10 (an outlier). the range may lead you to believe that the risk of this investment was high whereas in reality it was not.

3. purchasing power risk--the risk of losing value to inflation. for example, if your return last year was 3 percent and inflation was 4 percent, you actually lost 1 percent purchasing power before taxes. you need to think in "real terms," that is, after inflation and, preferably, after taxes

4. reinvestment risk--most people think of t-bills as riskless, but they are not. if you have a 5-year time horizon and you invest in 90-day t-bills, you face the uncertainty of not knowing what rate you will receive when your t-bills continually roll over. this is reinvestment risk

a) you can eliminate reinvestment risk by matching your investment horizon to the maturity of a zero-coupon bond (i.e., 5-year horizon to a 5-year zero-coupon bond)

b) matching time horizon and maturity of zero allows you to immunize the investment against risk. that is why parents like zero-coupon bonds for funding a child's college education.

5. default risk -the extra risk associated with a long-term corporate bonds relative to long-term government bonds

a) requires an extra reward (default premium). looking at the data in Table 2, you can see that default risk is expected to be an extra return of .5% (6.0% - 5.5%), assuming all other characteristics of both bonds are equal

b) the risk of long-term corporate bonds is expected to be .3% (9.3% - 9.0%) higher than the risk of long-term government bonds.

Table 2
Long Term Forecast Of Asset Class Returns And Risk

asset class	expected return	risk (std. dev.)
large-cap stocks	10.0%	18%
intl. large-cap stocks	12.0%	20.0%
small-cap stocks	15.0%	30.0%
lt corp. bonds	6.0%	9.3%
lt govt. bonds	5.5%	9.0%
t-bills	3.0%	3.0%
inflation	2.0%	4.0%

Source: Copley Investment Management, March 1993.

6. liquidity risk--the extra risk associated with tying up your money longer, assuming no default risk

a) from Table 2, the liquidity risk is expected to equal 6.0% (9.0% - 3.0%) as measured by the difference in risk between long-term government bonds and t-bills

b) the extra reward (liquidity premium) associated with the liquidity risk is expected to equal 2.5% (5.5% - 3.0%)

7. market risk--the extra risk associated with investing in the stock market relative to investing in t-bills

a) from Table 2, market risk is expected to equal 15.0% (18.0% - 3.0%) as measured by the difference in risk between common stocks and t-bills

b) the extra reward (market premium) associated with the market risk is expected to equal 7.0% (10.0% - 3.0%)

8. security risk premium--according to the CAPM, the required rate of return on a stock depends on the security risk premium, which depends on the market risk premium. the difference between the security risk premium and the market risk premium is due to the security's beta, a measure of the stock's risk relative to that of the market.

example

required rate of return = k = Rf + beta (Rm - Rf)

where:

Rf = risk-free rate of return

Rm - Rf = market risk premium

beta (Rm - Rf) = security risk premium

a) note that the market risk premium is macro, while the security risk premium is micro. theory states that a firm's financial policies affect beta. two policies, in particular, are:

(1) the firm's use of debt--more debt implies greater risk to the stockholders since the debt-holders (creditors) receive their interest before the stockholders receive their dividends

(2) the firm's dividend policy--lower dividends mean the firm retains more of the earnings that, in turn, means the stockholders must wait for future dividends. this wait implies greater risk.

9. size risk--one way of broadly defining risk is according to where the stock is traded:

Exchange	Classification	Capitalization
NYSE	Large Caps (1st tier)	> $1 billion
ASE	Middle Caps (2nd tier)	mil - $1 bil
OTC	Small Caps (3rd tier)	< $200 mil

According to this classification, risk decreases as stocks become larger due to smaller bid-ask spreads and greater volume of trading

C. diversification

1. the key to understanding diversification is correlation

a) the statistical measure of correlation between 2 stocks or 2 asset classes is R (rho)

b) R must lie between +1 and -1:

(1) if R equals +1, then the 2 stocks are perfectly correlated; in fact, they act as one and by combining them into a 2-asset portfolio provides no diversification benefits.

(2) if R equals -1, then the 2 stocks are perfectly negatively correlated. this means that as the returns of one increase, the returns of the other decrease exactly by the same amount. by properly combining these 2 stocks, you can eliminate the risk to the portfolio

(3) in reality, R on average is probably around .3. this means that you can reduce risk through diversification, but you cannot eliminate it.

2. you can diversify a portfolio at 3 different levels:

   a) diversification across multiple asset classes

   b) diversification within each asset class or across multiple sectors

   c) diversification within each sector or across multiple securities

3. in theory, perfect diversification means you would own a portion of all risky assets in the world, the market portfolio

   a) perfect diversification is obviously not possible

   b) good diversification is possible through the purchase of mutual funds (if you have a relatively small amount of money) or through the purchase of many individual securities (if you have enough money).

4. non-diversifiable risk--macro risk that you cannot reduce

   a) is present in the market from social, political, military and economic forces that affect all investments. one example is inflation

b) nondiversifiable risk is also referred to as systematic risk, and is measured by beta.

c) beta is a measure of relative risk. it is calculated by measuring the relationship between the returns of an individual stock against the returns of the entire market (i.e., S&P 500)

(1) beta is a measure of risk for an individual stock within a diversified portfolio of stocks

(2) the important point is that if the portfolio is not diversified, you cannot use beta as a measure of risk. in that case, you would have to use the portfolio's standard deviation as a measure of risk. note the following relationship:

total risk = systematic risk + unsystematic risk

where

systematic risk is non-diversifiable and unsystematic risk is diversifiable.

(3) for practical purposes, approximately 12 stocks diversified across 12 different industries is considered good diversification.

(4) you should apply beta only to stocks, although some people also try to apply it to bonds. the problem is in measuring the market other than the stockmarket.

D. asset allocation--the manner in which you allocate funds across **multiple asset** classes. for practical purposes, you could divide the **world** of investable assets into 6 asset classes as follows:

a) domestic stocks

b) domestic bonds

c) international stocks

d) gold

e) treasury-bills

f) real estate

this definition of asset allocation is not universally accepted, but good enough to get us on the same sheet of music. you could further divide domestic stocks into large-caps and small-caps, or some other way. you can see that our simple definition can quickly become rather complicated. the tradeoff is more complexity for greater accuracy in defining asset classes. conceptually, you would like to define enough asset classes such that each class is homogeneous. obviously, a broad definition such as domestic stocks does not define a homogeneous class, but many people use this definition because it is workable.

1. problems with asset allocation

a) the main problem with diversification is the practicality of implementing it. How, for example, are you to diversify within the stock market? Some people may say mutual funds offer a viable mechanism especially for the small investor who does not have enough money to purchase a large number of individual securities. Although this may be true, you have to be careful about the definition of diversification. For example, a mutual fund that invests in health care stocks--a sector fund--may be diversified across the health care industry, but is hardly diversified across all industries in the market. Thus, investing in a health care mutual fund satisfies only part of the diversification strategy. Such an investment needs to be supplemented by investing in multiple "sector" funds in order to gain broad exposure to the market.

(1) A possible solution to the sector mutual fund problem is index funds. An index fund, such as the Index Trust 500 offered by Vanguard, follows a policy of investing in a portfolio of stocks that

correlates highly with the Standard and Poors' 500 index. But even this index fund presents severe problems for the investor who wishes to follow a diversification strategy.

(2) The S&P 500 is comprised largely of stocks of the biggest firms in the United States. It ignores the other thousands of stocks, mostly the smaller stocks, that actively trade every day. These smaller stocks tend to be more growth oriented, pay lower dividends if any at all, and also present a higher risk of loss. By investing in the Index Trust, you gain wide exposure to only part of the market and, hence, are not really diversified.

(3) The mutual fund industry has recognized this problem and is now offering the investing public other index funds such as one that tracks Wilshire the Wilshire 4500 and the Russell 2000. The driving force behind these index funds is, again, diversification.

b) But the problems with index funds do not stop with stocks. What about investments in other asset classes such as bonds, internationals, gold, real estate, and money market securities. Pursuing a strategy of diversification requires you to have exposure to all these asset classed. Again, the mutual fund industry has responded with index funds for each one.

(1) For example, diversification in international securities requires you to invest in all the securities of all the different countries outside the United States. Because this is quite impractical even for a large mutual funds, you can purchase an international index fund that replicates the price movement of stock indexes of the largest industrial countries in the EAFE world. Still, we have the problem of smaller, emerging countries being ignored.

(2) Even if you can find an international mutual funds designed to mimic returns of a broad-based basket of country equity funds, what about exposure to other asset classes (i.e., bonds, real estate, and money market securities)?

c) Another problem with diversification, even if we can solve the problems of index funds discussed above, is that of proper weighing. What, for example, is the proper weight of U.S. domestic stocks in a diversification portfolio? In other words, what is the proper weighing for each country just in the stock component of the portfolio? Once this question is addressed, you still have to address the weighing question for each asset class. What conceptual basis is available for guiding the construction of a portfolio diversified across multiple-asset classes?

Some would say to use weight corresponding to the representations of each asset class in a world-wide index. This concept would first require calculation of all the wealth associated with stock investments throughout the whole world, then measuring each country's relative weight in such an index. The same concept would then apply to bonds, real estate, and money market securities.

d) Assuming that you can solve all the problems relating to index funds and their proper weighing scheme, you still have to deal with the issue of how often you should rebalance. Do you simply buy and hold this monstrous portfolio composed of numerous index funds, or do you buy and sell some of the asset classes in an attempt to keep the asset class weight within some predefined target weights?

2. But setting aside all these problems for the moment at least, what does diversification actually do for you? Given your best efforts to form a portfolio diversified across multiple asset classes. The strategy relegates you to an average rate of return. For example, a stock index fund such as the S&P 500 will never be the best performing fund in a group of like mutual

funds: those with an objective of growth and income. Its performance will always be in the middle of the pack simply because it represents the average for the pack.

a) Some investors would find such a prospect as quite boring. Why, they would ask, would anyone want to settle only for an average return? Would not this inevitability be counter to our most basic driving force of being competitive? Doesn't hope springs eternal?

b) The traditional answer to these concerns is that nobody knows how to consistently identify in advance which investments or mutual funds will beat the average. But even if you buy this argument, are you ready to throw in the towel without even trying? Some investors shutter at the very thought. Nobody ever said that asset allocation would be easy.

II. Equity Investment Management Approaches

A. fundamental analysis--is concerned with estimating "intrinsic" or true value of a security, usually a stock. the purpose is to compare the intrinsic value to the going market value of the stock

a) buy if intrinsic value exceeds market value

b) sell or avoid if intrinsic value is less than market value

c) hold if intrinsic value equals market value

1. top-down approach to fundamental analysis

a) analyze overall market--determine if the stockmarket is a good bet

b) analyze industry--determine which, if any, industries or sectors of the market are good bets

c) analyze company--determine which, if any, stocks within selected industries are good bets

d) this approach looks like market timing because of selecting the proper time to purchase or sell a stock. actually, you cannot totally escape market timing, but you can reduce its effect by dollar-cost-averaging when either buying or selling.

2. the alternative to the top-down approach is the bottoms-up approach

a) select stocks regardless of what the industry and market look like. you can think of this approach as ranking all stocks according to some measure of expected return relative to risk and investing in the highest ranked stocks

b) by using this approach you could be investing in relatively good stocks but at the wrong time; that is, at the beginning of a down market.

3. both the top-down and bottoms-up approaches are value oriented styles of investing. the idea is to find the best intrinsic valued stocks in the market relative to going market values. characteristics of the value style of investing are:

(1) low price/earnings ratios--lower than the market p/e

(2) high dividend yields--higher than the market dividend yield

(3) low price/book values--lower than the market price/book value

a) if the market is efficient, a stock is not mispriced relative to value of the company; that is, the two are the same

b) if market is not efficient stock value and company value are not necessarily equal.

c) the important point is that stock value and company value are not necessarily equal. based on this logic,

good company is not necessarily a good stock. over time, you would expect that the two are equal, which is another way of saying that the market eventually corrects itself (assuming that it is not correctly priced to begin with)

4. the alternative to value investing is growth investing. according to this approach, you bet that the stock's price will grow faster than the price of the average stock in the market. historically, the average growth rate of stocks has been around 7 percent. characteristics of growth investing include

(1) high p/e ratios

(2) low dividend yields

(3) high price/book ratios

again, these characteristics are relative to the market. some analysts use industry averages instead of market averages

5. fundamental analysis emphasizes future earning power of the company opposed to historical price movements. analysts evaluate of future earning power by analyzing financial statements for hints of what to expect. the key is expectations; that is, fundamental analysis is the analysis of expected returns relative to required returns. In terms of the CAPM, alpha is defined as the expected return minus the required return. the decision rules are:

a) if alpha exceeds zero (expected return greater than required return), buy the stock

b) if alpha is less than zero (expected return less than required return), avoid or sell the stock

c) if alpha equals zero (expected return equals required return), hold the stock

B. modern portfolio theory--according to the CAPM, the required return is calculated as:

k = Rf + beta (Rm - Rf)

1. k increases as beta increases, and vice versa (holding all other variables constant). beta is a statistical measure of relative risk. it comes from measuring the returns of a particular stock relative to the returns of the market.

   a) if beta exceeds 1.0, the stock is more risky than the market (aggressive)

   b) if beta is less than 1.0, the stock is less risky than the market (defensive)

   c) if beta equals 1.0, the stock is equally risky as the market (neutral)

2. judging from historical data provided by Ibbotson Associates, the average stock in the market (beta equals 1.0) generated a return (Rm) of 10.4 percent. Ibbotson defines the market as the S&P 500 stock composite index. you could define the market differently as, perhaps, the Dow Jones Industrial Average or some other index

3. the historical risk-free (Rf) rate was 3.7 percent. the market risk premium (Rm - Rf), then, equaled 6.7 percent. if these data continue in the future, you would expect the risk premium to equal approximately 7 percent. the assumption is that the market will continue working in the future as it did in the past. because the U.S. is a capitalistic economy, you are making an implicit bet that the economy will stay capitalistic and the reward for taking risk will be the same.

4. from Table 2, inflation is expected to equal 2.0 percent

   a) generally speaking, as inflation increases, t-bills tend also to increase, and vice versa.

   b) higher inflation tends to increase the required rate of return investors demand that, in turn, tends to decrease stock prices (alpha declines, holding all else constant).

c) over time, you would expect the stock market to adjust to inflation and provide a premium for taking the risk associated with inflation

d) this type of analysis, which is based on the CAPM, is referred to as modern portfolio theory or quantitative analysis.

C. growth analysis--another approach to equity investment management

1. sustainable growth is the maximum rate a firm's sales can grow without depleting its financial resources or altering it's capital structure (the division between debt and equity).

2. increased sales requires more assets, and more assets requires more financing. think of a firm's asset side of its balance sheet as where money is spent and the liability and owner's equity side of its balance sheet as where money comes from.

example

a firm wishes to determine how much it can grow sales next year without altering its capital structure, its existing dividend policy, or by selling new equity. assuming that $1 of new assets supports $2 of new sales (asset turnover ratio equals 2.0); the net profit margin (net income/sales) equals 5 percent; the retention rate equals 60 percent (40 percent is paid out to stockholders as dividends); and the optimal ratio of total assets (ta) to equity (e) equals 3.5; that is, ta = 3.5 and e = 1.0.

you can mathematically manipulate the ta/e ratio to equal a debt/equity (d/e) ratio. if ta equals 3.5 on the left hand side (lhs) of the balance sheet and debt plus equity on the right hand side (rhs) of the balance sheet equals ta because the balance sheet must balance, then debt must equal 2.5 because we know that equity equals 1.

given our assumptions, the firm's percentage increase in the right hand side (rhs) of its balance sheet equals

increase rhs = increase in equity + increase in debt
= (.05 x .6) + 2.5(.05 x .6)
= .105

because the balance sheet must balance, assets (lhs) must increase by the same amount. since the ratio of sales to assets is 2:1, a 10.5% increase in assets will support a 21% increase in sales. this is the firm's sustainable growth.

3. the sustainable growth (g*) equation can be written as.

= [(net income / sales) x (sales / assets) x (assets / eqty)] x rr

= [profit margin x asset turnover x financial leverage]x retention rate

= (p x a x t) x rr

a) since return on equity (roe) equals net income/equity (the product of the 3 components in brackets], another form of the equation is:

g* = roe x rr

b) the important conclusion is that if actual sales increase by other than the sustainable growth rate, then one of these four ratios [p,a,t, or rr] must also change.

c) too much growth--what happens if the actual growth rate (g) exceeds sustainable growth rate (g*)? from the above equation, for g* to increase one of the four ratios must increase. possible ways a firm can increase sustainable growth include:

(1) increasing leverage (t) can help finance the growth, but this cannot last forever. at some point, lenders will stop lending additional funds.

(2) increasing the rate of retention can help finance growth but retaining income is limited to 100% of the income. moreover, stockholders may not be willing to forgo current dividends in pursuit of a higher growth policy.

(3) improving operating efficiency through better utilization of both its human and non-human assets (increasing asset turnover ratio)

(4) paring costs (increasing the net profit margin)

if actual growth continually exceeds sustainable growth, one or more of the above actions must take place. oftentimes, a firm will increase leverage (t)--but this could put the firm in a more risky capital structure than it wants.

d) if a firm's actual growth exceeds sustainable growth, the firm may sell new equity to finance the growth. the problem is that new equity issues may not be a viable alternative because:

(1) the company is too small

(2) new issues are expensive

(3) immediate dilution of earnings per share

(4) the stock is undervalued

(5) management may believe that the stock market is an unreliable source of capital due to its volatility

e) other actions the firm may take if actual growth exceeds sustainable growth are:

(1) pruning its marginal businesses--pruning may be effective by allowing money to be plowed back into remaining businesses

(2) increasing prices--when sales growth is too high relative to a company's financing capabilities, it may be necessary to raise prices to reduce the growth

(3) merging--a drastic solution, merging offers has two possibilities

(4) finding a cash rich partner looking for profitable investments for its excess cash

(5) finding a conservatively financed company that would bring liquidity and borrowing capacity to the marriage

f) too little growth--the question is what to do with the excess cash. the first step is to decide whether the slow growth is temporary or long-term. if it is temporary, the firm can wait it out. if long-term, it can:

(1) ignore the problem and let excess cash accumulate--the problem is that this action may attract a raider

(2) return money to shareholders--the problem with this action is that the tax code encourages earnings retention by fully taxing dividends at the corporate and again at the personal level. besides, paying dividends reduces the size of management's empire

(3) buy growth--diversify into profitable existing firms. the problem with this action is that the buying firm often overpays for the target's stock price. under these conditions, it would be better to return the money to the stockholders.

4. ear ings growth--stock prices respond to earnings growth in one of two way

a) anticipated--if the market correctly anticipates earnings growth, investors will discount that growth into the current price of a stock. in other words, if the market is efficient, meaning that the information about earnings prospects flows throughout the market instantaneously and investors correctly process the information, discounting will occur, likewise, instantaneously.

b) unanticipated--if the market does not correctly anticipate earnings growth, meaning that actual earnings growth differs from what the market anticipated, then stock prices will experience surprises and adjust to the information as it comes to the market

(1) if information does not flow instantaneously (meaning the market is not perfectly efficient), then some investors receive important information before other investors and the first group to receive the information has the opportunity of use the information to their advantage in achieving above average, risk-adjusted rates of return

(2) another possibility is that the flow of information to all investors is instantaneous, but not all investors process the information the same way. those investors who process the information more quickly and accurately gain an advantage over the other investors. the point is that market efficiency plays an important role in driving stock prices.

c) several academic studies suggest that the market is highly efficient, but not perfectly efficient

(1) one study suggests that the market does not instantaneously discount quarterly earnings announcements into stock prices. if the market takes several days to adjust stock prices to

surprise earnings announcements, then quick-thinking, quick acting investors can achieve abnormally high risk-adjusted rates of return. in other words, beat the market

(2) although most professionals on Wall Street believe beating the market is possible, most would also say that it is very difficult to accomplish

(3) most academics do not believe that beating the market is possible.

III. Fixed Income Investment Management Approaches

A. duration--the weighted average term-to-maturity of the security's cash flow when the weights are the relative present value of cash flows.

1. for coupon bond, duration is less than maturity
2. for zero coupon bond, duration = maturity
3. important relationships are:
    a) duration and maturity => positively related
    b) duration and coupon => inversely related
    c) duration and yield => inversely related
4. duration and volatility;

% change price = - modified duration x yield change x 100

modified duration = duration/[(1 + yield/k)]

where k = number of compounding periods per year

example

duration = 10.87

yield to maturity (ytm)

semiannual compounding

modified duration = 10.87/1.045 = 10.40

if yields change from 9% to 9.1% (1 basis point)
% change in price = -10.40 x (+.0010) x 100 = -1.04%

this means that a 1 basis point increase in interest rates results in the price of the bond declining by 1.04%

5. duration is a good approximation for small changes in interest rates, but not large changes

B. interest rate forecasts--active management

1. you can use duration as a tool for actively managing fixed income securities based on forecasting interest rates

2. if you expect interest rates to increase, shorten duration

3. if you expect interest rates to decline, lengthen duration

4. this strategy involves moving back and forth along the yield curve

a) you would place bigger bets on this strategy as your confidence increases in your ability to forecast interest rates. if, for example, you were totally confident that interest rates will increase, you would shift out of long-duration bonds into short-duration t-bills

b) you would place smaller bets on this strategy as your confidence decreases in your ability to forecast interest rates

C. laddering

1. as your confidence declines in your ability to forecast interest rates, you would shift less funds. if you have no confidence in forecasting interest rates, you would ladder durations in such a way that you would be continually reinvesting funds as the securities mature

2. using laddering, you would not be betting on either short-term interest rates or long-term rates. you would have some of both including intermediate-term securities

example

if you initially ladder durations using zeros in one-year increments going out 10 years, one year later you would have to reinvest proceeds from the first duration security into a new 10-year duration security

if interest rates rise, you would be able to reinvest the short-duration securities into successively higher yielding securities

if interest rates decline, you would receive the benefits of capital appreciation from the long-duration securities.

D. actuarial assumptions--required for defined benefit plans (employer bears risk), but not defined contribution plans (employee bears risk)

1. defined benefit plan--a plan in which the retirement benefits are predefined

a) under this type of plan, the employer can either set money aside today to meet the future liability, or fund it on a "pay-as-you basis."

b) most employers today set money aside today based on projections as to how much they will need in the future.

c) defined contribution plans do not require the employer to set any money aside today because the

benefits depends on the rate of return on investments in the plan.

2. determining the value of pension assets is relatively straightforward. the asset value is found by observing the market value of the securities in the pension fund. determining the value of future liabilities is much more difficult and may be found by two different methods:

a) the present value of expected benefits for past service = the present value of accrued benefits.

b) the present value of expected benefits for past and future expected service = the present value of accrued benefits and expected future accrued benefits.

3. a typical defined benefit formula is where the participant receives 2% of average salary (during the last 5 years) multiplied by the years of service. after 25 years, upon retirement, the participant would be entitled to receive a benefit of 50% of average final salary

a) because the benefits are tied to average final salary, the benefits are partially adjusted for inflation

b) benefits are not wholly adjusted for inflation because payments usually stay constant after retirement.

4. actuarial rate of return--the return requirement for pension plans defined as the discount rate that equates the plan's future liabilities with the assets necessary to make the required payments to beneficiaries upon their retirement

a) the liability side of this equation includes not only known benefits payable to each retiree but must also take into account projected:

(1) wage increase assumptions

(2) the life expectancy of the employee upon retirement

(3) the rate of return likely to be earned on contributions set aside for each employee during his working years

(4) the asset side of the equation comes from contributions made by the plan's sponsor.

b) to the extent that a plan earns above its actuarial return rate, and all other actuarial assumptions are accurate, the plan sponsor can:

(1) reduce contributions to the plan to the benefit of shareholders

(2) increase the benefits of employees

(3) some combination of the two

c) be careful not to over simplify the actuarial rate of return as the required return for a pension plan. the actuarial rate depends on several assumptions, one of which is the rate of return on investments.

CLIENT OBJECTIVES & CONSTRAINTS

I. The Individual Investor

A. Individuals Contrasted with Institutions

1. individuals are more qualitative--more emotional with their own money

2. institutions are more quantitative--less emotional with other people's money (via committee)

B. What is Risk?

1. chance of losing Money

2. chance of gaining

3. impact of knowledge

a) lack of knowledge makes investment decision more difficult--investor must depend on knowledge of others

b) more knowledge makes decision less difficult--investor may still depend on knowledge of others but be more comfortable with decision

c) investment professional has incentive to educate clients in order to make his/her job easier, especially when appraising performance

4. attitudes toward risk impacted by recent experiences, which could work against long-term interests of investor

a) good experience encourages risk taking--good stock returns last year not a sufficient reason for investing in the stock market

b) bad experience discourages risk taking--bad stock returns last year not a sufficient reason for not investing in the stock market

(1) investment professional has responsibility of helping investor consider time horizon

(a) longer term goals imply greater ability to take risk--more growth oriented investments such as common stocks

(b) shorter term goals imply less ability to take risk--more liquid oriented investments such as Treasury bills

(2) investment professional has responsibility of helping individual identify investment goals, which defines time horizon and impacts level of risk tolerance

5. Contrary Investing--buying when market is down and selling when market is up. contrary investing implies degree of market timing

6. dollar-cost-averaging--systematic investing at predetermined times over long periods of time in order to mitigate market timing effect

a) requires discipline to stick to strategy

b) requires selection of when to implement buy decisions (going in) or sell decisions (coming out)--i.e., every week? every month?

c) requires selection of overall period of time (i.e., over 1 year? over 5 years?

(1) theoretically, dollar-cost-averaging requires implementation over market cycle, but no one knows when the cycle begins and ends beforehand

(2) practically, dollar-cost-averaging works best for young investors who have payroll deductions--the younger, the better this strategy works

7. Risk--before the fact or after the fact?

a) risk is an ex ante concept (before the fact) based on expectations

b) there is no guarantee that taking higher risk will result in higher returns

(1) actual results depend on length of time investment is held

(2) rationally, higher risk should generate higher returns especially in a diversified portfolio, but this is not always the case

c) ex post (after the fact) risk may provide a guide to expectations

C. Individual Investor psychology

1. passive--investor who wants to protect what he/she has already accumulated

a) achieved wealth from inheritance or prior work years

b) expected return low--requirement to maintain after-tax purchasing power by taking lower risk

c) passive investors may be too busy in their jobs to learn how to invest

d) passive investors tend to trust professionals to invest their money for them

e) passive investors tend to diversify

2. active investors--investor who wants to accumulate more assets from investing aggressively

a) wages generate excess cash flow for investing

b) expected return high--requirement to grow corpus by taking higher risk

c) active investors make time to learn how to invest, but still need guidance

d) active investors tend to become more personally involved in investment decisions

e) active investors tend to be less diversified

D. life cycle approach to risk--generally, younger investors more able to take greater risk than older investors

E. Investment Constraints

1. Liquidity--the ability to convert investment into cash at a known price

a) differs from marketability, which means the ability to buy or sell easily

(1) a share of common stock may be marketable, but not liquid

(2) if an investment is liquid, it is also marketable

b) emergency needs--usually estimated at 2 to 3 months' income to cover items such as property deductibles, waiting period until disability insurance begins, or periods of unemployment

c) estate taxes--liquidity may be needed to cover estate taxes in order to prevent the family of decedent from having to sell family assets

d) health insurance--an uninsured person needs more liquidity to cover illnesses or accidents than a person who has insurance

2. legal and regulatory

a) Personal Trust Considerations for investing assets

(1) portfolio perspective--considers risk by evaluating interaction of all assets in the portfolio

(2) individual investment perspective--focuses on risk of individual investment and ignores interaction of all assets in portfolio

(3) Prudent Man Rule--evolving into Prudent Investor Rule that gives more latitude for exercise of judgment by the trustee than had been permitted by Prudent Man Rule

b) Income Beneficiaries (income for life) vs. Remaindermen (person who receives residual estate when the life income beneficiary dies)

(1) trustee has conflict between interest of each

(a) income (yield) for the income beneficiary

(b) growth (capital gain) for the remainderman

(2) conflict usually settled in favor of income beneficiary, depending on income needs of beneficiary

3. tax considerations

a) tax exempt investments (municipal bonds) may be appealing depending on

(1) spread between yields of muni and taxable security

(2) liquidity of muni relative to liquidity of taxable security

(3) quality rating of each

(4) call provisions of each

b) capital gains tax incurred only at time of sale

(1) high tax bracket investors gain from growth investments opposed to income (high yielding)

investments due to deferral of taxes, assuming no need for income

(2) low tax bracket investors may need income yielding investments, but ignoring growth can be a serious mistake over time due to inflation

c) IRA's and 401 (k) plans--require investor to not withdraw money prior to age 59 1/2 but begin withdrawing by age 70 1/2

d) IRS treats multiple trusts as one for federal income tax purposes

e) for minors under age 14, unearned income of more than $1,000 on transferred assets is taxed at the parents' marginal tax bracket. investor may want to invest in tax-deferred assets for children under age 14

f) for zero-coupon bonds, the IRS imputes a tax even though you do not actually receive cash until maturity

g) series EE United states savings bonds--you do not pay taxes on these investments until they mature (good for deferring taxes for the child under 14)

(1) face value equals twice the amount of purchase price

(2) come in denominations ranging from $25 to $5,000

(3) cap of $15,000 investment per person--if you have 3 children, you may purchase $45,000 worth of bonds

(4) the actual interest rate varies up, but not below the guaranteed minimum

h) annuitiessimilar to IRAs in that they defer taxes on earnings, but they differ from IRAs because:

(1) not limited to $2,000 per year

(2) contributions not tax deductible

(3) contain some life insurance coverage

4. time horizon

a) young investors

(1) tend to want to accumulate

(2) willing to take more risk because they have longer time horizons

(3) often constrained by immediate spending needs for supporting family and increasing life style

b) middle-aged investors

(1) increase savings from excess income as children leave home and life style is more stable

(2) willing to take moderate to high risk in planning for retirement, which may still be 20 years away

(3) may be constrained by expense of children's college tuitions

c) senior investors

(1) spending money accumulated during working years for enjoyment during retirement

(2) willing to take less risk for the purpose of protecting accumulated assets

(3) investment time horizon may be

(a) short term to intermediate term lasting for the duration of their lives

(i) investment objectives include income and liquidity

(ii) time horizon based on mortality projections

(b) long term extending beyond their own life times

(i) investment objectives include some liquidity and income for supporting own life style

(ii) time horizon based on time horizons of future generations or philanthropic cause

5. unique needs

a) political sentiment--investor may not want to invest in certain countries such as South Africa where he/she does not agree with the policies of the current government

b) social sentiment--investor may have desire to pursue certain social issues such as investing in drug companies researching for a cure to AIDS

c) environmental sentiment--investor may wish to invest in companies that do not pollute the environment

d) family needs--investor may have children outside the United States that he/she wishes to provide financial support for by investing in the securities of the country where the child is located

e) corporate investors need to consider the business environment when contributing to a defined benefit plan because every dollar invested into the pension plan means one less dollar available for business expansion. pension plan investment policies of growth companies may be more aggressive in an attempt to reduce corporate contributions to the plan

II. institutional investors

A. Employee Benefit Funds

1. Defined Benefit Pension Plans

a) annual benefits (divide by 12 to get monthly benefits) driven by formula such as

(1) of average salary over the prior 3 years

(2) number of years of service times average salary over prior 5 years times a factor

b) because benefits represent an employer's future liability, the employer has two basic choices for funding the pending liability

(1) set money aside today--based on actuarial assumptions concerning

(a) rate of inflation

(b) death rate

(c) retirement age

(d) vesting provisions

(e) rate of return on investments

(2) pay-as-you-go

c) under Employee Retirement Income Security Act (ERISA), employers have responsibility of investing "solely in the interest of plan participants"

d) employer bears investment risk

(1) employer has incentive to take high investment risk in order to reduce contributions that, in turn, make more money available for growth of business

(2) employer may take a "contribution holiday" if investment results exceed actuarial expectations

(3) Pension Benefit Guarantee Corporation (PBBC) acts as guarantor for employees in case employer goes bankrupt

e) employee may bear inflation risk due to employer not providing inflation protection of benefits--some employers do provide inflation protection

f) some defined benefit plans are contributory meaning both employer and employee contribute equal percentages of pay

2. The Degree of Main Business and Pension Plan Integration

a) if plan asset growth exceeds liability growth, the plan sponsor may eventually reduce required contributions which means corporate earnings eventually increase. the plan sponsor may also

(1) increase retirement benefits

(2) use excess to reduce amortization period of unfunded past service liabilities generated from

(a) benefits promised for prior service

(b) increased benefits to current employees

b) if plan liabilities exceed asset growth, the plan sponsor must eventually increase required contributions which means corporate earnings eventually will decrease

3. Defined Contribution Plans

a) employer makes contributions into plan as a percentage of current pay or profits

b) retirement benefits depend on investment results over accumulation period

c) employee bears risk

d) employee buys annuity at time of retirement

e) either employer or employee may direct investments

(1) employer is responsible for providing range of investment selections which usually includes

(a) stock fund

(b) bond fund

(c) money market fund

(2) employer is responsible for providing employees with information necessary to make informed decision

f) two popular types of defined contribution plans are

(1) profit sharing plans

(a) employer may contribute to plan even if no profits are available

(b) many plans allow distribution prior to termination of employment for hardship purposes

(c) employer may deduct each your no more than 15 percent of the total compensation paid to all employees covered by the plan

(d) employer contribution limit for one employee to all defined contribution plans is the lesser of $30,000 or 25 percent of the employee's annual compensation

(e) employer may base contributions on a formula that takes into consideration a variety of factors such as annual earnings

(2) money purchase plans

(a) usually distribute benefits only to an employee who has left the company or retired

(b) employer must make contributions to plan each year even if the company posted no profits

(c) contributions based on a percentage of compensation of all participating employees

(d) maximum deductible contribution that an employer may make is 25 percent of the compensation of employees participating in all the company's defined contribution plans

g) other types of defined contribution plans include

(1) employee thrift

(2) savings plans

(3) both plans allow employees to make contributions that are matched by the employer's contributions

4. another type of employee benefit is health care

a) promised benefits represent future liability of employer

b) current question is how these future liabilities should be funded

(1) prefunded

(2) pay-as-you-go

5. the trend in the United States is toward defined contribution plans and away from defined benefit plans

a) employers want less liability

b) employees demanding more control of retirement assets

B. Endowment Funds

1. Return Requirements--endowment funds often must deal with the conflict (creative tension) between

a) income (or yield) for current consumption--for example, hospitals and universities constantly demand upgrading of facilities with funds coming from endowment

b) growth for future consumption

2. Spending rule

a) the purpose of a spending rule is to maintain constant purchasing power over time

b) a spending ruled allows for current consumption (income generated from T-bills and bonds) but also provides for sufficient growth (expected capital gains from stocks) to offset inflation

3. risk tolerance--depends on the relative importance of the endowment fund in the sponsoring institution's overall financial picture

a) if current operating budget is insufficient to cover needs of organization (i.e., hospital), the endowment fund may have to cover the shortfall, which implies a short-term need for:

(1) liquidity (T-bills)

(2) income (bonds)

b) if the current operating budget is sufficient to cover needs of organization, the endowment fund may take a longer-term view for growth via equities

c) Tax Considerations--endowments are tax exempt meaning tax favored investments such as municipal bonds are not needed

d) Regulatory and Legal Considerations--endowments have little federal regulation, but must adhere to state laws concerning management and administration of funds

e) Unique Needs

(1) one unique need may be to use local financial institutions as much as possible due to the endowment's solicitation of local support

(2) financially unsophisticated people may be members of the endowment committee

III. guidelines for constructing efficient portfolios

1. determine Investment objectives:

a. Capital Accumulation (Growth) => Equities

b. Capital Consumption (Income) => Bonds

c. Capital Preservation (Liquidity) => T-bills

Retirement and college education are 2 frequent objectives for individual investors. Funding a future liability (retirement benefits) is the objective of institutional investors

2. determine Risk relative to time horizon (usually the most important factor impacting risk)

a. if Long-term => Tilt portfolio toward equities for growth

b. if Intermediate-term => Tilt portfolio toward bonds for income

c. if Short-term => Tilt portfolio toward T-bills for capital preservation or to deal with uncertainty

3. systematically formulate an Asset allocation policy

a. 1st priority--Liquidity: Immediate needs (i.e., emergency needs, insurance, taxes, age of work force) drive allocation toward T-bills

b. 2nd priority--Income: Size of portfolio impacts income potential of portfolio and drives allocation to bonds

c. 3rd priority--Growth: Time horizon (often a function of age but not always) drives allocation toward equities; the major consideration is inflation

d. Diversification both across multiple asset classes and within any particular asset class is a primary consideration.

4. identify regulation and legal restrictions

a. Institutions--ERISA

b. Individuals--prudence

5. monitor Changes in investor situation in order to reevaluate asset allocation

a. individual investor factors

1. death of dependent

2. change of employment

3. birth of child or grandchild

4. financial independence of children

5. change of health

6. changes in wealth

7. changes in tax status

8. the wrong way to revise a portfolio is emotionally

1. stick to the written investment policy statement--stay disciplined

2. do not get caught up in current investment fads or market trends

3. market timing is very difficult to achieve--know the risks involved in such a strategy

4. objectively evaluate the portfolio at least quarterly according to the client's investment objectives

b. institutional investor factors

1. change of regulations

2. change in age of workforce

3. increase in retirement benefits

4. change in business climate

c. monitor changes in capital market expectations

6. Asset allocation should begin with T-bills, bonds and stocks--in that order to coincide with above priorities

I. Additional asset classes should be considered for diversification purposes usually in the order of

A. real estate (a real asset)

B. internationals (a financial asset)

C. gold (a real asset)

D. key considerations include:

1. correlation of proposed asset class with existing asset classes in portfolio

2. exposure of portfolio to the threat of inflation

exposure of portfolio to the threat of inflation

4. Economic forecasts drive risk/return tradeoff of all asset classes--be sure to have a good working knowledge of historical returns for multiple asset classes (Ibbotson data is a good source) to use as initial indication of expectations.

5. Recognize and be able to work with the Fisher equation:

k = Rf + risk premium
= Real Rate + inflation premium + risk premium

This equation is very helpful in seeing the logic of economic forecasts

6. Understand the difference between yield and total return

7. Taxes affect choice of type of bonds although it is not a foregone conclusion that a high-bracket taxpayer should always select municipal bonds. The spread between tax exempts and taxables is the determining factor. Everything else the same, it may be better to invest in taxables and pay the taxes depending on this spread.

8. evaluate portfolio performance and report results to client at least quarterly

9. realign asset class weights according to asset allocation in policy statement--recognize that mix of asset classes drifts over time

PERFORMANCE MEASUREMENT

I. Investment objectives--Without well defined investment objectives, investors and plan sponsors do not know what to expect from a particular money manager, mutual fund, or commingled fund.

A. allows the investor or plan sponsor to evaluate investment performance relative to stated objectives

B. a money manager's investment objectives may be broadly classified as either equity or fixed income

1. equity

a) aggressive growth--manager seeks rapid growth of capital by employing above average risk

b) equity income--seeks current income by investing in higher yielding equities

c) growth--invests in equity securities expected to grow faster than average (historically, about 7-8 percent)

d) growth and income--approximately equal objectives of income and growth

e) specialty--seeks capital appreciation by investing in equities of specific sectors such as health or natural resources

f) small company--seeks capital appreciation by investing in small-cap stocks generally defined as total market capitalization (price per share x number of shares outstanding) of less than $300 million

g) world stock--invests in equity securities of firms located anywhere throughout the world

h) foreign stock--invests in equity securities of firms located outside the United States

2. fixed income

a) corporate bond general--invests in corporate bonds of various quality ratings

b) corporate bond high-quality--invests in fixed-income securities rated A or better

c) government bond adjustable rate mortgage--invests in adjustable-rate mortgage-related securities usually backed by the U.S. government

d) government bond general--invests in a blend of fixed income securities

e) government bond mortgage-backed--generally invests in GNMA securities

f) government bond treasury--invests in U.S. Treasury securities

g) world bond--invests in bonds issued by foreign governments that are non-dollar denominated

h) short-term world income--invests in non-dollar denominated bonds with maturities less than 3 years

i) municipal bond--invests in tax-free bonds issued by a state or municipality

3. a third possible objective is asset allocation where the manager reallocates money across several asset classes in an attempt to capture turning points of the market

4. within each investment objective, a manager may employ one of several different styles according to size of company in which the manager invests or method of selecting securities

a) equity objective

(1) large cap

(2) medium cap

(3) small cap

(4) for each of the above sizes, the manager may be

(a) value oriented--characterized by

(i) low pe ratios

(ii) low price to book ratios

(iii) high dividend yields

(b) blend of value and growth

(c) growth oriented--characterized by

(i) high pe ratios

(ii) high price to book ratios

(iii) low dividend yields

(d) you should be careful in strictly applying these definitions as some managers do not fit these definitions

b) fixed income objective

(1) short--term--

(2) intermediate--term

(3) long-term

(4) for each of the above maturities, the manager may invest in

(a) high quality securities

(b) medium quality securities

(c) low quality securities

II. Benchmarks--investment objectives are crucial when selecting the appropriate benchmark against which to gauge performance

A. money managers provide a statement of their investment objectives in their marketing literature--some more specific than others

B. you should state investment objectives in a written policy statement based on personal interviews and a questionnaire

C. the way in which a manager's portfolio deviates from the benchmark portfolio (i.e., S&P 500) represents the manager's active bets. from this information, you can evaluate

1. the manager's style where he/she attempts to add value to the passive investment results of the benchmark

2. level of portfolio diversification

3. whether manager follows a buy-and-hold strategy or attempts market timing

D. A correct benchmark possesses several important traits:

1. unambiguous

2. investable

3. measurable

4. appropriate

5. reflective of current investment opinions

6. specified in advance

7. A commonly used benchmark, performance of the median manager from a broad universe of managers, fails to meet all traits except #3. using the median manager also incurs the problem of survivor Bias

a) Survivor bias results from the tendency of poorly performing managers to drop out of manager universes, biasing the performance of these universes upward.

b) Moreover, this bias increases with time since better performing managers tend to stay in the universe longer.

E. a correct benchmark allows the plan sponsor to design a management team consistent with the plan's investment objectives.

F. Building a benchmark could come from three sources:

1. plan sponsor
2. a consultant
3. the manager
4. The manager is in the best position to do this.

G. Constructing the "right" benchmark requires:

1. identifying prominent aspects of the manager
2. selecting the appropriate universe of securities
3. devising a weighting scheme, including cash
4. reviewing and modifying the benchmark
5. rebalancing the benchmark periodically

H. Constructing the right benchmark can involve considerable resources

1. database
2. computer
3. flexible weighting system
4. a means of maintaining the integrity of the benchmark over time.

III. Risk-adjusted returns--Once you have constructed the correct benchmark, you can evaluate the money manager's performance on a risk-adjusted basis using one of several measures that employ the CAPM:

A. Sharpe's measure:

S = (average portfolio return - average risk-free rate) / standard deviation of portfolio returns

1. the Sharpe measure is a reward to total variability (total risk) measure.

2. it is the most widely used risk-adjusted measure of performance

B. Treynor's measure:

T = (average portfolio return - average risk-free rate) / portfolio beta

1. the Treynor measure is a reward to volatility (systematic risk) measure

2. it assumes the portfolio is well diversified meaning that it has no unsystematic risk

C. Jensen's measure:

alpha = average portfolio return - {average risk-free + [beta x (average market return - average risk-free return)]}

1. the Jensen measure is the excess return above that predicted by the CAPM

2. like the T measure, it assumes the portfolio is well diversified

D. Use Sharpe's Measure as the Criterion for Overall Portfolios, but not always. For example

1. Case I:

a) If performance is being measured for the entire portfolio and not just some component of the whole, S is appropriate

b) Be sure to select the appropriate benchmark that reflects the style of the manager (i.e., growth, balanced, income, etc.)

c) Compare S to alternative S's

2. Case II:

a) If several active managers are being evaluated as managing subportfolios of a large, well-diversified portfolio, T is appropriate for each manager since T shows the contribution of the manager, in excess return/systematic risk terms, to total performance

b) Compare T to alternative T's

E. Note that you cannot evaluate absolute values of T and S. You must have a standard for comparison (i.e., the T or S measure for the benchmark)

IV. Problems with performance measurement:

A. Using ex post data to make an ex ante decision. using ex post data requires the implicit assumption that future performance will be like that of the past.

B. Statistical significance either in favor of or unfavorable to superior performance requires very long periods of time. For example, it would take over 30 years to show, via statistical significance, whether a manager with a positive alpha for 12 months were actually a superior manager

C. All 3 measures assume constant return distributions meaning that beta and standard deviations are stable through time. This is quite unrealistic since most managers periodically change their portfolio compositions.

V. Evaluating Market Timing--equity market timers periodically adjust their portfolio betas depending on how they perceive market potential

A. In bull markets, timers increase their portfolio beta by decreasing cash

B. in bear markets, they decrease beta by increasing cash

C. This effort to time the market (referred to as tactical asset allocation) makes alpha and beta inappropriate as measures of performance due to constant changes

D. a better approach is to calculate S and compare it to S for the benchmark

E. most empirical studies show little evidence of timing ability

VI. Performance Attribution Procedures--Performance attribution is a procedure for partitioning the excess return attributable to an active management style into three parts:

A. Asset allocation decision

B. Sector allocation decision

C. Security selection decision

D. these three decisions follow a top-down sequence. The returns attributable to each decision of an active manager are compared to the returns of a passive manager.

1. the contribution of the asset allocation decision is the excess return of an actively managed portfolio over a passively managed portfolio. the contribution is generated by overweighing or under weighting any particular asset class (i.e., stocks, bonds, or cash) within the total portfolio relative to predetermined weights of a passive benchmark portfolio (e.g., 60/30/10)

2. the contribution of the sector allocation decision is the excess return generated by overweighing or under weighting any sector (e.g., technology, consumer cyclicals) within a particular asset class (e.g., S&P 500 stock index)

3. the contribution of the security selection decision is the excess return generated by overweighing or under weighting any security (e.g., IBM, DEC) within a particular sector

the table below presents annualized returns for two managers over a four-year period. Manager A appears superior

	Annualized Return
Manager A	38%
Manager B	18%
S&P 500	17%
Treasury-bills	11%

Manager A has a higher Sharpe measure than Manager B. again, Manager A appears superior

Attribution analysis shows the following

	Manager A	Manager B
asset allocation	2%	1%
sector allocation	8%	3%
security selection	11%	3%
performance increment	21%	7%

again, Manager A appears superior in every category

problems with the analysis

these three traditional performance evaluation approaches fail to take into account each manager's respective benchmark

the Table below does this and shows that manager A actually underperformed his/her benchmark while manager B outperformed his/her benchmark. A's style is aggressive growth with small caps and B's is growth and income with large caps

	Annual Return
Manager A	38%
Benchmark A (Wilshire 5000)	42%
Value of Active Management	-4%

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Manager B	18%
Benchmark B (S&P 500)	17%
Value of Active Management	1%

The point of this case study is to emphasize that performance evaluation must consider the appropriate benchmarks or else the plan sponsor can be fooled.

Conclusions--The development of appropriate benchmarks has several beneficial effects:

manager performance will be compared to realistic expectations

plan sponsors will gain greater insights into the investment process

skillful managers will be better able to demonstrate their talents

Benchmark portfolios are essential investment tools for the plan sponsor concerned with passing the value of active management down to the plan's bottom line.

Compare performance of "like" managers; this usually consists of giving each portfolio manager a percentile ranking depending on relative performance within a comparison universe of managers with similar objectives.

Risk-adjusted returns

Use time-weighted returns

Select a long enough time period (preferably a market cycle)

Measuring Investment Returns

Total Return = (Income (dividend or coupon) + Capital Gain) divided by Initial Investment

Time-Weighted Returns vs. Dollar-Weighted Returns

Dollar-weighted return

depends on the beginning and ending market values of the portfolio and the timing of the net contributions to the portfolio.

employs an internal rate of return (IRR) methodology that weights the final overall return figure by the investment in the portfolio in each subperiod. As a result, different dollar size and growth of the portfolio has a strong influence on the final return figure.

the IRR method does provide the most accurate rate earned on the funds invested, which is important when making comparisons to a minimum acceptable return such as a pension fund's actuarially assumed rate of return. But it is not satisfactory for comparing the performance of two investment managers.

time-weighted returns, which are unaffected by portfolio contributions and withdrawals during the evaluation period, accurately compare performance of managers. A time-weighted return is simply the compound average of the subperiods where no contributions or withdrawals are assumed made.

Portfolio A

period	contributions	market value	rate of return
0		1000.00	
1	100	1415.00	30%
2	100	1661.50	10%
3	100	1419.20	-20%
4	100	1666.12	10%

at the end of period 1, the portfolio generated a 30% rate of return calculated according to this formula:

time-weighted rate of return = {[end value - .5(contribution)]/[begin value + .5(contribution)]} - 1

= [1415 - .5(100) / 1000 + .5(100)] - 1

at the end of period 1, the portfolio generated a 30% rate of return calculated according to this formula:

time-weighted rate of return = {[end value - .5(contribution)]/[begin value + .5(contribution)]} - 1

= [1415 - .5(100) / 1000 + .5(100)] - 1

= .30

the assumption is that the 100 contribution occurred in the middle of the period

compounding the 4 time-weighted rates of return provides an annual compounded rate of return of 5.9% according to the formula:

compound annual rate of return = {[(1+.3)(1+.1)(1-.2)(1+.1)]^(1/4)} - 1

in this case, you would take the 4th root of the product because you are looking for the annual rate of return over a 4 year holding period. note that if you were using semiannual compounding, you would have 6-month holding period rates of return compounded over 8 periods.

the internal (dollar-weighted) rate of return is different from the time-weighted rate of return and is equal to the annual compound rate of return that equates the present value of all cash outflows to the future value of all cash inflows. in this case, the dollar-weighted rate of return equals 5.16% and is calculated according to the formula:

present value of inflows (year 4) = present value of outflows (years 0 - 4)

(present value of 1666.12 to be received 4 years from now) = (present value of 1000 in year 0 + present value of 100 in year 1 + present value of 100 in year 2 + present value of 100 in year 3 + present value of 100 in year 4)

in order to take any present value, you need a discount rate. in this instance, the discount rate is referred to as the internal or dollar-weighted rate of return

the dollar-weighted rate of return for 2 different investments will differ if the amounts of the initial investment differ even though each of the periodic time-weighted rates of return are the same. for example:

Portfolio B

period	contributions	market value	rate of return
0		100.00	
1	100	245.00	30%
2	100	374.5.50	10%
3	100	389.6.60	-20%
4	100	533.56	10%

in this case, the compound annual rate of return is still 5.9% calculated the same way as we calculated it for portfolio A. for portfolio B, however, the internal rate of return equals 2.72%

note that if you attempt to duplicate these calculations, be sure to consistently assume that the contributions occur in the middle of the period.

IX. AIMR Performance Presentation Standards

A. minimum level of standards--the purpose is to prohibit misleading or false statements with respect to performance claims

1. must use time-weighted returns

2. must use total returns

3. gross performance is preferred, but net-of-fees performance when required by the SEC

a) can use gross results before fees for one-on-one presentations

b) SEC requires net results for public presentations

4. calculate returns at least quarterly--the standards encourage monthly or even daily returns to promote more

accurate return calculations and to avoid the problems with intraperiod cash flows

5. disclose all accounts that are excluded from a specific composites

6. create multiple composites that are meaningfully delineated by similarity by investment objective or risk. for example:

a) taxable vs. non-taxable

b) unrestricted discretion vs. South Africa-free restrictions

c) fully discretionary versus non-discretionary

d) may move an account from one composite to another if the objectives of the account change over time

7. balanced-account composites must include all assets inclusive of cash where manager has discretion over cash

a) the key distinction is whether the manager has discretion over the allocation

b) can combine equity and fixed income in, for example, a 60/40 mix for comparison to an appropriate benchmark such as the mix of S&P 500 and Lehman Government/Corporate Bond Index

c) accurately present performance of components (i.e., stocks, bonds, real estate) of a portfolio as well as the total portfolio

d) show composites that are relevant to the client (i.e., equity client), but not necessary to show equity composite to a fixed income client

8. allocate cash if there are segment composites

a) separating balanced accounts in order to include equity accounts in a single equity composite

b) separating balanced accounts in order to include fixed income accounts in a single fixed income composite

c) in this instance, you must allocate cash to each segment

9. agree upon benchmark in advance and use this benchmark consistently in presenting historical performance

10. presentation of risk measurements such as alpha, beta, and standard deviation for individual account returns within any composite is encouraged

11. other pertinent information for use in performance analysis should be added to composite presentations. for example:

a) average capitalization of stocks held

b) average quality and duration of bond holdings

B. SEC regulates advertising by investment advisors under the antifraud provisions of the Investment Advisors Act, which makes it illegal for an advisor to use any device or scheme to defraud or deceive a current or prospective client. the advertising rule prohibits:

1. use of testimonials

2. claims that a formula or chart alone can be used to determine what to buy or sell

3. "free" offers that are not really free

4. references to selective past recommendations without providing a list of all recommendations during the last year

5. advisors must tell the whole story, not only selected parts of it

6. advisors must keep all their ads and the information that can be used to substantiate their performance claims

C. major no-no's

1. do not present results for only selected time periods

    a) no less than 10 years if possible and up to 20 years if practical

    b) provide results for every single year and cumulatively compared to an appropriate index

2. do not use only selected accounts

    a) all client accounts should be included in one composite

    b) you can have separate composites if justified

    c) you can present individual portfolio results along with a composite

3. do not use unweighted composites

    a) equal weighting typically gives biased results because it gives greater relative weight to the smaller accounts than can experience better performance due to greater marketability and use of new issues

    b) present composite performance dollar-weighted by size

4. use paper portfolio is strictly forbidden

    a) exception is for the new manager who has no historical performance

    b) never link paper portfolios with actual portfolios

5. do not shift individual performance between firms

    a) performance is related to the firm, not individual managers

    b) you cannot change the firm's performance when individual managers leave or join the firm

D. AIMR Standards are performance presentation standards, not performance measurement standards

1. measurement of performance--calculation of individual asset and portfolio returns for a period--is left to the discretion of the individual manager

2. presentation of returns across portfolios and time periods must comply with certain guidelines to meet the AIMR Standards

3. problems in implementing use of time-weighted rates of return:

a) pricing of certain assets such as some fixed-income, international, or illiquid securities where market value may not be available

b) in some cases, fee are not known in advance and must be estimated based on beginning-of-quarter values

c) allocating fees over a portion of an account--could solve by allocating fees according to the assets in each portion of the account

d) availability of data especially with balanced accounts and composites

e) dealing with cash flows in figuring time-weighted returns--a large cash flow could distort return for the period

f) treatment of derivative securities--their treatment depends on whether the transaction is intended as an equity investment or merely a change in the leverage of the equity asset class

g) the allocation of cash to separate segments of a portfolio--the easiest way is to use separate portfolios for equities and fixed income securities

Selected CFA Questions
(past exams)

QUESTION 3 IS COMPOSED OF TWO PARTS, FOR A TOTAL OF 15 MINUTES

3. As a firm operating in a mature industry, Arbot Industries is expected to maintain a constant dividend payout ratio and constant growth rate of earnings for the foreseeable future. Earnings were $4.50 per share in the recently completed fiscal year. The dividend payout ratio has been a constant 55% in recent years and is expected to remain so. Arbot's return on equity (ROE) is expected to remain at 10% in the future, and you require an 11% return on the stock.

   A. Using the constant growth dividend discount model, calculate the current value of Arbot common stock. Show your calculations.

After an aggressive acquisition and marketing program, it now appears that Arbot's earnings per share and ROE will grow rapidly over the next two years. You are aware that the dividend discount model can be useful in estimating the value of common stock even when the assumption of constant growth does not apply.

   B. Calculate the current value of Arbot's common stock using the dividend discount model assuming Arbot's dividend will grow at a 15% rate for the next two years, returning in the third year to the historical growth rate and continuing to grow at the historical rate for the foreseeable future. Show your calculations.

(15 minutes)

QUESTION 3 - MORNING SECTION (I-'91)

(15 points)

(Reading Reference: Bodie, Kane and Marcus, pp. 478-486)

A. Constant growth (single-stage) dividend discount model:

$$VALUE_0 = \frac{D_1}{K - g}$$

D_1 = next year's dividend

K = required rate of return

g = constant growth rate

$D_1 = (EPS_0)(1 + g)(P/o) = (4.50)(1.045)(.55) = \$2.59$

K = given at 11% or .11

$g = (ROE)(1 - P/o) = (.10)(1 - .55) = .045$

$$VALUE_0 = \frac{\$2.59}{.11-.045} = \frac{\$2.59}{.065} = \$39.85$$

B. Multistage Dividend Discount Model (where $g_1 = .15$ and g_2 is .045):

$$VALUE_0 = \frac{D_1}{(1+K)} + \frac{D_2}{(1+K)^2} + \frac{D_3/(K-g_2)}{(1+K)^2}$$

$D_1 = (EPS_0)(1 + g_1)(P/o) = (4.50)(1.15)(.55) = \$2.85$

$D_2 = (D_1)(1 + g_1) = (\$2.85)(1.15) = \$3.27$

K = given at 11% or .11

$g_2 = .045$

$D_3 = (D_2)(1 + g_2) = (\$3.27)(1.045) = \$3.42$

$$VALUE_0 = \frac{\$2.85}{(1.11)} + \frac{\$3.27}{(1.11)^2} + \frac{3.42/(.11-.045)}{(1.11)^2}$$

$$= \frac{\$2.85}{(1.11)} + \frac{\$3.27}{(1.11)^2} + \frac{\$52.62}{(1.11)^2}$$

$$= \$2.56 + \$2.65 + \$42.71$$

$$= \$47.92$$

QUESTION 4 IS COMPOSED OF TWO PARTS, FOR A TOTAL OF 20 MINUTES

4. The value of the components affecting the ROE of Merck & Co., Inc. for 1985 are indicated in Table 1 below. Selected 1990 income statement and balance sheet information for Merck can be found in Table 2 below.

   A. Calculate *each* of the *five* ROE components for Merck in 1990. Using the *five* components, calculate ROE for Merck in 1990. Show all calculations.

   B. Based on your calculations, describe how *each* ROE component contributed to the change in Merck's ROE between 1985 and 1990. Identify the major underlying reasons for the change in Merck's ROE.

(20 minutes)

TABLE 1
Merck & Co., Inc.
1985 ROE Components

Tax burden (net income/pretax income)	.628
Interest burden (pretax income/EBIT)	.989
Operating (or profit) margin	.245
Asset turnover	.724
Financial leverage	1.877

TABLE 2
Merck & Co., Inc.
1990 Selected Financial Data
($ Millions)

Income Statement Data	
Sales revenue	$7,120
Depreciation	230
Interest expense	10
Pretax income	2,550
Income taxes	900
Net income	1,650
Balance Sheet Data	
Current assets	$4,850
Net fixed assets	2,400
Total assets	7,250
Current liabilities	3,290
Long-term debt	100
Shareholders' equity	3,860
Total liabilities & shareholders' equity	7,250

QUESTION 4 - MORNING SECTION (I-'91)

(20 points)

(Reading Reference: Bodie, Kane and Marcus, pp. 520-523)

A. Decomposition of ROE or duPont System:

1990 Components

Tax Burden	= Net Income/pretax income = $1650/$2550 = .647
Interest Burden	= Pretax Income/Pretax Income + interest expense = $2550/$2550 + $10 = .996
Operating Margin	= Pretax Income + interest expense/Sales Revenue = $2550 + $10/$7120 = .36
Asset Turnover	= Sales Revenue/Total Assets = $7120/$7250 = .982
Financial Leverage	= Total Assets/Stockholders' Equity = $7250/$3860 = 1.878

ROE = Tax burden x Interest Burden x Operating Margin x Asset Turnover x Financial Leverage
= .647 x .996 x .360 x .982 x 1.878
= .428 or 42.8%

Note: Alternative formulas for the duPont System are shown in other textbooks. All would give the same ROE. Nevertheless, the Bodie, Kane and Marcus method is presented here in order to facilitate comparison with Merck's 1985 ratios shown in Table 1.

B.

	1985	1990	Impact on change in
Tax Burden	.628	.647	Favorable
Interest Burden	.989	.996	Favorable
Operating Margin	.245	.360	Major Positive
Asset Turnover	.724	.982	Major Positive
Financial Leverage	1.877	1.878	Unchanged
ROE	.207	.428	

The ROE for Merck more than doubled from 20.7% in 1985 to 42.8% in 1990. The two primary factors behind this improvement were an increase in the operating margin and an increase in the asset turnover. Merck was able to increase selling prices or reduce operating costs, or some combination of both. The higher asset turnover is indicative of greater efficiency because Merck was able to produce more sales revenue per dollar of assets.

In the Bodie, Kane and Marcus method of computing the duPont System, an increase in the tax burden means a lower tax rate, and an increase in the interest burden means interest is a smaller percentage of pretax income. Both of these items had a small, but favorable, impact on ROE.

QUESTION 6 IS COMPOSED OF TWO PARTS, FOR A TOTAL OF 20 MINUTES

6. The duPont formula defines the net return on shareholders' equity as a function of the following components:

- operating margin
- asset turnover
- interest burden
- financial leverage
- income tax rate

Using *only* the data in Table III shown below:

A. **Calculate** *each* of the *five* components listed above for 1985 *and* 1989, and **calculate** the return on equity (ROE) for 1985 *and* 1989, using all of the *five* components. **Show** calculations.

(15 minutes)

B. **Briefly discuss** the impact of the changes in asset turnover *and* financial leverage on the change in ROE from 1985 to 1989.

(5 minutes)

TABLE III

	1985	1989
Income Statement Data		
Revenues	$542	$979
Operating income	38	76
Depreciation and amortization	3	9
Interest expense	3	0
Pretax income	32	67
Income taxes	13	37
Net income after tax	19	30
Balance Sheet Data		
Fixed assets	$ 41	$ 70
Total assets	245	291
Working capital	123	157
Total debt	16	0
Total shareholders' equity	159	220

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QUESTION 6 - MORNING SECTION (I-'90)

(20 points)

(Reading Reference: Cohen, Zinbarg & Ziekel, Chapter 12)

A.

		1985		1989
Operating Margin*	=	(Operating Income - Depreciation)/Sales		
	=	$\frac{38 - 3}{542}$	=	$\frac{76 - 9}{979}$
	=	6.46%	=	6.84%
Asset Turnover	=	Sales/Total Assets		
	=	$\frac{542}{245}$	=	$\frac{979}{291}$
	=	2.21x	=	3.36x
Interest Burden	=	Interest Expense/Total Assets		
	=	$\frac{3}{245}$	=	$\frac{0}{291}$
	=	1.22%	=	0

*Operating Margin also equals EBIT/Sales

Financial Leverage	=	Total Assets/Common Shareholders' Equity		
	=	$\frac{245}{159}$	=	$\frac{291}{220}$
	=	1.54x	=	1.32x
Tax Rate	=	Income Taxes/Pre-Tax Income		
	=	$\frac{13}{32}$	=	$\frac{37}{67}$
	=	40.63%	=	55.22%

The recommended formula is:

Return on Equity (ROE) = [(Op. Margin x Asset Turnover) - Int. Burden] x Financial Lev. x (100% - Income Tax Rate)

1985: = $\left[\left(\frac{38-3}{542} \times \frac{542}{245}\right) - \frac{3}{245}\right] \times \frac{245}{159} \times (1 - .4063)$

= [(6.46% x 2.21x) - 1.22%] x 1.54x x .5937 = 11.94%

1989: = $\left[\left(\frac{76-9}{979} \times \frac{979}{291}\right) - 0\right] \times \frac{291}{220} \times (1 - .5522)$

= [(6.84% x 3.36x) - 0] x 1.32x x .4478 = 13.58%

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QUESTION 7 IS COMPOSED OF THREE PARTS, FOR A TOTAL OF 10 MINUTES

7. The constant growth dividend discount model can be used both for the valuation of companies and for the estimation of the long-term total return of a stock.

Assume:	$20	=	the price of a stock today
	8%	=	the expected growth rate of dividends
	$.60	=	the annual dividend one year forward

A. Using *only* the above data, **compute** the expected long-term total return on the stock using the constant growth dividend discount model. Show calculations.

B. **Briefly discuss** *three* disadvantages of the constant growth dividend discount model in its application to investment analysis.

C. **Identify** *three* alternative methods to the dividend discount model for the valuation of companies.

(10 minutes)

QUESTION 7 - MORNING SECTION (I-'90)

(10 points)

(Reading Reference: Cohen, Zinbarg & Ziekel, Chapter 10)

A. The dividend discount model is: $P = \frac{d}{k - g}$

Where P - value of the stock today
d - annual dividend one year forward
k - discount rate
g - constant dividend growth rate

Solving for k: $(k - g) = \frac{d}{p}$; then $k = \frac{d}{p} + g$

So k becomes the estimate for the long-term return of the stock.

$k = \frac{\$.60}{\$20.00} + 8\% = 3\% + 8\% = 11\%$

B. Many professional investors shy away from the dividend discount framework analysis due to its many inherent complexities.

1) The model cannot be used where companies pay very small or no dividends and speculation on the level of future dividends could be futile. (Dividend policy may be arbitrary.)

2) The model presumes one can accurately forecast long term growth of earnings (dividends) of a company. Such forecasts become quite tenuous beyond two years out. (A short-term valuation may be more pertinent.)

3) For the variable growth models, small differences in g for the first several years produce large differences in the valuations.

4) The correct k or the discount rate is difficult to estimate for a specific company as an infinite number of factors affect it which are themselves difficult to forecast, e.g., inflation, riskless rate of return, risk premium on stocks and other uncertainties.

5) The model is not definable when g > k as with growth companies, so it is not applicable to a large number of companies.

6) Where a company has low or negative earnings per share or has a poor balance sheet, the ability to continue the dividend is questionable.

7) The components of income can differ substantially, reducing comparability.

C. Three alternative methods of valuation would include:
1) Price/Earnings ratios
2) Price/Asset value ratios (including market and book asset values)
3) Price/Sales ratios
4) Liquidation or breakup value
5) Price/cash flow ratios

3. Mulroney recalled from her CFA studies that the constant-growth discounted dividend model (DDM) was one way to arrive at a valuation for a company's common stock. She collected current dividend and stock price data for Eastover and Southampton, shown in Table 4 on page 12.

A. Using 11% as the required rate of return (i.e. discount rate) and a projected growth rate of 8%, **compute** a constant-growth DDM value for Eastover's stock and **compare** the computed value for Eastover to its stock price indicated in Table 4. **Show** calculations.

(10 minutes)

Mulroney's supervisor commented that a two-stage DDM may be more appropriate for companies such as Eastover and Southampton. Mulroney believes that Eastover and Southampton could grow more rapidly over the next three years and then settle in at a lower but sustainable rate of growth beyond 1994. Her estimates are indicated in Table 5 on page 12.

B. Using 11% as the required rate of return, **compute** the two-stage DDM value of Eastover's stock and **compare** that value to its stock price indicated in Table 4. **Show** calculations.

(15 minutes)

C. **Discuss** *two* advantages and *three* disadvantages of using a constant-growth DDM. **Briefly discuss** how the two-stage DDM improves upon the constant-growth DDM.

(10 minutes)

2. Mulroney continued her examination of Eastover and Southampton by looking at the five components of return on equity (ROE) for each company. For her analysis, Mulroney elected to define equity as total shareholders' equity, including preferred stock. She also elected to use year-end data rather than averages for the balance sheet items.

A. Based on the data shown in Tables 1 and 2 on pages 9 and 10, **calculate** *each* of the *five* ROE components for Eastover and Southampton in 1990. Using the *five* components, **calculate** ROE for *both* companies in 1990. **Show** all calculations.

(10 minutes)

B. Referring to the components calculated in Part A, **explain** the difference in ROE for Eastover and Southampton in 1990.

(5 minutes)

C. Using 1990 data, **calculate** an *internal* (i.e. *sustainable*) *growth rate* for *both* Eastover and Southampton. **Discuss** the appropriateness of using these calculations as a basis for estimating future growth.

(5 minutes)

4. In addition to the discounted dividend model (DDM) approach, Mulroney decided to look at the price/earnings ratio and price/book ratio, relative to the S&P 500, for *both* Eastover and Southampton. Mulroney elected to perform this analysis using 1987–1991 and current data.

A. Using the data in Tables 3 and 4 on pages 11 and 12, **compute** *both* the current and the 5-year (1987–1991) average relative price/earnings ratios and relative price/book ratios for Eastover and Southampton. Discuss *each* company's current relative price/earnings ratio as compared to its 5-year average relative price/earnings ratio and *each* company's current relative price/book ratio as compared to its 5-year average relative price/book ratio.

(10 minutes)

B. **Briefly discuss** *one* disadvantage for *each* of the relative price/earnings and relative price/book approaches to valuation.

(5 minutes)

QUESTION 5 IS ALLOCATED A TOTAL OF 5 MINUTES

5. Mulroney previously calculated a valuation for Southampton for both the constant growth and two-stage DDM as shown below:

	Discounted Dividend Model Using	
	Constant Growth Approach	Two-Stage Approach
Southampton	$29	$35.50

Using *only* the information provided and your answers to Questions 2, 3, and 4, **select** the stock (EO or SHC) that Mulroney should recommend as the better value, and **justify** your selection.

(5 minutes)

TABLE 1

Eastover Company (EO)
($ millions, except shares outstanding)

Income Statement Summary

	1986	1987	1988	1989	1990
Sales	$5,652	$6,990	$7,863	$8,281	$7,406
Earnings before interest & taxes (EBIT)	$ 568	$ 901	$1,037	$ 708	$ 795
Interest expense (net)	(147)	(188)	(186)	(194)	(195)
Income before taxes	$ 421	$ 713	$ 851	$ 514	$ 600
Income taxes	(144)	(266)	(286)	(173)	(206)
Tax rate	34%	37%	33%	34%	34%
Net income	$ 277	$ 447	$ 565	$ 341	$ 394
Preferred dividends	(28)	(17)	(17)	(17)	(0)
Net income to common	$ 249	$ 430	$ 548	$ 324	$ 394
Common shares outstanding (millions)	196	204	204	205	201

Balance Sheet Summary

	1986	1987	1988	1989	1990
Current assets	$1,235	$1,491	$1,702	$1,585	$1,367
Timberland assets	649	625	621	612	615
Property, plant & equipment	4,370	4,571	5,056	5,430	5,854
Other assets	360	555	473	472	429
Total assets	$6,614	$7,242	$7,852	$8,099	$8,265
Current liabilities	$1,226	$1,186	$1,206	$1,606	$1,816
Long-term debt	1,120	1,340	1,585	1,346	1,585
Deferred taxes & other	1,000	1,000	1,016	1,000	1,000
Equity-preferred	364	350	350	400	0
Equity-common	2,904	3,366	3,695	3,747	3,864
Total liabilities & equity	$6,614	$7,242	$7,852	$8,099	$8,265

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TABLE 2

Southampton Corporation (SHC)
($ millions, except shares outstanding)

Income Statement Summary

	1986	1987	1988	1989	1990
Sales	$1,306	$1,654	$1,799	$2,010	$1,793
Earnings before interest & taxes (EBIT)	$ 120	$ 230	$ 221	$ 304	$ 145
Interest expense (net)	(13)	(36)	(7)	(12)	(8)
Income before taxes	$ 107	$ 194	$ 214	$ 292	$ 137
Income taxes	(44)	(75)	(79)	(99)	(46)
Tax rate	41%	39%	37%	34%	34%
Net income	$ 63	$ 119	$ 135	$ 193	$ 91
Common shares outstanding (millions)	38	38	38	38	38

Balance Sheet Summary

	1986	1987	1988	1989	1990
Current assets	$ 487	$ 504	$ 536	$ 654	$ 509
Timberland assets	512	513	508	513	518
Property, plant & equipment	648	681	718	827	1,037
Other assets	141	151	34	38	40
Total assets	$1,788	$1,849	$1,796	$2,032	$2,104
Current liabilities	$ 185	$ 176	$ 162	$ 180	$ 195
Long-term debt	536	493	370	530	589
Deferred taxes & other	123	136	127	146	153
Equity	944	1,044	1,137	1,176	1,167
Total liabilities & equity	$1,788	$1,849	$1,796	$2,032	$2,104

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TABLE 3

Eastover Company (EO)

	1986	1987	1988	1989	1990	1991
Earnings per share	$ 1.27	$ 2.12	$ 2.68	$ 1.56	$ 1.87	$ 0.90
Dividends per share	0.87	0.90	1.15	1.20	1.20	1.20
Book value per share	14.82	16.54	18.14	18.55	19.21	17.21
Stock price						
-High	28	40	30	33	28	30
-Low	20	20	23	25	18	20
-Close	25	26	25	28	22	27
Average P/E	18.9x	14.2x	9.9x	18.6x	12.3x	27.8x
Average price/book	1.6x	1.8x	1.5x	1.6x	1.2x	1.5x

Southampton Corporation (SHC)

	1986	1987	1988	1989	1990	1991
Earnings per share	$ 1.66	$ 3.13	$ 3.55	$ 5.08	$ 2.46	$ 1.75
Dividends per share	0.77	0.79	0.89	0.98	1.04	1.08
Book value per share	24.84	27.47	29.92	30.95	31.54	32.21
Stock price						
-High	34	40	38	43	45	46
-Low	21	22	26	28	20	26
-Close	31	27	28	39	27	44
Average P/E	16.6x	9.9x	9.0x	7.0x	13.2x	20.6x
Average price/book	1.1x	1.1x	1.1x	1.2x	1.0x	1.1x

S&P 500

	1986	1987	1988	1989	1990	1991	5-Year Average (1987-1991)
Average P/E	15.8x	16.0x	11.1x	13.9x	15.6x	19.2x	15.2x
Average price/book	1.8x	2.1x	1.9x	2.2x	2.1x	2.3x	2.1x

TABLE 4

Current Information

	Current Share Price	Current Dividends Per Share	1992 EPS Estimate	Current Book Value Per Share
Eastover (EO)	$ 28	$ 1.20	$ 1.60	$ 17.32
Southampton (SHC)	48	1.08	3.00	32.21
S&P 500	415	12.00	20.54	159.83

TABLE 5

Projected Growth Rates

	Next 3 Years (1992, 1993, 1994)	Growth Beyond 1994
Eastover (EO)	12%	8%
Southampton (SHC)	13%	7%

QUESTION 2 - MORNING SECTION (I-'92)

(20 points)

***(Reading References:** Cohen, Zinbarg and Zeikel, Company Analysis; Bodie, Kane and Marcus, Chapter 18)*

A. One of the most familiar ROE formulas is:

ROE = operating margin x interest burden x asset turnover x leverage x tax burden. Using the definitions below, ROE for Eastover (EO) and Southampton (SHC) in 1990 are:

operating margin	=	EBIT/ Sales	SHC:	145/1793	= 8.1%
			EO :	795/7406	= 10.7%
interest burden	=	Pretax/ EBIT	SHC:	137/145	= 0.95x
			EO :	600/795	= 0.75x
asset turnover	=	Sales/ Assets	SHC:	1793/2104	= 0.85x
			EO :	7406/8265	= 0.90x
leverage	=	Assets/ Equity	SHC:	2104/1167	= 1.80x
			EO :	8265/3864	= 2.14x
tax burden	=	Net Inc/ Pretax	SHC:	91/137	= 0.66x
			EO :	394/600	= 0.66x
ROE			SHC:		= 7.8%
			EO:		= 10.2%

Note: Two alternative approaches to the ROE formula are also correct:
- [Op. Margin -(Int. Burden*/Asset Turnover)] x Financial Lev. x Asset Turnover x (100% - Income Tax Rate)
- [(Financial Lev. x Asset Turnover x Op. Margin) - (Financial Lev. x Interest Burden*)] x (100% - Income Tax Rate)

*In these versions of the formula, interest burden is defined as:
$\frac{\text{Interest Expense}}{\text{Assets}} \times 100\%$,
for example, in 1990: SHC = .38
EO = 2.36

B. The differences in the components of ROE for Eastover and Southampton for 1990 are as follows:

operating margin	EO has a higher margin
interest burden	EO has a higher interest burden because its pretax profits are a lower percentage of EBIT
asset turnover	EO is more efficient at turning over its assets
leverage	EO has higher financial leverage
tax burden	No major difference here between the two companies

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ROE — EO has a higher ROE than SHC, but this is only in part due to higher margins and a better asset turnover -- greater financial leverage also plays a part.

C. An internal growth rate can be calculated by multiplying ROE times the earnings retention rate. For 1990, the internal growth rates for Eastover and Southampton are as follows:

	1990 ROE	x	1990 Earnings Retention*	x	Internal Growth
Eastover	10.2%		0.36		3.7%
Southampton	7.8%		0.58		4.5%

The internal growth rates derived in this manner are not likely to be representative of future growth going forward, since 1990 was probably not a "normal" year. For Eastover, earnings had not recovered to 1987-88 levels yet, and earnings retention of only 0.36 seems low for a company in a capital intensive industry. Southampton's earnings fell by over 50% in 1990 and its earnings retention will probably be higher than 0.58 in the future. There is a danger, therefore, in basing a projection on just one year's results, especially for companies in a cyclical industry like forest products.

*Earnings Retention = (1 - payout ratio)
EO = (1 - .64) = .36
SHC = (1 - .42) = .58

QUESTION 3 - MORNING SECTION (I-'92)

(35 points)

(Reading References: Cohen, Zinbarg and Zeikel, Common Stock Valuation; Bodie, Kane and Marcus, Chapter 17)

A. The formula for the constant growth discounted dividend model is shown below:

$$\text{Price} = \frac{D_0 (1 + g)}{k - g}$$

Where D_0 = current dividends per share

For Eastover:

$$\text{Price} = \frac{1.20 * 1.08}{0.11 - 0.08} = 43$$

This compares with its current stock price of 28. On this basis, it appears that Eastover is undervalued.

B. The formula for the two-stage discounted dividend model is as follows:

$$\text{Price} = \frac{D_1}{1+k} + \frac{D_2}{(1+k)^2} + \frac{D_3}{(1+k)^3} + \frac{P_3}{(1+k)^3}$$

$$\text{where } P_3 = \frac{D_4}{k - g_2}$$

For Eastover: $g_1 = .12$
$g_2 = .08$

$D_0 = 1.20$
$D_1 = 1.20 * 1.12 = 1.34$
$D_2 = 1.20 * (1.12)^2 = 1.50$
$D_3 = 1.20 * (1.12)^3 = 1.69$
$D_4 = D_3 * (1.08) = 1.82$

$P_3 = 1.82 / (.11 - .08) = 60.67$

$$\text{Price} = \frac{1.34}{1.11} + \frac{1.50}{(1.11)^2} + \frac{1.69}{(1.11)^3} + \frac{60.67}{(1.11)^3}$$

$= 48.03$

This approach indicates that Eastover is even more undervalued than was the case with the constant growth approach.

An alternative solution to two-stage model is:

$$\text{Price} = \frac{D_1}{(1+k)} + \frac{D_2}{(1+k)^2} + \frac{P_2}{(1+k)^2}$$

$D_0 = 1.20$
$D_1 = 1.20\ (1.12) = 1.34$
$D_2 = 1.20\ (1.12)^2 = 1.50$
$D_3 = 1.20\ (1.12)^3 = 1.69$

$$P_2 = \frac{D_3}{k-g_2} = \frac{1.69}{.11-.08} = 56.33$$

$$\text{Price} = \frac{1.34}{1.11} + \frac{1.50}{(1.11)^2} + \frac{56.33}{(1.11)^2}$$

$= 1.21 + 1.22 + 45.72$

$= 48.15$

This answer differs from previous answer because of round off error.

Note: Bodie, Kane and Marcus also show an approximation of the two-stage DDM, the so-called "H-model." The actual two-stage calculation shown above is the preferred and more accurate answer.

C. Constant growth model:

Advantages:
1) logical, theoretical basis
2) simple to compute
3) inputs can be estimated

Disadvantages:
1) very sensitive to inputs of growth
2) g and k difficult to estimate accurately
3) result is meaningless if g > k
4) constant growth is an unrealistic assumption
5) assumes growth will never slow down
6) dividend payout must remain constant
7) not usable for firms not paying dividends
8) assumes stock price will increase at g

Improvements with the two-stage model:

1. The two-stage model is more realistic. It accounts for low, high, or zero growth in the first stage, followed by constant long-term growth in the second stage.

2. The model can solve for stock value when the growth rate in the first stage exceeds the required rate of return

QUESTION 4 - MORNING SECTION (I-'92)

(15 points)

(Reading Reference: Cohen, Zinbarg and Zeikel, Common Stock Valuation)

A. In order to determine whether a stock is undervalued or overvalued, analysts often analyze price-earnings ratios (P/Es) and price-book value ratios (P/Bs) as compared to those of the market as represented by the S&P 500 Index. The formulas for these calculations are:

$$\text{Relative } P/E = \frac{P/E \text{ of specific company}}{P/E \text{ of SP500}}$$

$$\text{Relative } P/B = \frac{P/B \text{ of specific company}}{P/B \text{ of SP500}}$$

To evaluate EO and SHC using the relative P/E model, Mulroney should calculate the five year average P/E for each stock, and divide that number by the 5 year average P/E for the S&P 500. This gives the average relative P/E. Mulroney should then compare the average historical relative P/E to the current relative P/E, which is the current P/E on each stock, using 1992 estimated E.P.S., divided by the current P/E of the market, again using the 1992 estimate.

For the price/book model, Mulroney should make similar calculations, i.e., divide the five year average price/book ratio for a stock into the five year average price/book for the S&P 500, and compare the result to the current relative price/book (using 1991 estimated book value, as that is all that is available).

The results are shown below:

		EO	SHC	S&P 500
P/E Model:	5 yr. avg. P/E	16.6x	11.9x	15.2x
	Relative 5 yr. P/E	1.09x	0.78x	
	Current P/E	17.5x	16.0x	20.20x
	Current relative P/E	0.87x	0.79x	
Price/Book	5 yr. avg. price/book	1.50x	1.10x	2.10x
	Rel. 5 yr. price/book	0.71x	0.52x	
	Current price/book	1.62x	1.49x	2.60x
	Current rel. price/book	0.62x	0.57x	

From this analysis, it is evident that EO is trading at a discount to its historical 5 year relative P/E ratio, whereas Southampton is trading right at its historical 5 year relative P/E. With respect to price/book, Eastover is trading at a discount to its historical relative price/book ratio, whereas SHC is trading modestly above its 5 year relative price/book ratio. As noted in the preamble, however, Eastover's book value is understated due to the very low historical cost basis for its timberlands. The fact that Eastover is trading at below its 5 year average relative price to book ratio even though its book value is understated makes Eastover seem especially attractive on a price/book basis.

Disadvantages of relative P/E model:

1) measures relative, not absolute, value
2) accounting earnings estimate for next fiscal year may not be representative of sustainable earnings
3) no standardization on which earnings to use
4) changing accounting standards may make historical comparisons difficult
   requires estimating earnings growth for next fiscal year

Advantages of relative P/B/ model:

book value may be under or overstated -- particularly for a company like Eastover, which has valuable lumberlands on its books carried at low historical cost
book value may not be representative of earning power or future growth potential
changing accounting standards may make historical comparisons difficult

QUESTION 5 - MORNING SECTION (I-'92)

(5 points)

***(Reading References:** Bodie, Kane and Marcus, Chapters 17 and 18; Cohen, Zinbarg and Zeikel, Common Stock Valuation, Industry Analysis and Company Analysis)*

The following table summarizes the valuation and ROE analysis for Eastover and Southampton:

	Eastover	Southampton
Stock Price	$28	$48
Constant Growth Model Value	43	29
2-Stage Growth Model Value	48	35.50

	Eastover	Southampton
Current P/E	17.5x	16.0x
Current Rel. P/E	0.87x	0.79x
5 Yr. Avg. P/E	16.6x	11.9x
Relative 5 yr. P/E	1.09x	0.79x
Current P/B	1.62x	1.49x
Current Rel. P/B	0.62x	0.57x
5 Yr. Avg. P/B	1.50x	1.10x
Rel. 5 Yr. P/B	0.71x	0.52x
1990 ROE	10.2%	7.8%
Internal Growth Rate	3.7%	4.5%

Eastover seems to be clearly undervalued under both discounted dividend models. Eastover also looks cheap on both a relative P/E and on a relative P/B basis. Southampton, on the other hand, looks expensive using discounted dividend models and is slightly overvalued using the relative price/book model. On a relative P/E basis, SHC looks only to be fairly valued. Southampton does have a slightly higher internal growth rate, but not appreciably so, and its ROE is less than Eastover.

The current P/E for Eastover is based on relatively depressed current earnings, yet the stock still comes out as attractive on this basis. In addition, the price/book ratio for Eastover is overstated due to the low historical cost basis used for the timberland assets. This makes Eastover all the more attractive on a price/book basis. Based on this analysis, Mulroney selected Eastover over Southampton.

QUESTION 5 IS COMPOSED OF THREE PARTS, FOR A TOTAL OF 20 MINUTES

5. As a continuation of your analysis of Monticello's debt you are asked to evaluate two specific bond issues held in Cavalier managed accounts, shown in Table 5 below.

   A. Using the duration and yield information in Table 5, compare the price and yield behavior of the two bonds under *each* of the following *two* scenarios:

      - Scenario 1 — Strong economic recovery with rising inflation expectations; and
      - Scenario 2 — Economic recession with reduced inflation expectations.

   (7 minutes)

   B. Using the information in Table 5, calculate the projected price change for Bond B if the yield-to-maturity for this bond falls by 75 basis points.

   (7 minutes)

   C. Describe the shortcoming of analyzing Bond A strictly to call or to maturity. Explain an approach to remedy this shortcoming.

   (6 minutes)

TABLE 5

Monticello Corporation
Bond Information

	Bond A (Callable)	Bond B (Non-Callable)
Maturity	2002	2002
Coupon	11.50%	7.25%
Current price	125.75	100.00
Yield-to-maturity	7.70%	7.25%
Modified duration to maturity	6.20	6.80
Convexity to maturity	.50	.60
Call date	1996	—
Call price	105	—
Yield to call	5.10%	—
Modified duration to call	3.10	—
Convexity to call	.10	—

Question 5 - Morning Section (II-'92)

(20 points)

(Reading References: Fabozzi, Fabozzi & Pollack, 3rd Edition, Ch. 6 & 7; Dunetz & Mahoney Article)

A. Scenario 1 - strong economic recovery with rising inflationary expectations. Interest rates and bond yields will most likely rise, and the price of both bonds will fall. The probability the callable bond will be called declines, and it will behave more like the non-callable bond--notice that they have similar durations and convexities when priced to maturity.

Scenario 2 - economic recession with reduced inflation expectations. Interest rates and bond yields will most likely fall. The call-adjusted performance of the callable bond approaches yield-to-call. The relevant duration and convexity calculations for the callable bond are now modified duration to call and convexity to call. Price appreciation is limited as indicated by the lower duration and convexity. The non-callable bond, on the other hand, continues to have the same modified duration and convexity and hence has greater price appreciation.

B. If yield-to-maturity (Y-T-M) on Bond B falls 75 basis points:

-75 basis points $= -75/100 = -.75$ Δ in Y-T-M

Proj. Price Δ = (-modified duration)(Δ in Y-T-M) + (½)(convexity)(Δ in Y-T-M)^2

$= (-6.8)(-.75) + (½)(.6)(.75)^2$

$= 5.1 + .169$

$= 5.27$

So the projected price will rise to \$105.27 from its current \$100 price.

C. For Bond A, the callable bond, neither maturity nor cash flow is certain. The analysis of callable bonds can take one of four approaches. The first is to ignore the call feature and analyze on a "to maturity" basis. All calculations for yield, duration, and convexity are distorted. Durations are too long and yields are too high.

A second approach is to treat the premium bond selling above the call price on a "to call" basis. The duration is unrealistically short and yields too low.

The most effective approach is to use an option evaluation approach. The callable bond can be decomposed into two separate securities - a non-call bond and an option.

Price of callable Bond = Price of non-callable Bond - Price of Option

Since the option will always have some positive value, the callable bond will always have a price which is less than the non-callable security.

An alternative, but less rigorous approach, is to use horizon analysis. The horizon approach considers the three sources of potential dollar return in analyzing a callable bond. The investor is required to estimate an investment holding period, a reinvestment rate, and a call date.

QUESTION 6 IS COMPOSED OF TWO PARTS, FOR A TOTAL OF 20 MINUTES

6. Your firm is considering investing in the equity securities of companies in several different countries. After a preliminary review of financial statements, you realize there is a range of international accounting practices that can materially affect net income and other financial data relevant for equity valuation purposes.

A. **Briefly** discuss *two* plausible approaches to comparing companies from different countries that use different accounting principles.

(5 minutes)

B. **Briefly** discuss how international variations in *each* of the following three accounting principles affect reported net income:

- revaluation of fixed assets,
- treatment of acquired goodwill, and
- discretionary reserves.

(15 minutes)

QUESTION 6 - MORNING SECTION (II-'91)

(20 points)

(Reading Reference: Hawkins Article)

A. Comparable Approach: This approach attempts to restate the earnings figures on a comparable basis using Generally Accepted Accounting Principles, International Accounting Standards Committee standards, or another enterprise's accounting practices in an appropriate model developed by the investor.

Assessment of the Quality of Earnings: In assessing the quality of earnings, a scale or standard is developed by the investor. This scale or standard may incorporate considerations for such accounting choices as inventory valuation, depreciation methods, accounting for pensions as well as the treatment of accounting for research and development.

Cash Flow Basis: Applied on a world-wide basis, an attempt is to analyze the cash flows of the investment. Consideration of cash flow definitions may include cash from operations, earnings before interest, and taxation (EBIT) or changes in the financial position. The overriding rule is analyze the investment from a cash flow perspective.

Adopt the Foreign Corporation's Financial Statement: Here an attempt is made to analyze the foreign corporation's financial statements from the perspective of a local investor and apply local valuation methods. This may include a comparison with local enterprises since their financial statements are assumed to be prepared on a similar and comparable basis.

Asset Valuation Model: A financial analyst may attempt to mark the assets to market values and then subtract the indebtedness to arrive at a value for the enterprise.

Dividend Valuation Model: Using a dividend valuation approach, the investor may focus on dividends and not earnings to arrive at an estimated value of the investment. This would, however, require an estimate of risk (k) and growth (g) which could be the investor's requirements or the inferred k and g of the investment.

B. i. An upward revaluation of fixed assets would increase depreciation expense on the income statement and reduce net income. A downward revaluation of fixed assets would reduce depreciation expense on the income statement and increase net income. Under Generally Accepted Accounting Principles, except in rare cases, only the downward revaluation of fixed assets is permitted. In some foreign countries, upward revaluation is also permitted as well as current expensing of a fixed asset which can greatly distort net income for an accounting period.

ii. The amortization of goodwill reduces net income. Under Generally Accepted Accounting Principles, goodwill can only be amortized if purchased and is carried on the balance sheet. The amortization is for forty years or the useful life of the goodwill, whichever is less.

In some foreign countries, purchased goodwill can be written off against shareholders equity immediately. Immediate write off of goodwill against shareholders' equity results in higher future earnings due to the absence of amortization charges. In countries where goodwill is recorded an amortized, the longer (shorter) the amortization period, the higher (lower) reported earnings will be. The International Accounting Standards Committee has a proposal that provides for five years amortization unless a longer period can be justified.

iii. As the name implies, discretionary reserves are up to the discretion of management. The primary impact of discretionary reserves on net income is to smooth the net income, allowing management to "look better" in bad years.

The creation of a discretionary reserve, when charged to income, lowers net income in that year. Absence of the charge in a later year, or use of the reserve to cover expenses of that year, increases net income in the later year.

Discretionary reserves against fixed assets (revaluation or impairment) will affect future depreciation charges and therefore net income. "Excess" depreciation charges can also be used to lower net income in a good year.

Appropriations of retained earnings or other shareholder equity reserves do not impact reported net income.

QUESTION 7 IS ALLOCATED A TOTAL OF 10 MINUTES

7. The table below shows selected data on a German government bond (payable in Deutschemarks) and a U.S. government bond. **Identify** the components of return and **calculate** the total return in U.S. dollars for *both* of these bonds for the year 1991. Show the calculations for *each* component. (Ignore interest on interest in view of the short time period.)

	Coupon	Market Yield 1/1/91	Market Yield 1/1/92	Modified Duration	Exchange Rate (DM/$U.S.) 1/1/91	Exchange Rate (DM/$U.S.) 1/1/92
German Government Bond	8.50%	8.50%	8.00%	7.0	1.55	1.50
U.S. Government Bond	8.00%	8.00%	6.75%	6.5	—	—

(10 minutes)

QUESTION 7 - MORNING SECTION (I-'92)

(10 points)

(Reading Reference: Fabozzi, Chs. 51 and 7)

There are three components of return for international (German) bonds: coupon income, capital appreciation (or loss) as resulting from interest rate movements, and profits (or loss) from changes in currency exchange rates; in contrast, only the first two components of return (coupon income and capital appreciation, or loss) apply to domestic (U.S. government) bonds.

Since both bonds were selling at par on 1/1/91 (in both cases, the market yields on the bonds equalled their coupons), the contribution from coupon income is simply the coupon rate indicated in the table. Given we're dealing with holding period return here, it's appropriate to use the beginning price of the issue to measure the current yield (coupon) component of return. Price change resulting from interest rate movements can be calculated using the change in yield times the modified duration, with the sign changed:

Percent price change = - modified duration x yield change x 100

German government bond: -0.50 x -7.0 = +3.50%

U.S. Government Bond: -1.25 x -6.5 = +8.13%

The percentage change from currency movements can be approximated by taking the reciprocal of the DM/U.S. exchange rate (to express the exchange rate in dollar terms) and finding the percentage change:

(1/1.50)/(1/1.55) = .6667/.6452 = 1.033
= +3.3% change

Thus, the contribution to total return for the two bonds can be summarized as follows:

	Domestic Coupon Income	+	Domestic Capital Gain	+	Currency Movements	=	Total Return
German Govt. Bond	8.5%	+	3.5%	+	3.7%*	=	15.7%
or approximated as	8.5%	+	3.5%	+	3.3%	=	15.3%
U.S. Govt. Bond	8.0%	+	8.1%	+	0.0%	=	16.1%

As indicated in the table above, the U.S. government bond offered the superior return relative to the German government bond.

*A more accurate formula to reflect currency movements is:
[(100% + coupon income + capital change) x (currency change)]
=[(100% + 8.5% + 3.5%) x (.033)] = 3.7%

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QUESTION 10 IS COMPOSED OF TWO PARTS, FOR A TOTAL OF 15 MINUTES

10. A. **List and briefly define** the *three* forms of the Efficient Market Hypothesis.

(6 minutes)

B. **Discuss** the role of a portfolio manager in a perfectly efficient market.

(9 minutes)

QUESTION 11 IS ALLOCATED A TOTAL OF 5 MINUTES

11. A bond analyst is looking at a 20-year, AA-rated corporate bond. The bond is non-callable and carries a coupon of 7.50%. The analyst computes both the standard yield-to-maturity and horizon return for this bond, which are as follows:

Yield-to-maturity	8.00%
Horizon return	8.96%

Assuming the bond is held to maturity, **explain** why these *two* measures of return differ.

(5 minutes)

QUESTION 12 IS ALLOCATED A TOTAL OF 5 MINUTES

12. A convertible bond has the following features:

Coupon	5.25%
Maturity	June 15, 2017
Market price of bond	77.50
Market price of underlying common stock	$28.00
Annual dividend	$ 1.20
Conversion ratio	20.83 shares

Calculate *both* the conversion premium per share *and* the break-even period.

(5 minutes)

QUESTION 10 - MORNING SECTION (I-'92)

(15 points)

(Reading References: Maginn & Tuttle, Chs. 1 & 2; Bodie, Kane & Marcus, Ch. 13)

A. The notion that stock prices already reflect all available information is referred to as the efficient market hypothesis (EMH). It is common to distinguish among three versions of the EMH: the weak, semi-strong, and strong forms. These versions differ by their treatment of what is meant by "all available information."

The weak-form hypothesis asserts that stock prices already reflect all information that can be derived from studying past market trading data. Therefore, "technical analysis" and trend analysis, etc., are fruitless pursuits. Past stock prices are publically available and virtually costless to obtain. If such data ever conveyed reliable signals about future stock performance, all investors would have learned already to exploit such signals.

The semi-strong form hypothesis states that all publically-available information about the prospects of a firm must be reflected already in the stock's price. Such information includes, in addition to past prices, all fundamental data on the firm, its products, its management, its finances, its earnings, etc., etc. that can be found in public information sources.

The strong-form hypothesis states that stock prices reflect all information relevant to the firm, even including information available only to company "insiders." This version is an extreme one. Obviously, some "insiders" do have access to pertinent information long enough for them to profit from trading on that information before the public obtains it. Indeed, such trading - not only by the "insiders" themselves, but also by relatives and/or associates - is illegal under rules of the SEC.

For the weak-form or the semi-strong forms of the hypothesis to be valid does not require the strong-form version to hold. If the strong-form version was valid, however, both the semi-strong and the weak-form versions of efficiency would also be valid.

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B. Even in an efficient market, a portfolio manager would have the important role of constructing and implementing an integrated set of steps to create and maintain appropriate combinations of investment assets. Listed below are the necessary steps in the portfolio management process:

1) **Counseling** the client to help the client to determine appropriate objectives and identify and evaluate constraints. The portfolio manager together with the client should specify and quantify risk tolerance, required rate of return, time horizon, taxes considerations, the form of income needs, liquidity, legal and regulatory constraints, and any unique circumstances that will impact or modify normal management procedures/goals.

2) **Monitoring and evaluating capital market expectations.** Relevant considerations, such as economic, social, and political conditions/expectations are factored into the decision making process in terms of the expected risk/reward relationship for the various asset categories. Different expectations may lead the portfolio manager to adjust a client's systematic risk level even if markets are efficient.

3) The above steps are decisions derived from/implemented through portfolio policy and strategy setting. **Investment policies are set** and implemented through the choice of optimal combinations of financial and real assets in the marketplace - i.e., **asset allocation.** Under the assumption of a perfectly efficient market, stocks would be priced fairly, eliminating any added value by specific security selection. It might be argued that an investment policy which stresses diversification is even more important in an efficient market context because the elimination of specific risk becomes extremely important.

4) Market conditions, relative asset category percentages, and the investor's circumstances are monitored.

5) **Portfolio adjustments** are made as a result of significant changes in any or all relevant variables.

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QUESTION 11 - MORNING SECTION (I-'92)

(5 points)

(Reading Reference: Fabozzi, Fabozzi and Pollack, Chapter 6)

They differ for one basic reason: they assume different reinvestment rates! Yield-to-maturity (Y-T-M) uses that rate (8% in this case) as its reinvestment rate, whereas horizon return (H.R.) employs an explicit, rather than assumed, reinvestment rate -- in this case, since the H.R. is greater than Y-T-M, the reinvestment rate must be more than 8% (actually, it is 10%, but that's not required in the answer). Thus, since H.R. uses a higher reinvestment rate (all else being the same), it only follows that it should show a higher return on the investment (8.96% vs. 8.00% for Y-T-M).

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QUESTION 12 - MORNING SECTION (I-'92)

(5 points)

(Reading Reference: Fabozzi, Fabozzi and Pollack, Chapter 15)

Conversion premium per share (CP):

$$CP = \frac{\text{market price of bond}}{\text{conversion ratio}} - \text{market price of stock}$$

$$CP = \frac{775}{20.83} - 28.00 = 37.21 - 28.00 = \$9.21$$

Break-even period:

($1000 x 5.25%)	$52.50
($1.20 x 20.83)	25.00
Income differential	$27.50

Income differential per share:

(27.50 / 20.83)	1.32

$$\text{Break-even period} = \frac{\text{conversion premium per share}}{\text{income differential per share}}$$

$$= \frac{9.21}{1.32} = 6.98 \text{ years}$$

The break-even could also be found on a per bond basis:

$$\text{Break-even period} = \frac{\text{conversion premium on bond}}{\text{income differential on bond}}$$

Conversion premium = market value - conversion value*
= 775 - 583.24 = 191.76

Income differential = 52.50 - 25.00 = 27.50

$$\text{Break-even period} = \frac{191.76}{27.50} = 6.97 \text{ years}$$

*Conversion value = market price of stock x conversion ratio

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Present Value of $1: $PVIF = 1/(1 + k)^t$

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	15%	16%	18%	20%	24%	28%	32%	36%
1	.9901	.9804	.9709	.9615	.9524	.9434	.9346	.9259	.9174	.9091	.8929	.8772	.8696	.8621	.8475	.8333	.8065	.7813	.7576	.7353
2	.9803	.9612	.9426	.9246	.9070	.8900	.8734	.8573	.8417	.8264	.7972	.7695	.7561	.7432	.7182	.6944	.6504	.6104	.5739	.5407
3	.9706	.9423	.9151	.8890	.8638	.8396	.8163	.7938	.7722	.7513	.7118	.6750	.6575	.6407	.6086	.5787	.5245	.4768	.4348	.3975
4	.9610	.9238	.8885	.8548	.8227	.7921	.7629	.7350	.7084	.6830	.6355	.5921	.5718	.5523	.5158	.4823	.4230	.3725	.3294	.2923
5	.9515	.9057	.8626	.8219	.7835	.7473	.7130	.6806	.6499	.6209	.5674	.5194	.4972	.4761	.4371	.4019	.3411	.2910	.2495	.2149
6	.9420	.8880	.8375	.7903	.7462	.7050	.6663	.6302	.5963	.5645	.5066	.4556	.4323	.4104	.3704	.3349	.2751	.2274	.1890	.1580
7	.9327	.8706	.8131	.7599	.7107	.6651	.6227	.5835	.5470	.5132	.4523	.3996	.3759	.3538	.3139	.2791	.2218	.1776	.1432	.1162
8	.9235	.8535	.7894	.7307	.6768	.6274	.5820	.5403	.5019	.4665	.4039	.3506	.3269	.3050	.2660	.2326	.1789	.1388	.1085	.0854
9	.9143	.8368	.7664	.7026	.6446	.5919	.5439	.5002	.4604	.4241	.3606	.3075	.2843	.2630	.2255	.1938	.1443	.1084	.0822	.0628
10	.9053	.8203	.7441	.6756	.6139	.5584	.5083	.4632	.4224	.3855	.3220	.2697	.2472	.2267	.1911	.1615	.1164	.0847	.0623	.0462
11	.8963	.8043	.7224	.6496	.5847	.5268	.4751	.4289	.3875	.3505	.2875	.2366	.2149	.1954	.1619	.1346	.0938	.0662	.0472	.0340
12	.8874	.7885	.7014	.6246	.5568	.4970	.4440	.3971	.3555	.3186	.2567	.2076	.1869	.1685	.1372	.1122	.0757	.0517	.0357	.0250
13	.8787	.7730	.6810	.6006	.5303	.4688	.4150	.3677	.3262	.2897	.2292	.1821	.1625	.1452	.1163	.0935	.0610	.0404	.0271	.0184
14	.8700	.7579	.6611	.5775	.5051	.4423	.3878	.3405	.2992	.2633	.2046	.1597	.1413	.1252	.0985	.0779	.0492	.0316	.0205	.0135
15	.8613	.7430	.6419	.5553	.4810	.4173	.3624	.3152	.2745	.2394	.1827	.1401	.1229	.1079	.0835	.0649	.0397	.0247	.0155	.0099
16	.8528	.7284	.6232	.5339	.4581	.3936	.3387	.2919	.2519	.2176	.1631	.1229	.1069	.0930	.0708	.0541	.0320	.0193	.0118	.0073
17	.8444	.7142	.6050	.5134	.4363	.3714	.3166	.2703	.2311	.1978	.1456	.1078	.0929	.0802	.0600	.0451	.0258	.0150	.0089	.0054
18	.8360	.7002	.5874	.4936	.4155	.3503	.2959	.2502	.2120	.1799	.1300	.0946	.0808	.0691	.0508	.0376	.0208	.0118	.0068	.0039
19	.8277	.6864	.5703	.4746	.3957	.3305	.2765	.2317	.1945	.1635	.1161	.0829	.0703	.0596	.0431	.0313	.0168	.0092	.0051	.0029
20	.8195	.6730	.5537	.4564	.3769	.3118	.2584	.2145	.1784	.1486	.1037	.0728	.0611	.0514	.0365	.0261	.0135	.0072	.0039	.0021
25	.7798	.6095	.4776	.3751	.2953	.2330	.1842	.1460	.1160	.0923	.0588	.0378	.0304	.0245	.0160	.0105	.0046	.0021	.0010	.0005
30	.7419	.5521	.4120	.3083	.2314	.1741	.1314	.0994	.0754	.0573	.0334	.0196	.0151	.0116	.0070	.0042	.0016	.0006	.0002	.0001
40	.6717	.4529	.3066	.2083	.1420	.0972	.0668	.0460	.0318	.0221	.0107	.0053	.0037	.0026	.0013	.0007	.0002	.0001	*	*
50	.6080	.3715	.2281	.1407	.0872	.0543	.0339	.0213	.0134	.0085	.0035	.0014	.0009	.0006	.0003	.0001	*	*	*	*
60	.5504	.3048	.1697	.0951	.0535	.0303	.0173	.0099	.0057	.0033	.0011	.0004	.0002	.0001	*	*	*	*	*	*

* The factor is zero to four decimal places.

Present Value of an Annuity of $1 Per Period for n Periods: $PVIFA = \sum_{i=1}^{n} \frac{1}{(1+k)^i} = \frac{1 - \frac{1}{(1+k)^n}}{k}$

Number of Payments	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	15%	16%	18%	20%	24%	28%	32%
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.8929	0.8772	0.8696	0.8621	0.8475	0.8333	0.8065	0.7813	0.7576
2	1.9704	1.9416	1.9135	1.8861	1.8594	1.8334	1.8080	1.7833	1.7591	1.7355	1.6901	1.6467	1.6257	1.6052	1.5656	1.5278	1.4568	1.3916	1.3315
3	2.9410	2.8839	2.8286	2.7751	2.7232	2.6730	2.6243	2.5771	2.5313	2.4869	2.4018	2.3216	2.2832	2.2459	2.1743	2.1065	1.9813	1.8684	1.7663
4	3.9020	3.8077	3.7171	3.6299	3.5460	3.4651	3.3872	3.3121	3.2397	3.1699	3.0373	2.9137	2.8550	2.7982	2.6901	2.5887	2.4043	2.2410	2.0957
5	4.8534	4.7135	4.5797	4.4518	4.3295	4.2124	4.1002	3.9927	3.8897	3.7908	3.6048	3.4331	3.3522	3.2743	3.1272	2.9906	2.7454	2.5320	2.3452
6	5.7955	5.6014	5.4172	5.2421	5.0757	4.9173	4.7665	4.6229	4.4859	4.3553	4.1114	3.8887	3.7845	3.6847	3.4976	3.3255	3.0205	2.7594	2.5342
7	6.7282	6.4720	6.2303	6.0021	5.7864	5.5824	5.3893	5.2064	5.0330	4.8684	4.5638	4.2883	4.1604	4.0386	3.8115	3.6046	3.2423	2.9370	2.6775
8	7.6517	7.3255	7.0197	6.7327	6.4632	6.2098	5.9713	5.7466	5.5348	5.3349	4.9676	4.6389	4.4873	4.3436	4.0776	3.8372	3.4212	3.0758	2.7860
9	8.5660	8.1622	7.7861	7.4353	7.1078	6.8017	6.5152	6.2469	5.9952	5.7590	5.3282	4.9464	4.7716	4.6065	4.3030	4.0310	3.5655	3.1842	2.8681
10	9.4713	8.9826	8.5302	8.1109	7.7217	7.3601	7.0236	6.7101	6.4177	6.1446	5.6502	5.2161	5.0188	4.8332	4.4941	4.1925	3.6819	3.2689	2.9304
11	10.3676	9.7868	9.2526	8.7605	8.3064	7.8869	7.4987	7.1390	6.8052	6.4951	5.9377	5.4527	5.2337	5.0286	4.6560	4.3271	3.7757	3.3351	2.9776
12	11.2551	10.5753	9.9540	9.3851	8.8633	8.3838	7.9427	7.5361	7.1607	6.8137	6.1944	5.6603	5.4206	5.1971	4.7932	4.4392	3.8514	3.3868	3.0133
13	12.1337	11.3484	10.6350	9.9856	9.3936	8.8527	8.3577	7.9038	7.4869	7.1034	6.4235	5.8424	5.5831	5.3423	4.9095	4.5327	3.9124	3.4272	3.0404
14	13.0037	12.1062	11.2961	10.5631	9.8986	9.2950	8.7455	8.2442	7.7862	7.3667	6.6282	6.0021	5.7245	5.4675	5.0081	4.6106	3.9616	3.4587	3.0609
15	13.8651	12.8493	11.9379	11.1184	10.3797	9.7122	9.1079	8.5595	8.0607	7.6061	6.8109	6.1422	5.8474	5.5755	5.0916	4.6755	4.0013	3.4834	3.0764
16	14.7179	13.5777	12.5611	11.6523	10.8378	10.1059	9.4466	8.8514	8.3126	7.8237	6.9740	6.2651	5.9542	5.6685	5.1624	4.7296	4.0333	3.5026	3.0882
17	15.5623	14.2919	13.1661	12.1657	11.2741	10.4773	9.7632	9.1216	8.5436	8.0216	7.1196	6.3729	6.0472	5.7487	5.2223	4.7746	4.0591	3.5177	3.0971
18	16.3983	14.9920	13.7535	12.6593	11.6896	10.8276	10.0591	9.3719	8.7556	8.2014	7.2497	6.4674	6.1280	5.8178	5.2732	4.8122	4.0799	3.5294	3.1039
19	17.2260	15.6785	14.3238	13.1339	12.0853	11.1581	10.3356	9.6036	8.9501	8.3649	7.3658	6.5504	6.1982	5.8775	5.3162	4.8435	4.0967	3.5386	3.1090
20	18.0456	16.3514	14.8775	13.5903	12.4622	11.4699	10.5940	9.8181	9.1285	8.5136	7.4694	6.6231	6.2593	5.9288	5.3527	4.8696	4.1103	3.5458	3.1129
25	22.0232	19.5235	17.4131	15.6221	14.0939	12.7834	11.6536	10.6748	9.8226	9.0770	7.8431	6.8729	6.4641	6.0971	5.4669	4.9476	4.1474	3.5640	3.1220
30	25.8077	22.3965	19.6004	17.2920	15.3725	13.7648	12.4090	11.2578	10.2737	9.4269	8.0552	7.0027	6.5660	6.1772	5.5168	4.9789	4.1601	3.5693	3.1242
40	32.8347	27.3555	23.1148	19.7928	17.1591	15.0463	13.3317	11.9246	10.7574	9.7791	8.2438	7.1050	6.6418	6.2335	5.5482	4.9966	4.1659	3.5712	3.1250
50	39.1961	31.4236	25.7298	21.4822	18.2559	15.7619	13.8007	12.2335	10.9617	9.9148	8.3045	7.1327	6.6605	6.2463	5.5541	4.9595	4.1666	3.5714	3.1250
60	44.9550	34.7609	27.6756	22.6235	18.9293	16.1614	14.0392	12.3766	11.0480	9.9672	8.3240	7.1401	6.6651	6.2402	5.5553	4.9999	4.1667	3.5714	3.1250

Future Value of $1 at the End of n Periods: $FVIF_{k,n} = (1 + k)^n$

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	15%	16%	18%	20%	24%	28%	32%	36%
1	1.0100	1.0200	1.0300	1.0400	1.0500	1.0600	1.0700	1.0800	1.0900	1.1000	1.1200	1.1400	1.1500	1.1600	1.1800	1.2000	1.2400	1.2800	1.3200	1.3600
2	1.0201	1.0404	1.0609	1.0816	1.1025	1.1236	1.1449	1.1664	1.1881	1.2100	1.2544	1.2996	1.3225	1.3456	1.3924	1.4400	1.5376	1.6384	1.7424	1.8496
3	1.0303	1.0612	1.0927	1.1249	1.1576	1.1910	1.2250	1.2597	1.2950	1.3310	1.4049	1.4815	1.5209	1.5609	1.6430	1.7280	1.9066	2.0972	2.3000	2.5155
4	1.0406	1.0824	1.1255	1.1699	1.2155	1.2625	1.3108	1.3605	1.4116	1.4641	1.5735	1.6890	1.7490	1.8106	1.9388	2.0736	2.3642	2.6844	3.0360	3.4210
5	1.0510	1.1041	1.1593	1.2167	1.2763	1.3382	1.4026	1.4693	1.5386	1.6105	1.7623	1.9254	2.0114	2.1003	2.2878	2.4883	2.9316	3.4360	4.0075	4.6526
6	1.0615	1.1262	1.1941	1.2653	1.3401	1.4185	1.5007	1.5869	1.6771	1.7716	1.9738	2.1950	2.3131	2.4364	2.6996	2.9860	3.6352	4.3988	5.2899	6.3275
7	1.0721	1.1487	1.2299	1.3159	1.4071	1.5036	1.6058	1.7138	1.8280	1.9487	2.2107	2.5023	2.6600	2.8262	3.1855	3.5832	4.5077	5.6295	6.9826	8.6054
8	1.0829	1.1717	1.2668	1.3686	1.4775	1.5938	1.7182	1.8509	1.9926	2.1436	2.4760	2.8526	3.0590	3.2784	3.7589	4.2998	5.5895	7.2058	9.2170	11.703
9	1.0937	1.1951	1.3048	1.4233	1.5513	1.6895	1.8385	1.9990	2.1719	2.3579	2.7731	3.2519	3.5179	3.8030	4.4355	5.1598	6.9310	9.2234	12.166	15.916
10	1.1046	1.2190	1.3439	1.4802	1.6289	1.7908	1.9672	2.1589	2.3674	2.5937	3.1058	3.7072	4.0456	4.4114	5.2338	6.1917	8.5944	11.805	16.059	21.646
11	1.1157	1.2434	1.3842	1.5395	1.7103	1.8983	2.1049	2.3316	2.5804	2.8531	3.4785	4.2262	4.6524	5.1175	6.1759	7.4301	10.657	15.111	21.198	29.459
12	1.1268	1.2682	1.4258	1.6010	1.7959	2.0122	2.2522	2.5182	2.8127	3.1384	3.8960	4.8179	5.3502	5.9360	7.2876	8.9161	13....	19.342	27.982	40.037
13	1.1381	1.2936	1.4685	1.6651	1.8856	2.1329	2.4098	2.7196	3.0658	3.4523	4.3635	5.4924	6.1528	6.8858	8.5994	10.699	16.386	24.758	36.937	54.451
14	1.1495	1.3195	1.5126	1.7317	1.9799	2.2609	2.5785	2.9372	3.3417	3.7975	4.8871	6.2613	7.0757	7.9875	10.147	12.839	20.319	31.691	48.756	74.053
15	1.1610	1.3459	1.5580	1.8009	2.0789	2.3966	2.7590	3.1722	3.6425	4.1772	5.4736	7.1379	8.1371	9.2655	11.973	15.407	25.195	40.564	64.358	100.71
16	1.1726	1.3728	1.6047	1.8730	2.1829	2.5404	2.9522	3.4259	3.9703	4.5950	6.1304	8.1372	9.3576	10.748	14.129	18.488	31.242	51.923	84.953	136.96
17	1.1843	1.4002	1.6528	1.9479	2.2920	2.6928	3.1588	3.7000	4.3276	5.0545	6.8660	9.2765	10.761	12.467	16.672	22.186	38.740	66.461	112.13	186.27
18	1.1961	1.4282	1.7024	2.0258	2.4066	2.8543	3.3799	3.9960	4.7171	5.5599	7.6900	10.575	12.375	14.462	19.673	26.623	48.038	85.070	148.02	253.33
19	1.2081	1.4568	1.7535	2.1068	2.5270	3.0256	3.6165	4.3157	5.1417	6.1159	8.6128	12.055	14.231	16.776	23.214	31.948	59.567	108.89	195.39	344.53
20	1.2202	1.4859	1.8061	2.1911	2.6533	3.2071	3.8697	4.6610	5.6044	6.7275	9.6463	13.743	16.366	19.460	27.393	38.337	73.864	139.37	257.91	468.57
21	1.2324	1.5157	1.8603	2.2788	2.7860	3.3996	4.1406	5.0338	6.1088	7.4002	10.803	15.667	18.821	22.574	32.323	46.005	91.591	178.40	340.44	637.26
22	1.2447	1.5460	1.9161	2.3699	2.9253	3.6035	4.4304	5.4365	6.6586	8.1403	12.100	17.861	21.644	26.186	38.142	55.206	113.57	228.35	449.39	866.67
23	1.2572	1.5769	1.9736	2.4647	3.0715	3.8197	4.7405	5.8715	7.2579	8.9543	13.552	20.361	24.891	30.376	45.007	66.247	140.83	292.30	593.19	1178.6
24	1.2697	1.6084	2.0328	2.5633	3.2251	4.0489	5.0724	6.3412	7.9111	9.8497	15.178	23.212	28.625	35.236	53.108	79.496	174.63	374.14	783.02	1602.9
25	1.2824	1.6406	2.0938	2.6658	3.3864	4.2919	5.4274	6.8485	8.6231	10.834	17.000	26.461	32.918	40.874	62.668	95.396	216.54	478.98	1033.5	2180.0
26	1.2953	1.6734	2.1566	2.7725	3.5557	4.5494	5.8074	7.3964	9.3992	11.918	19.040	30.166	37.856	47.414	73.948	114.47	268.51	612.99	1364.3	2964.9
27	1.3082	1.7069	2.2213	2.8834	3.7335	4.8223	6.2139	7.9881	10.245	13.110	21.324	34.389	43.535	55.000	87.259	137.37	332.95	784.63	1800.9	4032.2
28	1.3213	1.7410	2.2879	2.9987	3.9201	5.1117	6.6488	8.6271	11.167	14.421	23.883	39.204	50.065	63.800	102.96	164.84	412.86	1004.3	2377.2	5483.8
29	1.3345	1.7758	2.3566	3.1187	4.1161	5.4184	7.1145	9.3173	12.172	15.863	26.749	44.693	57.575	74.008	121.50	197.81	511.95	1285.5	3137.9	7458.0
30	1.3478	1.8114	2.4273	3.2434	4.3219	5.7435	7.6123	10.062	13.267	17.449	29.959	50.950	66.211	85.849	143.37	237.37	634.81	1645.5	4142.0	10143
40	1.4889	2.2080	3.2620	4.8010	7.0400	10.285	14.974	21.724	31.409	45.259	93.050	188.88	267.86	378.72	750.37	1469.7	5455.9	19426	66520	*
50	1.6446	2.6916	4.3839	7.1067	11.467	18.420	29.457	46.901	74.357	117.39	289.00	700.23	1083.6	1670.7	3927.3	9100.4	46890	*	*	*
60	1.8167	3.2810	5.8916	10.519	18.679	32.987	57.946	101.25	176.03	304.48	897.59	2595.9	4383.9	7370.1	20555	56347	*	*	*	*

* $FVIFA > 99.999$

Sum of an Annuity of $1 Per Period for *n* Periods: $FVIFA_{i,n} = \sum_{i=1}^{n} (1 + k)^{n-1} = \frac{(1 + k)^{n-1}}{k}$

Number of Periods	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	15%	16%	18%	20%	24%	28%	32%	36%
1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2	2.0100	2.0200	2.0300	2.0400	2.0500	2.0600	2.0700	2.0800	2.0900	2.1000	2.1200	2.1400	2.1500	2.1600	2.1800	2.2000	2.2400	2.2800	2.3200	2.3600
3	3.0301	3.0604	3.0909	3.1216	3.1525	3.1836	3.2149	3.2464	3.2781	3.3100	3.3744	3.4396	3.4725	3.5056	3.5724	3.6400	3.7776	3.9184	4.0624	4.2096
4	4.0604	4.1216	4.1836	4.2465	4.3101	4.3746	4.4399	4.5061	4.5731	4.6410	4.7793	4.9211	4.9934	5.0665	5.2154	5.3680	5.6842	6.0156	6.3624	6.7251
5	5.1010	5.2040	5.3091	5.4163	5.5256	5.6371	5.7507	5.8666	5.9847	6.1051	6.3528	6.6101	6.7424	6.8771	7.1542	7.4416	8.0484	8.6999	9.3983	10.146
6	6.1520	6.3081	6.4684	6.6330	6.8019	6.9753	7.1533	7.3359	7.5233	7.7156	8.1152	8.5355	8.7537	8.9775	9.4420	9.9299	10.980	12.135	13.405	14.798
7	7.2135	7.4343	7.6625	7.8983	8.1420	8.3938	8.6540	8.9228	9.2004	9.4872	10.089	10.730	11.066	11.413	12.141	12.915	14.615	16.533	18.695	21.126
8	8.2857	8.5830	8.8923	9.2142	9.5491	9.8975	10.259	10.636	11.028	11.435	12.299	13.232	13.726	14.240	15.327	16.499	19.122	22.163	25.678	29.731
9	9.3685	9.7546	10.159	10.582	11.026	11.491	11.978	12.487	13.021	13.579	14.775	16.085	16.785	17.518	19.085	20.798	24.712	29.369	34.895	41.435
10	10.462	10.949	11.463	12.006	12.577	13.180	13.816	14.486	15.192	15.937	17.548	19.337	20.303	21.321	23.521	25.958	31.643	38.592	47.061	57.351
11	11.566	12.168	12.807	13.486	14.206	14.971	15.783	16.645	17.560	18.531	20.654	23.044	24.349	25.732	28.755	32.150	40.237	50.398	63.121	78.998
12	12.682	13.412	14.192	15.025	15.917	16.869	17.888	18.977	20.140	21.384	24.133	27.270	29.001	30.850	34.931	39.580	50.894	65.510	84.320	108.43
13	13.809	14.680	15.617	16.626	17.713	18.882	20.140	21.495	22.953	24.522	28.029	32.088	34.351	36.786	42.218	48.496	64.109	84.852	112.30	148.47
14	14.947	15.973	17.086	18.291	19.598	21.015	22.550	24.214	26.019	27.975	32.392	37.581	40.504	43.672	50.818	59.195	80.496	109.61	149.23	202.92
15	16.096	17.293	18.598	20.023	21.578	23.276	25.129	27.152	29.360	31.772	37.279	43.842	47.580	51.659	60.965	72.035	100.81	141.30	197.99	276.97
16	17.257	18.639	20.156	21.824	23.657	25.672	27.888	30.324	33.003	35.949	42.753	50.980	55.717	60.925	72.939	87.442	126.01	181.86	262.35	377.69
17	18.430	20.012	21.761	23.697	25.840	28.212	30.840	33.750	36.973	40.544	48.883	59.117	65.075	71.673	87.068	105.93	157.25	233.79	347.30	514.66
18	19.614	21.412	23.414	25.645	28.132	30.905	33.999	37.450	41.301	45.599	55.749	68.394	75.836	84.140	103.74	128.11	195.99	300.25	459.44	700.93
19	20.810	22.840	25.116	27.671	30.539	33.760	37.379	41.446	46.018	51.159	63.439	78.969	88.211	98.603	123.41	154.74	244.03	385.32	607.47	954.27
20	22.019	24.297	26.870	29.778	33.066	36.785	40.995	45.762	51.160	57.275	72.052	91.024	102.44	115.37	146.62	186.68	303.60	494.21	802.86	1298.8
21	23.239	25.783	28.676	31.969	35.719	39.992	44.865	50.422	56.764	64.002	81.698	104.76	118.81	134.84	174.02	225.02	377.46	633.59	1060.7	1767.3
22	24.471	27.299	30.536	34.248	38.505	43.392	49.005	55.456	62.873	71.402	92.502	120.43	137.63	157.41	206.34	271.03	469.05	811.99	1401.2	2404.6
23	25.716	28.845	32.452	36.617	41.430	46.995	53.436	60.893	69.531	79.543	104.60	138.29	159.27	183.60	244.48	326.23	582.62	1040.3	1850.6	3271.3
24	26.973	30.421	34.426	39.082	44.502	50.815	58.176	66.764	76.789	88.497	118.15	158.65	184.16	213.97	289.49	392.48	723.46	1332.6	2443.8	4449.9
25	28.243	32.030	36.459	41.645	47.727	54.864	63.249	73.105	84.700	98.347	133.33	181.87	212.79	249.21	342.60	471.98	898.09	1706.8	3226.8	6052.9
26	29.525	33.670	38.553	44.311	51.113	59.156	68.676	79.954	93.323	109.18	150.33	208.33	245.71	290.08	405.27	567.37	1114.6	2185.7	4260.4	8233.0
27	30.820	35.344	40.709	47.084	54.669	63.705	74.483	87.350	102.72	121.09	169.37	238.49	283.56	337.50	479.22	681.85	1383.1	2798.7	5624.7	11197.9
28	32.129	37.051	42.930	49.967	58.402	68.528	80.697	95.338	112.96	134.20	190.69	272.88	327.10	392.50	566.48	819.22	1716.0	3583.3	7425.6	15250.2
29	33.450	38.792	45.218	52.966	62.322	73.639	87.346	103.96	124.13	148.63	214.58	312.09	377.16	456.30	669.44	984.06	2128.9	4587.6	9802.9	20714.1
30	34.784	40.568	47.575	56.084	66.438	79.058	94.460	113.28	136.30	164.49	241.33	356.78	434.74	530.31	790.94	1181.8	2640.9	5873.2	12940.	28172.2
40	48.886	60.402	75.401	95.025	120.79	154.76	199.63	259.05	337.88	442.59	767.09	1342.0	1779.0	2360.7	4163.2	7343.8	22728.	69377	*	*
50	64.463	84.579	112.79	152.66	209.34	290.33	406.52	573.76	815.08	1163.9	2400.0	4994.5	7217.7	10435	21813.	45497.	*	*	*	*
60	81.669	114.05	163.05	237.99	353.58	533.12	813.52	1253.2	1944.7	3034.8	7471.6	18535	29219	46057	*	*	*	*	*	*

* *FVIF* > 99.999

Value Line Data

THE VALUE LINE Investment Survey

Part 1 Summary & Index

File at the front of the *Ratings & Reports* binder. Last week's *Summary & Index* should be removed

September 10, 1993

TABLE OF SUMMARY-INDEX CONTENTS

SCREENS

The Median of Estimated
PRICE-EARNINGS RATIOS
of all stocks with earnings

16.6

26 Weeks Ago*	Market Low 12-23-74*	Market High 9-4-87*
16.9	4.8	16.9

The Median of
ESTIMATED YIELDS
(next 12 months) of all dividend paying stocks under review

2.5%

26 Weeks Ago*	Market Low 12-23-74*	Market High 9-4-87*
2.5%	7.8%	2.3%

The Estimated Median
APPRECIATION POTENTIAL
of all 1700 stocks in the hypothesized economic environment 3 to 5 years hence

55%

26 Weeks Ago*	Market Low 12-23-74*	Market High 9-4-87*
55%	234%	40%

*Estimated medians as published in *The Value Line Investment Survey* on the dates shown.

ANALYSES OF INDUSTRIES IN ALPHABETICAL ORDER WITH PAGE NUMBER

Numeral in parenthesis after the industry is rank for probable performance (next 12 months).

*Reviewed in this week's edition.

In three parts: This is Part 1, the Summary & Index. Part 2 is Selection & Opinion. Part 3 is Ratings & Reports. Volume XLVIII, No. 52.
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TIMELY STOCKS IN TIMELY INDUSTRIES

Page No.	Industry (Industry Rank)	Recent Price	Timeliness	Safety Rank	Beta	Current P/E Ratio	Est'd Yield	Estimated Range of 3-5 Year Appreciation
	Semiconductor (INDUSTRY RANK 1)							
1059	Advanced Micro Dev.	32	2	4	1.80	12.3	NIL	N- 55%
1060	Analog Devices	25	1	3	1.35	26.8	NIL	20-100%
1061	Applied Materials	72	1	3	1.65	29.0	NIL	N- 5%
1063	Cypress Semiconductor	15	2	3	1.25	30.0	NIL	35-100%
1064	Integrated Device	17	1	4	1.50	28.8	NIL	10- 75%
1065	Intel Corp.	64	1	3	1.35	12.4	0.4%	0- 65%
1067	Kulicke & Soffe	27	1	4	1.45	18.8	NIL	N- N%
1068	Micron Technology	52	1	4	1.70	19.8	0.2%	N- 25%
1069	Motorola, Inc.	95	1	3	1.20	31.7	0.5%	N- 5%
1070	National Semiconductor	18	1	4	1.55	16.5	NIL	10- 95%
1071	Novellus Sys.	36	2	4	1.80	40.0	NIL	N- 40%
1072	Teradyne Inc.	28	2	4	1.20	31.1	NIL	N- 25%
1073	Texas Instruments	80	1	3	1.35	18.8	1.0%	N- 25%
1074	VLSI Technology	14	2	4	1.35	35.0	NIL	30-115%
	Securities Brokerage (INDUSTRY RANK 2)							
1185	Alex. Brown	27	2	3	1.80	6.8	2.2%	10- 85%
1186	Bear Stearns	24	1	3	1.60	7.2	2.5%	45-130%
1187	Edwards (A G)	28	2	3	1.65	9.3	2.1%	45-115%
1188	Inter-Regional Fin'l	25	2	3	1.45	5.4	1.3%	20-100%
1190	Merrill Lynch & Co.	95	1	3	1.75	9.0	1.5%	15- 75%
1191	Morgan Stanley	83	1	3	1.50	9.2	1.3%	0- 50%
1192	PaineWebber Group	33	2	3	1.75	8.6	1.8%	35-110%
1193	Quick & Reilly Group	36	1	3	1.65	10.0	1.1%	25- 95%
1194	Raymond James Fin'l	26	2	3	1.35	7.7	1.2%	55-110%
1195	Salomon Inc.	52	2	3	1.20	8.3	1.2%	55-120%
1196	Schwab (Charles)	34	2	4	1.80	20.6	0.6%	20- 90%
	Auto Parts (Replacement) (INDUSTRY RANK 3)							
114	Allen Group	50	1	3	1.35	21.7	0.5%	N- 40%
115	Echlin Inc.	28	2	3	1.05	17.3	2.7%	N- 25%
116	Federal-Mogul	26	2	3	1.00	22.6	1.8%	N- 35%
118	Republic Automotive	11	2	4	0.95	13.8	NIL	10-125%
120	Standard Motor Prod.	24	1	3	0.75	21.8	1.3%	N- 45%
121	Wynn's Int'l	30	2	3	0.90	12.8	2.2%	15- 85%
	Manuf. Housing/Rec Veh (INDUSTRY RANK 4)							
1539	Champion Enterprises	14	1	4	1.10	10.8	NIL	45-150%
1540	Clayton Homes	26	2	3	1.20	20.5	NIL	15- 75%
1541	Coachmen Ind.	12	2	4	1.35	7.3	1.7%	65-190%
1543	Oakwood Homes	23	1	3	1.50	18.5	0.4%	30- 75%
1546	Winnebago	8⅛	2	5	1.20	20.7	NIL	10- 70%
	Financial Services (INDUSTRY RANK 5)							
2046	ADVANTA Corp. 'A'	55	1	4	1.70	20.4	0.5%	0- 65%
2049	Amer. Express	33	1	3	1.50	11.4	3.0%	50-140%
2052	CUC Int'l	34	1	3	1.35	45.3	NIL	5- 60%
2054	Countrywide Credit	29	2	4	1.60	10.2	1.7%	55-140%
2056	First Financial Mgmt.	47	2	3	1.45	22.4	0.2%	N- 40%
2057	Franklin Resources	46	2	3	1.40	21.3	0.6%	N- 40%
2058	Green Tree	48	1	4	1.60	14.6	0.7%	N- 45%
2066	Price (T. Rowe) Assoc.	60	1	3	1.40	20.0	1.4%	15- 85%
2067	Primerica Corp.	45	1	3	1.55	15.0	1.1%	20- 90%
2070	SunAmerica Inc.	41	2	4	1.60	14.3	0.7%	N- 70%
2071	Transamerica	59	2	3	1.05	11.7	3.5%	20- 80%
2073	United Asset Mgmt.	47	1	3	1.00	26.9	1.9%	N- 40%
	Retail Building Supply (INDUSTRY RANK 6)							
888	Hechinger Co. 'A'	12	2	3	0.95	15.0	1.4%	35-110%
889	Home Depot	42	2	3	1.55	40.0	0.3%	20- 90%
890	Hughes Supply	19	2	3	0.75	15.8	0.8%	N- 30%
891	Lowe's Cos.	40	1	3	1.40	26.7	0.9%	0- 50%
	Broadcasting/Cable TV (INDUSTRY RANK 7)							
380	Belo (A.H.) 'A' Corp	47	2	3	0.80	20.9	1.3%	50-125%
381	CBS Inc.	266	2	1	0.95	15.5	0.4%	35- 65%
386	Multimedia, Inc.	32	2	3	0.90	18.4	NIL	40-135%
388	Turner Broadc. 'B'	25	2	4	1.20	55.6	0.3%	40-120%
389	Viacom Inc. 'A'	67	1	3	1.15	38.3	NIL	N- 35%
	Furn./Home Furnishings (INDUSTRY RANK 9)							
905	Flexsteel Inds.	15	2	3	0.60	16.3	3.2%	N- 35%
910	Leggett & Platt	42	1	3	0.85	21.0	1.3%	N- 45%
911	Miller (Herman)	28	2	3	0.85	20.4	1.9%	N- 25%
912	Shaw Inds.	45	1	3	1.45	27.8	0.8%	0- 45%
	Steel (Integrated) (INDUSTRY RANK 8)							
1407	Acme Metals	17	2	3	0.60	16.2	NIL	45-135%
1411	Inland Steel	27	2	3	1.20	NMF	NIL	10-120%
1413	Stelco Inc 'A'	4⅛	2	5	1.00	NMF	NIL	N- 60%
	Insurance (Life) (INDUSTRY RANK 10)							
1198	AFLAC Inc.	33	2	3	1.15	14.7	1.3%	5- 50%
1200	Capital Holding Corp.	43	2	3	1.30	12.6	1.7%	5- 50%
1201	Conseco, Inc.	62	2	4	1.45	8.7	0.8%	5- 70%
1203	Jefferson-Pilot Corp	56	2	2	0.95	12.9	2.8%	25- 60%
1207	Torchmark Corp	59	2	2	1.05	14.4	1.9%	N- 20%
1208	UNUM Corp	58	2	3	1.15	14.3	1.4%	5- 45%
1211	Washington National	24	2	3	0.85	11.4	4.5%	25- 90%
	Bank (Midwest) (INDUSTRY RANK 11)							
643	Banc One Corp.	41	2	3	1.30	12.5	3.0%	45-120%
647	Cont'l Bank Corp.	25	2	4	1.50	6.5	2.4%	20-100%
648	Fifth Third Bancorp	54	2	2	0.95	16.9	1.8%	0- 40%
652	Firstar Corp.	33	2	2	0.85	10.8	3.2%	20- 65%
654	Huntington Bancshs.	27	1	2	0.90	12.0	3.0%	10- 50%
655	Liberty Nat'l Bancorp	28	2	2	0.85	13.7	2.5%	N- 25%
656	Marshall & Ilsley	24	2	2	0.95	13.0	2.3%	5- 45%
662	Norwest Corp.	26	1	3	1.15	12.7	2.7%	35- 90%
663	Old Kent Financial	35	2	2	0.90	11.5	3.0%	15- 55%
665	Star Banc Corp.	35	2	3	0.85	10.6	3.3%	30- 85%
	Bank (INDUSTRY RANK 12)							
2008	Bankers Trust NY	80	2	3	1.25	7.4	3.9%	25- 90%
2011	Chase Manhattan	35	2	4	1.40	58.3	3.4%	15- 85%
2012	Chemical Banking Corp.	40	2	3	1.60	8.2	3.4%	25- 90%
2013	Citicorp	33	2	4	1.30	12.2	NIL	5- 65%
2017	First Alabama	32	2	2	0.95	10.5	3.3%	25- 70%
2020	First Interstate Bancorp	62	1	3	1.60	10.3	2.6%	15- 70%
2021	First Union Corp.	45	2	3	1.10	9.5	3.6%	45-110%
2022	First Va. Banks	37	2	2	1.05	10.3	3.0%	50-105%
2024	KeyCorp	39	2	3	1.15	10.3	3.4%	30- 80%
2028	Midlantic Corp.	26	1	5	1.75	16.3	NIL	N- 75%
2033	Shawmut National	24	2	4	1.55	15.5	1.7%	25-110%
2035	SouthTrust Corp	19	2	3	1.00	9.7	3.4%	30-110%
2037	SunTrust Banks	43	2	2	1.10	11.5	2.6%	40- 85%
2038	Synovus Financial	20	2	3	0.65	18.2	1.9%	25-100%
2039	UJB Financial Corp	29	2	4	1.35	16.6	2.2%	5- 90%
2042	Wachovia Corp	35	2	2	1.00	12.5	3.1%	30- 70%
2044	Zions Bancorp	43	2	3	0.85	10.0	2.0%	5- 65%
	Recreation (INDUSTRY RANK 13)							
1754	Carnival Cruise 'A'	41	2	3	1.55	18.2	1.5%	N- 45%
1756	Cineplex Odeon	2½	2	5	1.45	NMF	NIL	20-180%
1757	Club Med	28	2	3	1.05	11.6	1.1%	25- 80%
1759	Electronic Arts	35	1	3	1.80	41.2	NIL	0- 30%
1762	Harcourt General	41	2	3	0.85	20.5	1.5%	10- 60%
1763	Harley-Davidson	43	1	3	1.60	22.6	0.6%	5- 65%
1764	Huffy Corp.	20	2	3	1.15	13.8	1.7%	25-100%
1766	King World Productions	26	2	3	1.15	13.3	NIL	10- 55%
1772	WMS Industries	27	2	4	1.65	20.1	NIL	30-105%
	Natural Gas(Diversified) (INDUSTRY RANK 14)							
456	Enron Corp.	36	2	3	0.85	25.2	2.0%	N- 25%
460	Mitchell Energy 'A'	28	2	3	0.65	21.5	1.7%	5- 60%
462	Panhandle Eastern	26	2	3	1.00	17.9	3.1%	15- 75%
464	Sonat Inc.	70	1	3	0.95	20.9	3.1%	N- 30%
465	Southwestern Energy	21	1	3	0.65	19.3	1.1%	20- 65%
466	Tenneco, Inc.	53	2	3	1.20	21.2	3.0%	N- 30%
469	Williams Cos	60	2	3	1.05	16.9	2.5%	10- 60%
	Cement & Aggregates (INDUSTRY RANK 15)							
895	Dravo Corp.	11	2	3	1.00	22.0	NIL	55-125%
896	Florida Rock	27	2	3	0.80	32.5	1.9%	N- 30%
899	Medusa Corp.	29	2	3	1.10	23.2	1.4%	5- 55%
900	Southdown, Inc.	17	2	4	0.95	NMF	NIL	10-105%
901	Texas Industries	23	2	3	0.85	34.8	0.9%	50-140%
	Gold/Silver Mining (INDUSTRY RANK 16)							
1220	Amer. Barrick Res	25	1	3	0.40	31.3	0.3%	60-190%
1222	Echo Bay Mines	12	2	3	0.35	NMF	0.7%	25-120%
1224	Hemlo Gold Mines	14	2	3	0.10	32.6	1.4%	5- 80%
1225	Homestake Mining	20	2	3	0.20	47.8	0.5%	25-105%

AMER. EXPRESS NYSE-AXP

RECENT PRICE 33 | P/E RATIO 11.4 (Trailing: 16.5 Median: 13.0) | RELATIVE P/E RATIO 0.69 | DIV'D YLD 3.0% | VALUE LINE 2049

TIMELINESS 1 (Relative Price Performance Next 12 Mos.) Highest
SAFETY 3 Average (Scale: 1 Highest to 5 Lowest)
BETA 1.50 (1.00 = Market)

1996-98 PROJECTIONS

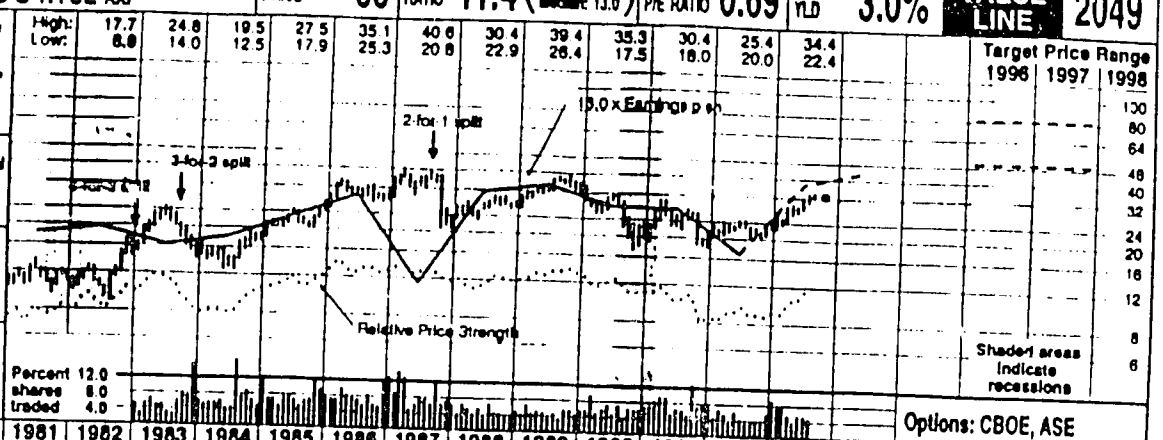
	Price	Gain	Ann'l Total Return
High	60	(+140%)	26%
Low	50	(+60%)	13%

Insider Decisions

	O	N	D	J	F	M	A	M	J
to Buy	0	0	0	0	1	0	1	0	0
Options	0	0	0	1	2	2	3	1	0
to Sell	0	0	0	1	0	3	2	2	0

Institutional Decisions

	3Q'92	4Q'92	1Q'93
to Buy	148	159	163
to Sell	176	211	187
Hld(000)	306891	333068	345174



Options: CBOE, ASE

1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	© VALUE LINE PUB., INC.	96-98
12.10	14.33	16.39	19.31	19.38	21.19	22.90	29.74	26.68	34.03	41.89	55.50	59.93	52.39	54.56	56.17	47.55	50.00	Revenues per sh A	70.00
.98	1.15	1.29	1.43	1.53	1.67	1.30	1.59	2.25	2.65	1.04	3.11	3.52	3.41	3.78	2.65	4.00	4.50	Travel Service Inc. p sh	6.00
.91	1.06	1.21	1.32	1.40	1.51	1.27	1.40	1.78	2.27	.87	2.43	2.70	2.12	2.11	1.31	2.90	3.40	Earnings per sh B	4.85
.33	.39	.45	.50	.51	.56	.63	.64	.66	.69	.78	.78	.86	.92	.94	1.00	1.00	1.00	Div'ds Decl'd per sh Cm	1.25
.12	.15	.32	.51	.50	.61	.34	.18	2.43	1.62	1.66	2.21	2.30	1.55	1.39	1.19	1.65	1.50	Investm. Serv. Inc. p sh	1.50
4.70	5.43	6.44	7.58	7.15	7.98	9.47	10.10	11.41	12.80	10.11	11.39	12.90	13.21	14.43	14.58	15.70	19.35	Book Value per sh	27.95
284.65	285.13	284.67	285.10	372.02	381.95	426.72	433.68	444.18	430.58	420.80	416.79	417.92	484.47	472.17	479.98	480.00	500.00	Common Shs Outst'g D	500.00
10.4	8.0	6.6	8.4	8.0	8.0	15.5	11.3	12.5	13.3	37.9	11.0	12.5	12.5	11.2	17.2	Bold figures are Value Line estimates		Avg Ann'l P/E Ratio	13.0
1.36	1.09	.96	.85	.97	.88	1.31	1.06	1.01	.90	2.53	.91	.86	.93	.72	1.05			Relative P/E Ratio	1.00
3.4%	4.5%	5.7%	5.9%	4.6%	4.6%	3.2%	4.1%	3.0%	2.3%	2.3%	2.9%	2.6%	3.5%	4.0%	4.4%			Avg Ann'l Div'd Yield	2.5%
9770.0	12895	11850	14662	17626	23122	25047	24332	25783	26961	23300	25000							Revenues ($mill) A	35000
17.3	20.2	23.8	13.3	27.2	30.7	34.1	36.5	38.6	34.7	34.0	33.5							Cards In Force ($mill)	35.0
2.4	2.8	2.9	134.0	64.0	277.0	333.0	603.0	4.4	4.9	5.0	5.0							Avg. Travellers Checks	6.0
515.0	610.0	810.0	1022.0	391.0	1038.0	1157.0	1018.0	1070.0	653.0	1500	1775							Net Profit ($mill)	2500
4%	17.1%	35.0%	30.9%	28.3%	25.8%	24.2%	27.5%	3.3%	3.3%	48.0%	35.0%							Income Tax Rate	30.0%
5.3%	4.7%	6.8%	7.0%	2.2%	4.5%	4.6%	4.2%	4.2%	2.4%	6.4%	7.1%							Net Profit Margin	7.1%
43981	61848	74777	99478	116434	142753	130855	137682	146441	172819	180000	200000							Total Assets ($mill)	250000
2301.0	3270.0	5008.0	7792.0	10022	11856	11744	10077	10379	15122	15300	15500							Long-Term Debt ($mill)	15000
4044.0	4607.0	5369.0	5726.0	4554.0	5048.0	5691.0	6835.0	7465.0	7499.0	8500	10450							Net Worth ($mill)	14775
10.3%	10.1%	10.4%	10.7%	5.4%	9.3%	9.4%	8.5%	8.2%	4.5%	10.5%	13.5%							% Earned Total Cap'l	12.5%
12.7%	13.2%	15.1%	17.8%	8.6%	20.6%	20.3%	15.3%	14.3%	8.7%	17.5%	17.0%							% Earned Net Worth	17.0%
6.5%	7.5%	9.9%	12.9%	2.0%	15.0%	14.5%	9.5%	8.7%	1.9%	10.0%	11.5%							% Retained to Comm Eq	12.5%
49%	46%	38%	31%	79%	31%	32%	43%	45%	80%	37%	33%							% All Div'ds to Net Prof	31%

CAPITAL STRUCTURE as of 6/30/93
ST Debt $22980 mill. Due in 5 Yrs $26350 mill.
LT Debt $15789 mill. LT Interest $1200
(LT Interest earned: 3.3x; total interest coverage: 2.7x) (66% of Cap'l)
Pension Liability $69.0 mill. in '92 vs. $69.0 mill in '91.

Pfd Stock $800 mill. Pfd Div'd $65.0 mill.
4,000,000 convertible Exchangeable Preferred Shares 7.75%; convertible into 12.2 million 8.5% non-transf. CAP preferred shares. (4% of Cap'l)
Common Stock 485,445,011 shs. (30% of Cap'l) as of 7/31/93

FINANCIAL POSITION (bill.)	1991	1992	6/30/93
Cash Assets	4876	7281	6167
Invest. Sec's	55828	72804	72272
Receivables	29882	31644	29456
Other	55855	61090	61366
[illegible] Assets	146441	172819	169261
[illegible]sits	24778	23480	16071
[illegible]nce Res.	17841	20073	22045
[illegible]	96357	121788	123102
[illegible] Liab.	138976	165341	161218

[illegible]UAL RATES	Past 10 Yrs.	Past 5 Yrs.	Est'd '90-'92 to '96-'98
[illegible]ings (per sh)	12.5%	11.5%	6.5%
[illegible]enues	8.5%	3.0%	15.0%
[illegible]ings	11.0%	6.0%	4.5%
[illegible]dends	10.5%	8.5%	7.5%
[illegible]k Value			

Calendar	QUARTERLY REVENUES ($ mill.) A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1990	5904	6062	6063	6303	24332
1991	6292	6363	6483	6625	25763
1992	6663	6888	6712	6669	26081
1993	5641	5680	5850	6129	23300
1994	6000	6150	6300	6550	25000

Calendar	EARNINGS PER SHARE B Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1990	.37	.73	.74	.28	2.12
1991	.55	.81	.28	.47	2.11
1992	.51	.38	.27	.15	1.31
1993	.75	.83	.72	.60	2.90
1994	.90	.90	.90	.80	3.40

Calendar	QUARTERLY DIVIDENDS PAID Cm Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1989	.21	.21	.21	.21	.84
1990	.23	.23	.23	.23	.92
1991	.23	.23	.23	.25	.94
1992	.25	.25	.25	.25	1.00
1993	.25	.25	.25		

BUSINESS: American Express Company is a travel, financial and information services organization. Principal subsidiaries are American Express Travel Related Services Co. (charge and credit cards, travellers checks, etc.), First Data Corp. (information and communications), Shearson Lehman (investment services), IDS Financial Services (financial planning, insurance and investment products), and American Express Bank (international banking). Sold remaining 19% interest in Fireman's Fund Corp. 8/89. Has 114,352 employees, 54,326 shareholders. Insiders own less than 1% of common (Proxy 4/93). President & Chief Executive Officer: Harvey Golub. Incorporated: New York. Address: 200 Vesey Street, New York, New York 10285. Telephone: 212-640-2000.

American Express's turnaround appears to have plenty of staying power. After several years of sub-par performance, American Express has broken out of an earnings slump by posting its most profitable quarter since the late Eighties and its second consecutive big year-over-year comparison. Some of the key reasons have been the major overhaul of the core Travel Related Services (TRS) businesses as well as a balance sheet clean-up (asset sales, writedowns). What's more, this ongoing profit recovery is also coming with the backdrop of recessionary conditions in some European markets as well as a very modest growth environment in the U.S. Low interest rates have been a crucial factor in providing reduced credit costs. Looking forward, the next two quarters face easy comparisons, but earnings may be uneven until the weak European economies are firmly in positive growth territory and the remaining part of the 'reengineering' effort in the Travel Related Services division is completed.

We're bullish on this equity for both the long term and the short term, notwithstanding the fairly sizable move in price over the preceding months. New top management at American Express seems to have been a major factor in accelerating the recovery process through a number of important actions taken since yearend. In our view, the efforts are just beginning to pay off. To be sure, we think changing fundamentals in the credit card industry and the less-than-spectacular economic growth in prospect in the industrialized West will play decisive roles in the company's long-term growth. However, we think AMEX can still get plenty of mileage out of its existing customer base (which should soon begin to stabilize) and the array of recently introduced highly-successful new programs (such as membership miles). From a financial standpoint, the balance sheet is stronger and much more reflective of true asset value. Thus, we believe there will be some room for annual dividend hikes over the next couple of years. There is also room for a revaluation of the price/earnings ratio as the earnings stream becomes more predictable, although this may be dependent on a friendlier competitive environment.

Peter Axue *September 10, 1993*

Company's Financial Strength	B+
Stock's Price Stability	50
Price Growth Persistence	30
Earnings Predictability	50

(A) Includes Shearson Lehman; Investors Diversified Services, from '84. Excludes Fireman's Fund as of '85. (B) Primary earnings. Excludes nonrecurring items: '86, 51¢; '87, 33¢; '90, d$1.87; '91, d52¢; '92, d42¢; '93, Q1, d69¢;. Next earnings report due late Oct. Excludes Fireman's Fund as of 1989. (C) Next dividend meeting about Nov. 22. Goes ex about Sep. 27. Dividend payment dates: about the 10th of Feb., May, Aug., Nov. (D) Dividend reinvestment plan available (3% discount). (E) In millions, adjusted for splits and dividends.

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AMER. ELEC. PWR. NYSE-AEP

RECENT PRICE 36 | P/E RATIO 13.3 (Trailing: 14.1 / Median: 9.5) | RELATIVE P/E RATIO 0.86 | DIV'D YLD 6.7% | VALUE LINE 159

TIMELINESS 4 (Relative Price Performance Next 12 Mos.) — Below Average
SAFETY 3 — Average
(Scale: 1 Highest to 5 Lowest)
BETA .75 (1.00 = Market)

1996-98 PROJECTIONS

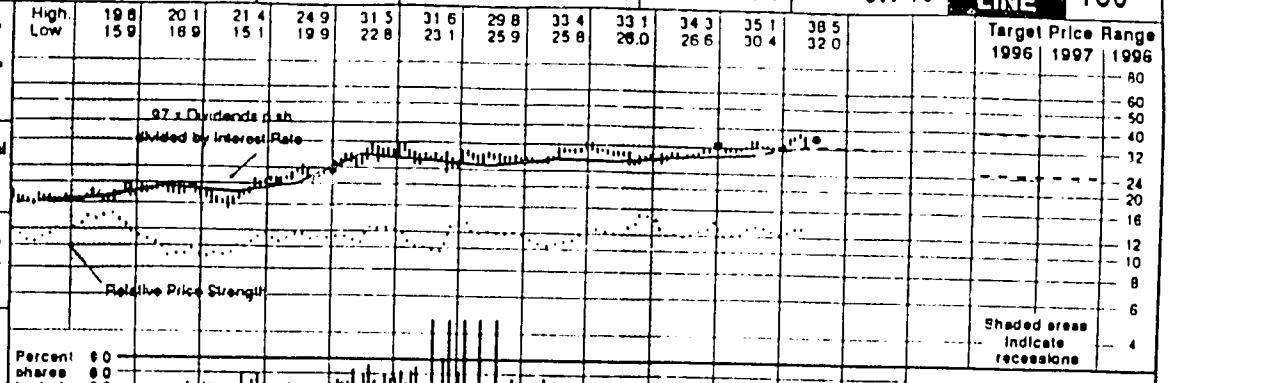
	Price	Gain	Ann'l Total Return
High	40	(+10%)	9%
Low	25	(-30%)	Nil

Insider Decisions

	J	A	S	O	N	D	J	F	M
to Buy	0	0	1	0	0	0	1	0	0
Options	0	0	0	0	0	0	0	0	0
to Sell	0	0	0	0	0	0	0	0	0

Institutional Decisions

	3Q'92	4Q'92	1Q'93
to Buy	93	82	92
to Sell	87	86	92
Hld's(000)	49195	49254	51746



Options: CBOE

1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	© VALUE LINE PUB., INC.	96-98
19.73	21.59	23.19	25.57	26.02	24.33	24.29	26.11	25.05	25.02	24.74	25.01	26.56	28.00	27.35	27.34	*28.45*	*29.50*	Revenues per sh	*32.25*
4.15	4.10	4.17	4.49	4.41	4.04	4.43	4.57	4.64	4.88	5.30	5.75	5.82	5.60	5.65	5.30	*5.90*	*6.20*	"Cash Flow" per sh	*7.20*
2.42	2.28	2.29	2.41	2.37	2.03	2.44	2.65	2.54	2.62	2.98	3.24	3.25	2.77	2.70	2.54	*2.70*	*2.85*	Earnings per sh (A)	*3.40*
2.08	2.14	2.19	2.23	2.26	2.26	2.26	2.34	2.26	2.26	2.34	2.34	2.36	2.40	2.40	2.40	*2.40*	*2.40*	Div'd Decl'd per sh (B)	*2.52*
7.87	7.98	7.68	6.40	5.21	5.39	4.91	4.79	3.26	3.21	4.07	4.32	4.33	3.64	3.45	3.39	*3.90*	*4.60*	Cap'l Spending per sh	*4.90*
21.42	21.46	21.32	21.07	20.61	20.15	20.24	20.39	20.35	20.71	20.94	21.84	22.71	22.58	22.88	23.01	*23.30*	*23.75*	Book Value per sh (C)	*25.90*
102.98	110.67	121.34	146.89	161.16	171.81	179.81	189.68	193.54	193.54	193.54	193.54	193.54	184.54	184.54	184.54	*184.55*	*184.55*	Common Shs Outst'g (D)	*184.55*
10.1	10.1	9.0	7.3	7.0	8.6	7.6	6.8	8.7	10.4	9.3	8.5	8.8	10.5	11.0	12.6	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*9.5*
1.32	1.38	1.30	.97	.85	.95	.64	.63	.71	.71	.62	.71	.67	.78	.70	.76			Relative P/E Ratio	*.75*
8.5%	9.3%	10.6%	12.6%	13.7%	13.0%	12.1%	13.0%	10.2%	8.3%	8.5%	8.5%	8.2%	8.2%	8.1%	7.5%			Avg Ann'l Div'd Yield	*7.8%*
4368.4	4951.9	4848.0	4842.8	4787.6	4840.8	5140.4	5167.5	5046.6	5044.8	*5250*	*5440*	Revenues ($mill)	*5950*
534.2	590.3	584.8	602.7	651.4	693.0	691.7	571.0	551.5	527.7	*560*	*590*	Net Profit ($mill)	*700*
33.3%	36.7%	38.5%	37.7%	33.2%	28.1%	29.8%	29.5%	26.5%	24.0%	*30.0%*	*31.0%*	Income Tax Rate	*34.0%*
42.0%	39.7%	20.9%	22.9%	23.3%	24.1%	26.8%	14.9%	4.6%	1.8%	*3.0%*	*4.5%*	AFUDC % to Net Profit	*3.0%*
54.9%	54.0%	52.7%	52.6%	53.6%	52.2%	47.0%	51.2%	49.5%	50.6%	*50.5%*	*51.0%*	Long-Term Debt Ratio	*51.5%*
35.3%	36.7%	38.0%	38.6%	38.9%	40.7%	45.7%	42.0%	43.6%	41.9%	*42.0%*	*41.5%*	Common Equity Ratio	*41.0%*
10322	10548	10355	10380	10407	10394	v9611.3	9922.5	9687.5	10137	*10200*	*10550*	Total Capital ($mill)	*11690*
10685	11040	10971	10881	11173	11703	10843	11064	11196	11228	*11435*	*11820*	Net Plant ($mill)	*13235*
7.9%	8.5%	8.5%	8.5%	8.8%	9.2%	9.8%	7.8%	7.8%	7.3%	*7.5%*	*7.5%*	% Earned Total Cap'l	*8.0%*
11.5%	12.2%	11.9%	12.3%	13.5%	13.9%	13.6%	11.8%	11.3%	10.5%	*11.0%*	*11.5%*	% Earned Net Worth	*12.5%*
11.8%	12.6%	12.3%	12.7%	14.1%	14.8%	14.3%	12.4%	11.8%	11.0%	*11.5%*	*12.0%*	% Earned Comm Equity (D)	*13.0%*
9%	15%	13%	17%	29%	41%	39%	17%	13%	6%	*15%*	*20%*	% Retained to Comm Eq	*3.5%*
94%	90%	91%	88%	82%	75%	75%	88%	90%	95%	*90%*	*86%*	% All Div'ds to Net Prof	*77%*

CAPITAL STRUCTURE as of 3/31/93
Total Debt $5575 mill. Due in 5 Yrs $1155 mill.
LT Debt $4714 mill. LT Interest $425.0 mill.
(LT Interest earned: 2.6x)
Pfd Stock $732.8 mill. Pfd Div'd $60.4 mill.
Aff cum. Not subj. to mand. red.: 3.28 mill. shs., $100 par, 4.08% to 8.68%, call $102-$110; 4.07 mill. shs., $25 par, $2.15-$2.27, call $26.08-$26.14; 1.05 mill. shs., no par, 4.5% to 8.52%, call $102.31-$110. Subj. to mand. red.: 1,250,000 shs., $100 par, 7.8% and 9.5%, call $107.88 and $109.5; 801,298 shs., no par, 4.5%-9% and $2.65; call $102-$109 and $26.33.
Common Stock 184,535,000 shs.

ELECTRIC OPERATING STATISTICS

	1990	1991	1992
% Change Sales (KWH)	+1.7	-6.2	-1.6
Avg Resid'l Use (KWH)	10530	11302	10996
Avg Resid'l Rate per KWH (¢)	6.03	6.04	6.16
Capacity at Peak (Mw)	23967	24202	24202
Peak Load, Summer (Mw)	21489	22360	20474
Annual Load Factor (%)	67.8	61.2	65.7
% Change Customers (yr-end)	+1.2	+1.0	+1.2
Fixed Charge Cov. (%)	207	202	183

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '90-'92 to '96-'98
Revenues	1.0%	2.0%	*2.5%*
"Cash Flow"	2.5%	2.0%	*4.5%*
Earnings	1.5%	-.5%	*4.0%*
Dividends	.5%	1.0%	*1.0%*
Book Value	1.0%	2.0%	*2.0%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1990	1299	1260	1333	1276	5167.5
1991	1252	1231	1286	1262	5046.6
1992	1297	1174	1282	1292	5044.8
1993	1321	*1230*	*1345*	*1354*	*5250*
1994	*1365*	*1275*	*1390*	*1410*	*5440*

Calendar	EARNINGS PER SHARE (A) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1990	.75	.60	.82	.60	2.77
1991	.79	.55	.74	.62	2.70
1992	.71	.40	.58	.85	2.54
1993	.72	*.50*	*.78*	*.70*	*2.70*
1994	*.76*	*.53*	*.82*	*.74*	*2.85*

Calendar	QUARTERLY DIVIDENDS PAID (B) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1989	.58	.58	.60	.60	2.36
1990	.60	.60	.60	.60	2.40
1991	.60	.60	.60	.60	2.40
1992	.60	.60	.60	.60	2.40
1993	.60	.60			

BUSINESS: American Electric Power Co., Inc., via eight operating subsidiaries, serves parts of VA, WV, KY, OH, IN, MI, and TN. Revenue distribution: industrial, 35%; residential, 38%; commercial, 25%; other, 2%. Sales to other utilities accounted for 20% of kilowatt-hour sales in '92. Largest industrial customers: primary metal, chemical and allied products industries. Fuel sources: coal, 93%, nuclear, 6%; purchased, hydro, and other, 1%. Fuel & purchased power costs: 33% of revenues. '92 depreciation rate: 2.9%. Estimated plant age: 12 years. Has about 20,840 employees, 204,170 common stockholders. Chairman & Chief Executive Officer: Dr. E. Linn Draper, Jr. Inc.: New York. Address: 1 Riverside Plaza, Columbus, Ohio 43216. Telephone: 614-223-1000.

The Ohio Supreme Court will soon rule on American Electric Power's appeal of a previous rate decision. Late last year, the Public Utilities Commission of Ohio handed down a rate order to the Columbus Southern subsidiary, denying recovery of $165 million in construction costs. AEP's management is of the opinion that PUCO has diverged from a 1985 stipulation agreement that allowed for recognition of a portion of expenses related to the conversion of the Zimmer nuclear power plant to a coal-fired facility in base rates. If the high court concurs with the state regulators, AEP would be forced to take a one-time charge to earnings (excluded from our 1993 estimates) of about $150 million. We expect the judiciary to make a final determination sometime next month.

Two additional tariff hikes are imminent this year. The Appalachian Power Company recently received interim electricity rates (subject to refund) in Virginia, totaling $30 million. The state commission staff recommended a $10.5 million annual revenue increase and an allowed return on common equity of 11.35%. The utility originally petitioned for a $31.4 million boost and a 12.75% rate of return. A final order is due by yearend. The Indiana Michigan Power subsidiary has a $44.8 million case pending in Indiana, which should be decided by the end of this month. I&M is seeking a 12.6% return on equity. Barring unfavorable resolutions of the above-mentioned regulatory matters, we look for AEP to earn a return on common equity near 12% by 1994. This stock is ranked to underperform the broader market in the year ahead.

Income-oriented investors can probably find better dividend growth potential elsewhere. We think management's aggressive cost-cutting efforts (including debt and preferred equity refinancing and staff reductions) will provide earnings growth of about 4% annually. Still, the dividend may only advance at a modest 1% rate, considering the issue's above-average yield and high current payout ratio. At the current quote, AEP shares' 3- to 5-year total return potential is slightly below that of most electric utility equities under our review.

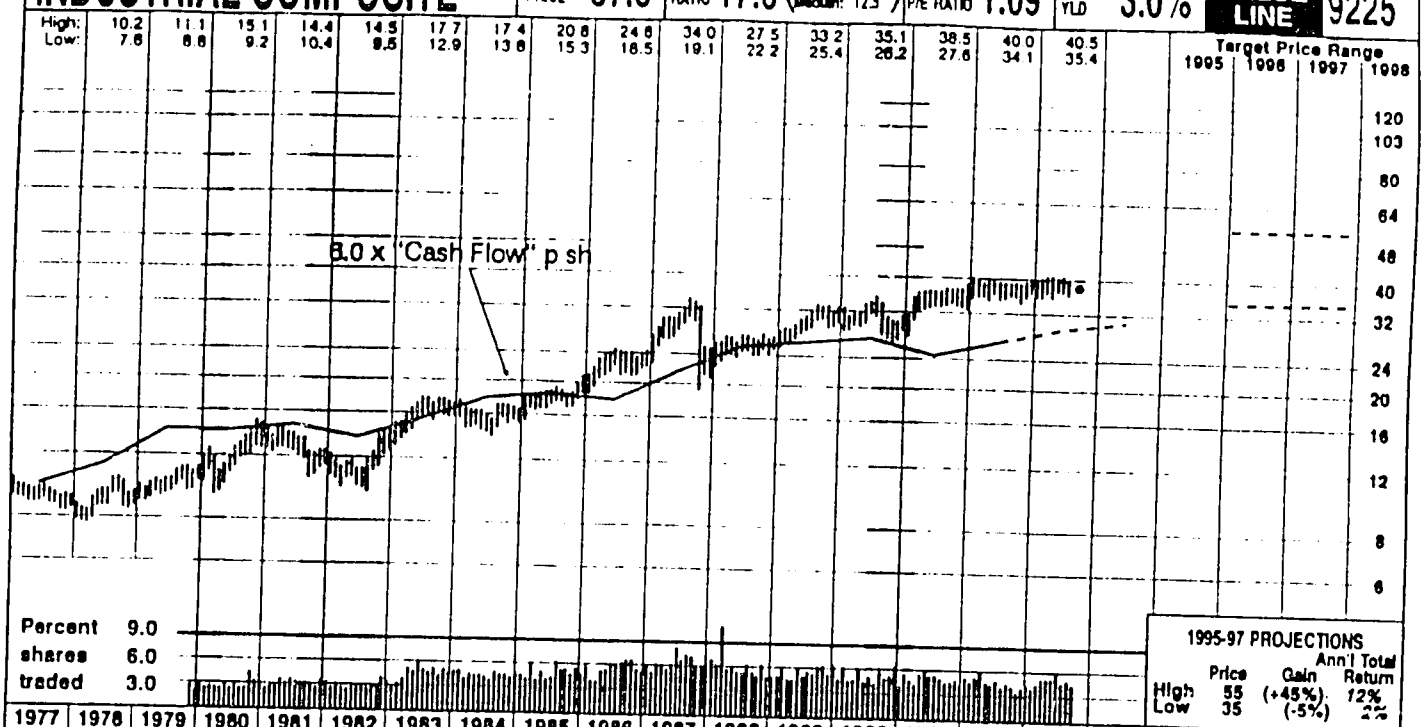
David M. Reimer — *June 18, 1993*

(A) Based on avg. shares. Incl. Col. & So. Pwr. from '80. Excl. extra. loss in '85: 35¢; '87: 35¢; '90: 12¢. Next egs. rept. due early August.
(B) Next div'd meeting about July 23. Goes ex about Aug. 5. Approx. div'd paymt. dates: 10th of Mar., Jun., Sep., Dec. Spec. div'ds paid: '84: 8¢; '87: 8¢; '88: 5¢. ■ Div'd reinvestment plan available. (C) Incl. deferred charges in '92: $3.94/sh. (D) Rate base: various. All'd on com eq.: '12 46%-16.5%; earned on avg. system com. eq. in '92: 11.1%. Reg. Climate: Avg. (E) In mil. (F) Doesn't sum due to accig. change.

Company's Financial Strength B+
Stock's Price Stability 100
Price Growth Persistence 70
Earnings Predictability 90

INDUSTRIAL COMPOSITE

RECENT PRICE 37.8 | P/E RATIO 17.6 (Trailing: 19.7 / Median: 12.5) | RELATIVE P/E RATIO 1.09 | DIV'D YLD 3.0% | VALUE LINE 9225



1995-97 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	55	(+45%)	12%
Low	35	(-5%)	2%

1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	© VALUE LINE PUB., INC.	96-98
19.91	22.21	26.12	28.68	30.64	29.57	29.85	32.41	34.24	33.47	37.89	41.88	45.04	50.84	50.00	52.47	*54.15*	*56.60*	Sales per sh A	*68.55*
1.63	1.86	2.35	2.34	2.44	2.27	2.56	2.98	3.06	2.97	3.59	4.25	4.37	4.52	4.10	4.46	*4.85*	*5.10*	"Cash Flow" per sh	*6.60*
1.00	1.13	1.52	1.41	1.39	1.11	1.32	1.81	1.54	1.38	1.83	2.30	2.30	2.18	1.65	1.86	*2.15*	*2.30*	Earnings per sh B	*3.45*
.39	.43	.49	.52	.55	.58	.58	.62	.67	.70	.80	.90	.98	1.05	1.05	1.10	*1.15*	*1.20*	Div'ds Decl'd per sh	*1.55*
1.30	1.52	1.97	2.28	2.59	2.42	1.99	2.27	2.58	2.31	2.40	2.83	3.22	3.68	3.53	3.42	*3.65*	*3.80*	Cap'l Spending per sh	*4.20*
6.91	7.58	8.56	9.22	9.99	10.25	10.82	11.44	11.93	12.39	13.84	14.51	15.15	16.63	16.64	15.85	*16.45*	*17.80*	Book Value per sh C	*23.50*
54.85	55.15	56.22	59.24	60.51	61.55	63.08	62.94	62.73	63.13	61.91	61.74	61.82	59.94	61.09	59.57	*60.00*	*60.50*	Common Shs Outst'g D	*62.00*
9.2	8.1	6.7	8.3	9.1	10.2	11.8	9.8	11.5	15.9	14.7	10.9	12.5	14.1	20.6	19.5	Bold figures are Value Line estimates		Avg Ann'l P/E Ratio	*13.0*
1.20	1.10	.97	1.10	1.11	1.12	1.00	.91	.93	1.08	.98	.90	.96	1.05	1.32	1.18			Relative P/E Ratio	*1.00*
4.2%	4.7%	4.8%	4.4%	4.4%	4.9%	3.6%	4.0%	3.8%	3.2%	3.0%	3.6%	3.3%	3.4%	3.1%	3.0%			Avg Ann'l Div'd Yield	*3.5%*
1883.7	2039.9	2148.0	2113.3	2345.8	2585.6	2784.8	3047.0	3054.3	3125.4	*3250*	*3425*	Sales ($bill) A	*4250*
12.9%	13.8%	13.5%	12.9%	13.6%	14.9%	14.6%	14.0%	12.6%	12.6%	*13.5%*	*13.5%*	Operating Margin	*14.5%*
78.3	85.1	94.9	100.3	106.8	120.3	127.9	140.2	149.7	154.8	*160*	*170*	Depreciation ($bill)	*195*
85.0	103.1	98.8	88.8	115.4	143.5	144.3	133.6	103.5	114.9	*130*	*145*	Net Profit ($bill)	*220*
45.7%	45.1%	46.3%	43.4%	41.3%	37.0%	36.6%	38.3%	38.8%	35.8%	*38.0%*	*39.0%*	Income Tax Rate	*39.0%*
4.5%	5.1%	4.8%	4.2%	4.9%	5.6%	5.2%	4.4%	3.4%	3.7%	*4.0%*	*4.2%*	Net Profit Margin	*5.2%*
227.7	227.3	232.2	248.2	274.3	369.0	338.3	357.5	358.7	354.5	*380*	*405*	Working Cap'l ($bill)	*550*
264.3	295.9	334.5	380.9	400.5	496.7	598.5	642.2	680.8	683.1	*700*	*750*	Long-Term Debt ($bill)	*810*
705.0	743.0	771.0	808.1	878.7	918.3	973.2	1034.8	1057.1	990.7	*1035*	*1125*	Net Worth ($bill)	*1500*
10.2%	11.4%	10.5%	9.0%	10.5%	12.0%	11.1%	9.9%	7.9%	8.8%	*9.5%*	*9.5%*	% Earned Total Cap'l E	*11.0%*
12.1%	13.9%	12.8%	11.0%	13.1%	15.6%	14.8%	12.9%	9.8%	11.6%	*12.5%*	*12.5%*	% Earned Net Worth	*14.5%*
7.0%	8.6%	7.3%	5.5%	7.5%	9.7%	8.8%	6.8%	3.6%	4.8%	*6.0%*	*6.0%*	% Retained to Comm Eq F	*8.0%*
44%	40%	45%	51%	45%	40%	43%	49%	64%	60%	*55%*	*53%*	% All Div'ds to Net Prof	*46%*

CAPITAL STRUCTURE as of Fiscal Year 1992 A

Total Debt $937.1 bill. Due in 5 Yrs $366.7 bill

LT Debt $683.1 bill. LT Interest $68.2 bill.
Incl $25.4 bill. capitalized leases; $18.7 bill.
Convertible debt. (LT interest earned: 3.7x;
total interest coverage: 3.2x) (40.8% of Cap'l)

Leases, Uncapitalized Annual rentals $31.9 bill.

Pension Liability $18.8 bill. in '91 vs. $16.4 bill. in '90

Pfd Stock $46.6 bill. Pfd Div'd $3.9 bill.
Incl. $33.9 bill. conv. preferred. (2.8% of Cap'l)

Common Stock 59.57 billion shares
(56.4% of Cap'l)

CURRENT POSITION ($bill)	1990	1991	12/31/92 A
Cash Assets	158.1	170.5	180.6
Receivables	646.2	612.9	590.7
Inventory	345.4	342.3	331.3
Other	74.6	87.0	96.0
Current Assets	1224.3	1212.9	1198.6
Accts Payable	290.6	283.3	265.9
Debt Due	288.5	269.3	254.0
Other	287.7	301.6	304.2
Current Liab.	866.8	854.2	844.1

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '90-'92 to '96-'98
Sales	5.5%	7.5%	*5.0%*
"Cash Flow"	6.5%	6.5%	*7.0%*
Earnings	4.0%	3.5%	*10.5%*
Dividends	7.0%	8.0%	*6.5%*
Book Value	5.0%	5.0%	*6.0%*

Fiscal Year Begins	QUARTERLY SALES ($bill) A Qtr. I	Qtr. II	Qtr. III	Qtr. IV	Full Fiscal Year
1990	710.0	743.5	752.6	840.9	3047.0
1991	736.1	757.5	751.4	809.3	3054.3
1992	734.5	778.2	781.4	831.3	3125.4
1993	765p	*800*	*815*	*870*	*3250*
1994	*800*	*835*	*865*	*925*	*3425*

Fiscal Year Begins	EARNINGS PER SHARE A B Qtr. I	Qtr. II	Qtr. III	Qtr. IV	Full Fiscal Year
1990	.54	.57	.53	.54	2.18
1991	.42	.44	.40	.39	1.65
1992	.43	.49	.46	.48	1.86
1993	.49p	*.56*	*.54*	*.56*	*2.15*
1994	*.52*	*.60*	*.58*	*.60*	*2.30*

Calendar	QUARTERLY DIVIDENDS PAID Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1989	.244	.24	.236	.24	.96
1990	.273	.267	.248	.262	1.05
1991	.264	.269	.251	.266	1.05
1992	.27	.282	.263	.285	1.10
1993	28p	29p			

EXPLANATION: The Industrial Composite consists of approximately 815 industrial, retail, and transportation companies. Financial data and stock market values for these companies have been pooled as if they belong to one giant conglomerate. The Composite includes about three fourths of Value Line's 98 industries; excluded sectors are financial services (banks, thrifts, insurance, real estate, securities brokerage, and investment companies), utilities (electrics, natural gas distribution and telecommunications services), and non-North American companies. Estimates for 1993 and 1994 and projections for 1996-98 were prepared using Value Line's economic forecast, which was last updated in *Selection & Opinion* on June 25, 1993. All per-share figures have been computed using the sum of shares outstanding at yearend for all included companies. In 1992, the integrated petroleum industry provided 18% of net profits.

(A) Co. fisc. yrs. end between 5/1 of yr. shown and 4/30 of next yr. Years for about 80% of co.'s end 12/31. (B) Based on yr.-end shs. outstand. Excl. disc. ops.: '82, -2¢; '83, -4¢; '84, -4¢; 85, -6¢; '86, -1¢; '87, 3¢; '89, 4¢; '90, -1¢; '91, -1¢; '92, -4¢. Excl. nonrecur. items: '82, -2¢; '84, -2¢; '85, -20¢; '86, -18¢; '87, -4¢; '88, 8¢; '89, -4¢; '90, -12¢; '91, -42¢; '92, -$1.59 (C) Incl. intang. In '92: $248.5 bill., $4.14/sh. (D) In bill. (E) (Net prof. + ½ LT interest)÷(L-T debt+net worth) (F) (Net prof. - all div'd.)÷ comm. eq. p preliminary.

August 20, 1993

CFA Case Analysis
(past exams)

Good Samaritan Hospital (A)

P. V. Wise, CFA, a portfolio manager at Investment Associates, is preparing for a meeting with Mary Atkins to discuss her portfolio. Wise has just learned that Mrs. Atkins has been diagnosed as having a terminal illness and is not expected to live for more than nine months. Wise expects this news to affect the investment of her portfolio and notes that her investment policy statement should be updated.

Mary Atkins

Mary Atkins, age 66, became a client of Investment Associates 5 years ago upon the death of her husband, Charles Atkins. Mr. Atkins had owned a successful newspaper business, which he sold 2 years before his death to Merit Enterprises, a publishing and broadcasting conglomerate, in exchange for shares of Merit common stock. Mr. Atkins had believed that Merit had a bright future and requested that the stock be retained, if possible. Although Mrs. Atkins had consented to sell some Merit shares to provide better portfolio diversification, the remaining Merit holding still represents a large percentage of her portfolio's total value.

The Atkins' portfolio has a market value of $2 million. Recent sales of Merit stock generated a $50,000 capital gain. The portfolio currently produces $118,200 of annual income, more then half of which is exempt from federal income taxes. Mrs. Atkins also receives substantial income from a life annuity purchased before Mr. Atkin's death. This income level allows Mrs. Atkins to live comfortably, although her income has not kept pace with inflation during the past 5 years. Fortunately, she is covered adequately by medical insurance.

The Atkinses had no children. Their wills provide that the assets remaining after Mrs. Atkins' death be used to create the Atkins Endowment Fund for the benefit of Good Samaritan Hospital. Because her life expectancy is less than a year, Mrs. Atkins wants to make sure that her financial affairs are in order. She looks forward to the meeting with Investment Associates, expecting that they can devise a portfolio that satisfies her immediate financial needs as well as the future needs of the Good Samaritan Hospital.

Good Samaritan Hospital

Good Samaritan is a 180-bed, not-for-profit hospital with an annual operating budget of $12.5 million. Until 5 years ago, the hospital's operating revenues were sufficient to meet operating expenses and even to generate an occasional small surplus. More recently, however, rising costs and declining occupancy rates are causing Good Samaritan to incur operating deficits averaging $350,000 annually. As a result, the hospital's Board of Governors decided to increase the endowment's current investment income objective from 5% to 6% of total assets in order to reduce the size of the deficit.

The market value of Good Samaritan's existing endowment assets is $7.5 million. The portfolio generates approximately $375,000 of income annually, up from less than $200,000 5 years ago. This increased income resulted from higher interest rates and a shift in asset mix toward more bonds. The new 6% requirement will raise investment income to approximately $450,000 yearly.

The hospital has not received any significant additions to its endowment assets in the past 5 years.

The Immediate Task

Wise has reviewed Mrs. Atkins' original, 5-year-old investment policy statement (Exhibit 1) and the current portfolio (Exhibit 2) for the account in preparation for the meeting with Mrs. Atkins. He intends to write a new investment policy statement and to recommend specific investment actions that should be taken in the near future. He plans to articulate for Mrs. Atkins the justification for each action.

Exhibit 1

Original Investment Policy Statement for Mrs. Atkins

Objectives

Return Requirements: Mrs. Atkins requires a minimum of $50,000 after-tax investment income annually. Future investment income growth should attempt to keep pace with inflation. Given the fact that the assets will go to a charitable remainderman eventually, capital growth is also needed.

Risk Tolerance: Mrs. Atkins can assume modest risk to achieve income growth, provided that her minimum income need (adjusted for future inflation) is met. If the size of the fund builds over time, somewhat increased risk could be incurred to facilitate growth of capital.

Constraints

Liquidity: Because death taxes have been provided for and the assets will go to an endowment at her death, liquidity needs are low, except for any related to investment considerations.

Time Horizon: Mrs. Atkins's shorter-than-average personal time horizon is not an important investment consideration because her wealth will go to an endowment fund, which has an infinite time horizon, on her death.

Laws and Regulations: Because this is a personal portfolio, regulatory and legal constraints are not significant investment factors; Prudent Man rules apply.

Tax Considerations: Mrs. Atkins is in the highest income tax bracket and would benefit from appropriate tax-advantaged investments.

Policy

The following guidelines were developed and approved following agreement between Investment Associates and Mrs. Atkins on the above objectives and constraints:

Asset Allocation:

50% to 70%	— Domestic stocks and issues convertible into domestic stocks.
20% to 50%	— Fixed income investments, principally tax-exempt.
0% to 20%	— Short-term reserves, principally tax-exempt.

Diversification: With the exception of Merit Enterprises, individual common stock (and common stock equivalent) holdings should not exceed $50,000 at cost or $100,000 at market. Individual fixed income holdings should not exceed $100,000 at cost or $150,000 at market.

Quality Criteria: All convertible securities and debt instruments must be rated no less than BBB as defined by Standard & Poor's, or its equivalent as defined by other rating agencies. All domestic stocks must have a history of at least 5 years of continuous dividend payment.

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Exhibit 2

Investment Portfolio of Mrs. Atkins

Shares		*Recent Price*	*Market Value*	*Cost Basis*	*Annual Income*
	Domestic Stocks				
20,220	Merit Enterprises	$39	$788,600	$475,000	$24,800
1,000	Caterpillar Tractor	32	32,000	50,000	500
1,000	General Electric	58	58,000	50,000	2,000
500	IBM	122	61,000	38,000	2,200
2,000	Penn Power & Light	24	48,000	40,000	5,000
1,000	Standard Oil of Indiana	57	57,000	49,000	3,000
1,300	Weyerhauser	28	36,400	49,000	1,700
			$1,081,000	$751,000	$39,200
Par Value	***Convertible Issues***				
$50,000	John Deere 9% bonds due 2008	98	$49,000	$50,000	$4,500
$50,000	American Medical 13% bonds due 2001	140	70,000	50,000	6,500
			$119,000	$100,000	$11,000
Par Value	***Municipal Bonds***				
$100,000	Albuquerque, NM School Bonds 6.6% due 6/15/91	92	$92,000	$100,000	$6,600
$100,000	Cincinnati, OH GO 10% due 12/1/92	101	101,000	100,000	10,000
$100,000	Illinois State GO 8.6% due 10/1/95	101	101,000	100,000	8,600
$100,000	Lynchburg, VA GO 7.5% due 6/1/91	93	93,000	100,000	7,500
$100,000	Oregon State GO 8.2% due 2/1/91	89	89,000	100,000	8,200
$100,000	Sacramento, CA Util. Rev. Bonds 11.0% due 5/1/94	108	108,000	100,000	11,000
$100,000	Sheboygan, WI GO 10.20% due 4/1/91	106	106,000	100,000	10,200
			$690,000	$700,000	$62,100
Market Value	***Short-Term Reserves***				
$110,000	Tax-exempt money market fund	1	$ 110,000	$ 110,000	$ 5,900
	Total portfolio		$2,000,000	$1,661,000	$118,200

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Good Samaritan Hospital (B)

Before Wise was able to take any of the investment actions identified for discussion at the pending meeting, Mrs. Atkins died, and title to the assets passed to the hospital's Board of Governors. The Board announced that it would select a manager for the Atkins Endowment Fund from among four firms with experience in managing endowment portfolios. It would leave the portfolio with Investment Associates temporarily, but it requested that major purchases or sales be deferred until the manager decision has been made and an appropriate investment policy has been adopted.

Investment Associates is one of the four firms under consideration. Wise now has the task of preparing for a presentation to the Board of Good Samaritan Hospital. Wanting an expression of investment philosophy for endowment funds, the Board requested that each firm address the following issues in its presentation:

1. Prepare an Investment Policy statement for the Atkins Endowment Fund, taking into account all relevant objectives and constraints.
2. What immediate changes, if any, would you recommend for the Atkins portfolio pending the selection of a new portfolio manager?
3. Assume that your firm is selected as the new manager for the fund. Disregarding Good Samaritan's other endowment assets and basing your answer on the economic and capital market expectations supplied by the Board of Governors (Exhibit 1), what specific actions would you take?

Exhibit 1

Good Samaritan Hospital Board of Governors
Twelve-Month Forecast

Economic Expectations

	Forecast	*Range*
Real GNP	3.5%	3.0 to 4.0%
Inflation	4.7	4.0 to 5.5

Capital Market Expectations

	Current Annual Yield Level	*Expected Annual Return*	*Standard Deviation of Return*
Domestic stocks	4.2%	22.5%	25.2%
Domestic bonds	11.7	19.4	18.4
Cash equivalents	9.0	8.6	2.2

Good Samaritan Hospital (C)

After a hiatus of nearly 4 months, Investment Associates has been notified that it is being retained to manage the Atkins Endowment Fund on behalf of Good Samaritan Hospital. Realizing that new investment actions may be in order, Wise gathers the firm's report on economic and capital market expectations (Exhibit 1) and prepares to make his recommendations. He also prepares himself to explain why his current recommendations differ from those presented to the Board at the earlier meeting.

Exhibit 1

Investor Associates
Twelve-Month Forecast

Economic Expectations

	Forecast	*Range*
Real GNP	4.1%	3.5 to 4.9%
Inflation	5.9	5.0 to 6.9

Capital Market Expectations

	Current Annual Yield Level	*Expected Annual Return*	*Standard Deviation of Return*
Domestic stocks (S&P 500)	3.8%	11.9%	17.4%
Domestic bonds	11.2	10.5	9.7
Cash equivalents	7.0	8.6	2.1

The Allen Family (A)

Harvey Bowles, CFA, recently joined the Perennial Trust Company, a firm specializing in financial management for wealthy families. Bowles' first assignment is the Allen family, a new client who came to Perennial upon the death of Charles A. Allen. Bowles soon will be meeting with Mr. Allen's widow, Emily Allen, and son, George Allen. To familiarize himself with the Allen's situation, he reads the following memorandum prepared by Perennial's new-business officer.

> Emily Allen is the Allen trust's only income beneficiary. Upon her death, the assets go to her son, George, free of taxes (which were paid at Mr. Allen's death). Emily Allen is 65 years old and is suffering from a physically degenerative disease; although her mind is quite alert, she is not expected to live more than a few more years. Mrs. Allen has good insurance, but it does not cover all of her growing medical bills. Beyond her substantial medical bills, Mrs. Allen has few expenses. She contributes most of her excess income to various charities and occasionally makes gifts to George and members of his family. She feels that George is somewhat irresponsible but is a good son, husband, and father. Mrs. Allen lived through the Depression and is concerned about the present-day financial environment. She has often said, "We saw great companies and great fortunes destroyed. We were terrified, and we suffered great hardship; yet my husband was able to build our fortune by investing wisely over the years." The Allen trust's only investment restriction is a requirement that George Allen be consulted, as a courtesy, before any investment action is taken.
>
> George Allen, 44, is married and has three sons (two in prep school and one in college). Although Mr. Allen is not employed, he volunteers his services to a variety of civic and charitable organizations. Neither he nor his wife, a homemaker, seems to be financially sophisticated, although Mr. Allen is a strong believer in free investment markets and free enterprise. He believes that "smart investors can double their money every 5 years." He looks forward to financing businesses for his sons as they graduate from college. The George Allens' living style and family needs require an annual after-tax income of $100,000. This now is derived from investment income and occasional gifts from his mother. He wants to increase the income from his portfolio to eliminate his dependence on gifts from his mother.

The present status of the Allen trust is shown in Exhibit 1, and George Allen's current investment portfolio is shown in Exhibit 2. The real estate investment in that portfolio is a piece of the real estate investment owned in the trust.

Exhibit 1

Investment Assets: Charles A. Allen Trust

	Cost	*Market Value*	*After-Tax Yield*
Cash equivalents	$3,000,000	$3,000,000	4%
Growth stocks	500,000	1,000,000	1
Cyclical stocks	1,000,000	1,000,000	2
Defensive stocks	3,000,000	4,000,000	2
Tax-exempt bonds	4,000,000	4,500,000	7
Equity real estate*	1,000,000	2,000,000	6
Total	$12,500,000	$15,500,000	

* Exclusive of personal residence.

Exhibit 2

Investment Assets: George Allen

	Cost	*Market Value*	*After-Tax Yield*
Money market account	$ 50,000	$50,000	3%
Growth stocks	150,000	300,000	1
Cyclical stocks	200,000	250,000	2
Defensive stocks	300,000	400,000	2
Venture capital fund	100,000	100,000	0
Tax-exempt bonds	300,000	400,000	7
Equity real estate*	200,000	300,000	6
Total	$1,300,000	$1,800,000	

* Exclusive of personal residence.

Before his meeting with the Allens, Bowles reviews Perennial's latest investment return projections. His firm believes that continued prosperity is the most likely outlook for the next 3 to 5 years but is mindful of the possibility of two disturbing alternatives: a return to high inflation or a drift into deflation/depression. Exhibit 3 presents the details of Perennial's projections.

Bowles lists the tasks to be completed prior to his upcoming meeting. The first is to create revised investment policy statements for the Allen trust and for George Allen. The second is to recommend a new asset allocation for each Allen portfolio. He realizes that he must justify any changes he recommends and explain why they are appropriate.

Exhibit 3

Perennial Trust Company
Three- to Five-Year Expected Annual Investment Returns

	Expected Total Annual Return	*Expected Annual Yield*
Continued Prosperity (60% probability)		
Cash equivalents	5%	5%
Domestic stocks	14	4
Domestic bonds	13	13
Tax-exempt bonds	7	7
Equity real estate	9	10
High Inflation (20% probability)		
Cash equivalents	9%	9%
Domestic stocks	16	5
Domestic bonds	6	16
Tax-exempt bonds	2	8
Equity real estate	14	10
Deflation/Depression (20% probability)		
Cash equivalents	2%	2%
Domestic stocks	-5	2
Domestic bonds	25	9
Tax-exempt bonds	15	5
Equity real estate	-3	5

The Allen Family (B)

Nine months later, Emily Allen requested a meeting with Bowles to discuss her portfolio. After this meeting, Bowles knows that he must review the Allen trust's policy and investment mix. He rereads the memorandum summarizing his meeting with Emily.

> Mrs. Allen announced that her disease has been arrested. The Lifeline Company discovered a new drug that successfully counteracts the virus that had been attacking her. This "miracle drug," as she calls it, has changed her perspective on life. She now looks forward to exploring the world and seeing the sights she had thought she would never be able to see. She also wants to make a substantial donation to medical research in the name of her late husband, Charles. Because she does not control the assets of the trust and is entitled only to its annual income, Mrs. Allen reasons that she would have to make gifts of $250,000 a year for 10 years to meet her goal. Mrs. Allen does not plan to provide any further support to her son; in fact, she would prefer that he get a job. She is willing to help with the education of the grandchildren.

Bowles prepares to revise his previous investment policy statements and asset allocations for each of the Allen portfolios. Although he looks forward to revising the Allen trust portfolio, he is not looking forward to his "consult" meeting with George Allen, who had insisted at their previous meeting that his portfolio be managed to generate annual income of at least $100,000 after taxes.

The Allen Family (A)

Important points of the case that you should recognize:

1. This case presents the classic conflict between an income beneficiary who typically wants income and a remainderman who typically wants growth. Specifics of the case involve two portfolios—one for Mrs. Allen (The Trust) and the other for her son, George Allen.

2. Recognize the interaction between liquidity needs and insurance coverage. Someone without insurance would look for liquidity from the portfolio, and vice-versa.

3. Recognize the interaction between two different portfolios—an inflation-adjusted capital preservation and growth orientation for the trust, and more of an income orientation for George's portfolio. This interaction has an important bearing on the asset allocation of the two portfolios.

4. Recognize that what George says and what he needs are not the same. He talks aggressively but should focus more on a conservative investment policy for his portfolio. His desire for risk is actually satisfied through his mother's asset allocation in a portfolio that will one day be his.

The first thing you should do when you are presented security market expectations like Exhibit 3 is to calculate expected returns and yields.

	Expected Annual Total Return	*Expected Annual Yield*
Cash	5.2%	5.2%
Common Stocks	10.6%	3.8%
Domestic Bonds	14.0%	12.8%
Tax-exempt Bonds	7.6%	6.8%
Equity Real Estate	7.6%	9.0%

Policy Statement (The Trust)

Objectives:

Return Requirements: No additional income need since Mrs. Allen already receives sufficient income (not specified in case) from existing trust assets. The objectives are, therefore, preservation of purchasing power and growth for George.

Risk Tolerance: No liquidity need and the lack of additional income suggest that the portfolio can tolerate above average volatility as long as Mrs. Allen's income needs are met.

Constraints:

Liquidity: Not very important at this time.

Time Horizon: Very long—for future generations—George and his sons.

Laws and Regulatory: Prudent Man standards of personal trust law—asset by asset evaluation.

Taxes: Highest tax bracket for trust.

Unique Needs: Conflict between income and growth as well as Mrs. Allen's concern of another economic depression.

Asset Allocation: An approximate allocation of 60% equities/40% other seems reasonable and may look as follows:

Asset Class	Range	Specific Allocation	Dollar Amounts	Yield (after taxes)*	Income
Stocks	50% - 60%	55%	$8,525,000	2.3%	$196,075
Bonds, tax-exempt	30% - 50%	30%	4,650,000	6.8%	316,200
Real Estate	10% - 20%	15%	2,325,000	5.4%	125,550
Cash	0% - 5%	0%	0	3.1%	0
Totals		100%	15,500,000		$637,825

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Note: Assumed tax bracket of 40%.

I suggest that you at least mention international securities and precious metals in your answer even if you do not include them in your asset allocation.

Policy Statement (George Allen)

Objectives:

Return Requirements: $100,000 after-tax income with protection against inflation over time.

Risk Tolerance: Fairly high due to George's comfort in knowing that one day he will inherit his mother's trust. Still, he needs income now with growth over time to protect purchasing power.

Constraints:

Liquidity: Not very important at this time as Mrs. Allen gives money to George from time to time.

Time Horizon: Fairly short, given Mrs. Allen's age and health.

Laws and Regulatory: None other than prudence.

Taxes: Highest tax bracket.

Unique Needs: George is relatively aggressive, although his needs at this time suggest conservatism or a fixed income tilt.

Asset Allocation: Given a lack of liquidity need, construct the portfolio to meet the $100,000 income requirement by treating the equity allocation as a residual. This will take some playing with the numbers as follows:

	Income
1,800,000	
– 300,000 (RE)	16,200 (.054 – 300,000)
– 100,000 (VC)	0
1,400,000	16,200
	100,000
	–16,200
	83,800

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.068 X = 83,800

X = 1,232,352 (call it 1,250,000)

1,400,000 – 1,250,000 = 150,000 (allocated to growth stocks).

This rightly assumes illiquidity of the real estate and venture capital funds.

Asset Class	Specific Allocation	Dollar Amounts	Yield (after taxes)*	Income
Stocks	8%	$150,000	1.0%	$1,250
Bonds, tax-exempt	70%	1,250,000	6.8%	85,000
Real Estate	17%	300,000	5.4%	16,200
Venture Capital	5%	100,000	0.0%	0
Totals	100%	1,800,000		$102,450

Note: Assumed tax bracket of 40%.

This portfolio is exposed to inflation to a large extent. But given that George will inherit a sizable portfolio presumably in the not-too-distant future, the risk appears tolerable.

The Allen Family (B)

The Allen Trust
No apparent changes are needed to the policy statement. Mrs. Allen still has the same objectives, except now the money will go to support her, her grandchildren's educations, medical research, and charity. George is the affected one since he is being "cut off."

George Allen
This is an excellent example of tradeoffs inherent in many portfolios. George's current policy is oriented toward bonds (income) without much growth potential. The "cutoff" from his mother combined with her improved health condition imply that his current income orientation, which is more short-run, needs to be reoriented toward growth over the long term. This reorientation will mean less current income with more overall portfolio risk. Other options include George's cutting his standard on living, thus reducing his income need, and getting a job. The revised policy statement may look like:

Policy Statement (George Allen)

Objectives:

Return Requirements: Inflation-protected income.

Risk Tolerance: Higher than average to generate real returns for protection of purchasing power.

Constraints:

Liquidity: Some since George has no other source.

Time Horizon: Dependent on Mrs. Allen's life expectancy now around 20 to 30 years.

Laws and Regulatory: None other than prudence.

Taxes: Highest tax bracket.

Unique Needs: Income vs. growth is the real issue. George cannot count on his current portfolio's structure to generate income over the long term that will provide a steady standard of living. This long-term perspective requires more of a growth orientation.

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Asset Allocation:

Asset Class	Specific Allocation	Dollar Amounts	Yield (after taxes)*	Income
Stocks	40%	$725,000	1.0%	$7,250
Bonds, tax-exempt	40%	725,000	6.8%	49,300
Real Estate	17%	300,000	5.4%	16,200
Cash	3%	50,000	3.1%	1,550
Totals	100%	1,800,000		$74,300

Note: Assumed tax bracket of 40%.

Good Samaritan Hospital (A)

Important points of the case that you should recognize in order to gain points:

1. Income requirement of $50,000 is first priority.

2. Liquidity is unimportant due to Mrs. Atkins' adequate insurance coverage. Still, the short time she has to live and the needs of the endowment suggest moderate liquidity.

3. Growth needs important for endowment. Be sure to recognize that the time horizon in this case is beyond Mrs. Atkins' life. The endowment has an infinite time horizon.

4. Taxes are important. The current portfolio contains capital losses that can be used to offset Mrs. Atkins' $50,000 income. Also, you would want to defer capital gains to the endowment since it is tax-exempt.

5. Diversification for both the equity and fixed income components.

Policy Statement

Objectives:

Return Requirements: Mrs. Atkins needs $50,000 income after taxes and some growth to keep pace with inflation in order to maintain purchasing power for the endowment.

Risk Tolerance: Growth and income suggests moderate risk.

Constraints:

Liquidity: Moderate to cover endowment's future needs.

Time Horizon: Long-term due to document's infinite time horizon.

Laws and Regulatory: Endowment—Prudent Man. Mrs. Atkins—none.

Taxes: Very important (see above comments).

Unique Needs: Time horizon beyond Mrs. Atkins' life.

Asset Allocation:

Asset Class	Percentages
Domestic Stocks	50% - 70%
Fixed Income	20% - 50%
Cash	0% - 20%
Total	100%

Note: No change from Mrs. Atkins' asset allocation.

Good Samaritan Hospital (B)

Important points of the case that you should recognize in order to gain points:

1. Interaction between Hospital's operating budget and endowment. Income from the endowment can be used to cover the operating deficit, if necessary. In this case, it is not necessary. Thus, given the current asset allocation the equity component of the portfolio can be devoted to growth.

2. The endowment must be concerned with future inflation. This concern drives the need for growth via equities and a higher tolerance for risk. Also, the endowment's time horizon is much longer than Mrs. Atkins'.

3. The endowment has no need for tax-exempt securities. They should be sold immediately with proceeds reinvested in taxables.

4. Diversification suggests selling some of Merit stock. Mrs. Atkins' portfolio has only seven equities. The endowment needs to increase the number of equities to around 20.

Policy Statement

Objectives:

Return Requirements: Growth—total return.

Risk Tolerance: Above average.

Constraints:

Liquidity: Low.

Time Horizon: Long-term.

Laws and Regulatory: Prudent Man standard.

Taxes: Endowment is tax-exempt.

Unique Needs: Possible operating deficits, which suggests conservatism.

Asset Allocation:

Asset Class	Percentages
Domestic Stocks	60% - 80%
Fixed Income	20% - 40%
Cash	0%
Total	100%

Good Samaritan Hospital (C)

Important points of the case that you should recognize in order to gain points:

1. You should recognize the impact of economic projections (higher expected inflation) on investment policies of the portfolio. Need for inflation hedging investments.

2. Recognize the incremental returns and risk of each asset class. At least mention this in your answer. Graders love this.

3. Shorten duration of the fixed income component due to relative attractiveness of cash over bonds.

4. Mention additional asset classes for diversification purposes, specifically, real estate and internationals.

Asset Allocation:

Asset Class	Percentages
Domestic Stocks	60%
Fixed Income	20%
Cash	20%
Total	100%