

1/20/00

Overview:

Capital

Markets

...

SFIN

FILE



# Agenda

## **"Capital Markets Outlook 2000" Alaska Permanent Fund Corporation Presentation to the Legislative Finance Committees January 20, 2000**

<u>Topics</u>	<u>Times</u>	<u>Presenters</u>
Introduction/Fund status report	8:30 – 8:40	Clark Gruening, Chair, APFC Board of Trustees, Jim Kelly, Director of Communications, APFC
Rate of return and risk expectations for the next 5 years for all asset classes	8:40 – 9:00	Michael O'Leary, Vice-President, Callan Associates
Outlook for stocks, bonds and real estate	9:00 – 9:30	Terry Brown, Chief Investment Officer, APFC Randy Sears, Manager of Fixed Income Investments Peter Naoroz, Manager of Real Estate Investments Michael Bell, Manager of Equity Investments
Permanent Fund forecast: range of outcomes for Fund balances, income produced and PFDs	9:30 – 10:00	Greg Allen, Vice-President, Callan Associates Chris Phillips, Director of Finance, APFC



# How has the Fund been doing?

## ALASKA PERMANENT FUND CONSOLIDATED ASSETS - DAILY POSITION 01/18/2000

<b>DAILY UNAUDITED* CUSTODIAN POSITION</b>	<b>COST</b>	<b>%</b>	<b>MARKET</b>	<b>%</b>	<b>UNREALIZED GAIN(LOSS)</b>
U.S. & NON - U.S. FIXED INCOME**	10,502,500,000	45%	10,078,800,000	37%	(423,700,000)
U.S. EQUITIES	6,761,800,000	29%	9,702,700,000	35%	2,940,900,000
NON - U.S. EQUITIES	3,568,000,000	15%	5,125,800,000	19%	1,557,800,000
REAL ESTATE	2,271,300,000	10%	2,391,900,000	9%	120,600,000
ALASKA CD'S	195,000,000	1%	195,000,000	1%	0
<b>TOTAL</b>	<b>23,298,600,000</b>	<b>100%</b>	<b>27,494,200,000</b>	<b>100%</b>	<b>4,195,600,000</b>

The Unaudited Position Report is updated daily and made available at: [www.apfc.org](http://www.apfc.org)



# How has the Fund been doing?

	12/31/1999 Market Value	----- % return as of 12/31/99 -----				
		Last Month	Last 3 Months	Fiscal Y-T-D	Last 12 Months	Last 3 Years
<b>FUND SUMMARY</b>						
Unallocated Cash Pool	\$ 4.3					
Transition Cash	2.9					
U.S. Equities	9,886.8	6.88	15.44	6.94	18.45	23.48
Non-U.S. Equities	5,180.0	12.09	23.25	26.47	34.88	18.50
U.S. Fixed Income	9,308.3	(0.54)	(0.30)	0.34	(2.97)	5.30
Non-U.S. Fixed Income	594.8	0.41	(1.12)	(1.69)	(3.65)	
Alaska CDs	209.5	0.41	1.24	2.46	5.33	5.37
Real Estate	2,424.0	0.24	0.72	1.44	8.47	10.76
	<b>\$27,610.7</b>	<b>4.37</b>	<b>9.02</b>	<b>6.95</b>	<b>10.98</b>	<b>14.09</b>

Source: BOT Monthly Management Report: December 31, 1999  
 (Full report available at: [www. http://www.apfc.org/financial/performance/analysis.cfm](http://www.apfc.org/financial/performance/analysis.cfm))

# Periodic Table of Investment Returns



## Annual Return for Key Indices (1980-1999)

Ranked in order of performance (Best to Worst)

1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Russell 2000 Growth Value 52.26%	Russell 2000 Value 14.85%	LB Agg 32.65%	Russell 2000 Value 38.63%	LB Agg 15.15%	MSCI EAFE 56.14%	MSCI EAFE 69.46%	MSCI EAFE 24.64%	Russell 2000 Value 29.47%	LB Agg 8.96%	Russell 2000 Growth Value 51.18%	Russell 2000 Value 29.15%	MSCI EAFE 32.57%	MSCI EAFE 7.78%	S&P/BARRA 500 Value 37.68%	S&P/BARRA 500 Value 22.96%	S&P/BARRA 500 Value 33.36%	S&P/BARRA 500 Value 28.58%	Russell 2000 Growth Value 43.09%	
Russell 2000 Value 38.58%	Russell 2000 Value 2.03%	LB Agg 24.95%	S&P/BARRA 500 Value 28.89%	MSCI EAFE 7.41%	S&P/BARRA 500 Value 31.73%	S&P/BARRA 500 Value 18.67%	S&P/BARRA 500 Value 5.25%	Russell 2000 Value 24.80%	S&P/BARRA 500 Value 26.13%	S&P/BARRA 500 Value -3.11%	Russell 2000 Value 41.70%	Russell 2000 Value 10.52%	MSCI EAFE 18.89%	S&P/BARRA 500 Value 1.32%	S&P/BARRA 500 Value 36.99%	S&P/BARRA 500 Value 22.00%	S&P/BARRA 500 Value 31.78%	MSCI EAFE 20.00%	MSCI EAFE 26.96%
S&P 500 Index 32.50%	MSCI EAFE 0.02%	S&P 500 Index 23.69%	S&P 500 Index 6.27%	Russell 2000 Value 31.04%	Russell 2000 Value 15.30%	LB Agg 3.88%	Russell 2000 Growth 21.67%	Russell 2000 Growth 20.16%	Russell 2000 Growth -6.85%	Russell 2000 Growth 7.77%	S&P 500 Index 18.81%	Russell 2000 Growth -0.64%	Russell 2000 Value 31.04%	Russell 2000 Value 21.37%	Russell 2000 Value 29.98%	Russell 2000 Value 14.69%	Russell 2000 Value 21.26%		
S&P/BARRA 500 Value 25.39%	S&P/BARRA 500 Value -2.27%	S&P/BARRA 500 Value 21.65%	Russell 2000 Growth 22.56%	Russell 2000 Value 31.01%	Russell 2000 Value 2.75%	Russell 2000 Value 20.38%	Russell 2000 Value 16.25%	Russell 2000 Value -17.42%	Russell 2000 Value 30.47%	Russell 2000 Value 7.62%	S&P/BARRA 500 Value 13.37%	Russell 2000 Value -1.55%	Russell 2000 Value 28.44%	Russell 2000 Value 16.53%	Russell 2000 Value 22.36%	Russell 2000 Value 8.70%	Russell 2000 Value 21.04%		
MSCI EAFE 23.59%	Russell 2000 Growth -4.92%	Russell 2000 Growth 21.04%	Russell 2000 Value 20.14%	Russell 2000 Value 2.27%	S&P/BARRA 500 Value 30.97%	Russell 2000 Value 7.41%	Russell 2000 Value -7.12%	Russell 2000 Value 16.61%	Russell 2000 Value 14.53%	Russell 2000 Value -19.50%	Russell 2000 Value 22.56%	Russell 2000 Value 7.40%	Russell 2000 Value 10.08%	Russell 2000 Value -1.81%	Russell 2000 Value 25.75%	Russell 2000 Value 11.32%	Russell 2000 Value 12.93%	Russell 2000 Value 1.23%	Russell 2000 Value 12.72%
LB Agg 22.60%	MSCI EAFE -9.23%	MSCI EAFE 20.99%	LB Agg -7.13%	Russell 2000 Growth 29.68%	LB Agg 5.69%	Russell 2000 Growth -8.76%	Russell 2000 Growth 12.43%	LB Agg -21.77%	MSCI EAFE 16.00%	MSCI EAFE -21.77%	MSCI EAFE 16.00%	MSCI EAFE 9.75%	MSCI EAFE -2.44%	LB Agg 18.46%	MSCI EAFE 6.05%	LB Agg 9.64%	MSCI EAFE -2.55%	Russell 2000 Value -0.82%	
2.71%	2.71%	-1.86%	8.19%	-15.84%	22.13%	3.59%	-10.48%	7.89%	10.53%	-23.45%	12.14%	-12.18%	-2.92%	11.21%	3.64%	1.78%	-6.46%	-1.48%	

S&P 500 Index measures the performance of large capitalization U.S. stocks. The S&P 500 is a market-value-weighted index of 500 stocks that are traded on the NYSE, AMEX and NASDAQ. The weightings make each company's influence on the Index performance directly proportional to that company's market value.

S&P/BARRA 500 Growth and S&P/BARRA 500 Value indices measure the performance of the growth and value styles of investing in large cap U.S. stocks. The indices are constructed by dividing the stocks in the S&P 500 Index according to price-to-book ratios. The Growth index contains stocks with higher price-to-book ratios. The Value Index contains stocks with lower price-to-book ratios. The indices are market-capitalization-weighted, and their constituents are mutually exclusive.

Russell 2000 Index measures the performance of small capitalization U.S. stocks. The Russell 2000 is a market-value-weighted index of the 2,000 smallest stocks in the broad-market Russell 3000 Index. These securities are traded on the NYSE, AMEX and NASDAQ.

Russell 2000 Value and Russell 2000 Growth indices measure the performance of growth and value styles of investing in small cap U.S. stocks. The Value index contains those Russell 2000 securities with a less-than-average growth orientation, while the Growth index contains those securities with a greater-than-average growth orientation. Securities in the Value index generally have lower price-to-book and price-earnings ratios than those in the Growth index. The constituent securities are NOT mutually exclusive.

MSCI EAFE is a Morgan Stanley Capital International Index that is designed to measure the performance of the developed stock markets of Europe, Australia, and the Far East.

LB Agg is the Lehman Brothers Aggregate Bond Index. This Index includes US Government, Corporate and Mortgage-Backed securities, and includes maturities up to 30 years.



## Alaska Permanent Fund Corporation Capital Markets Outlook 2000 Profiles of Guest Speakers

### **Gregory C. Allen**

*Executive Vice President, Director of  
Operations, Callan Associates*

Mr. Allen joined Callan Associates in 1988 and currently oversees the development of Callan's performance measurement service. He is a frequent speaker on investment-related topics, and his publications include an article on Performance Attribution for Global Portfolios in the Journal of Portfolio Management. Gregory Allen received an M.S. in Applied Economics and a BA in Economics from the University of California at Santa Cruz.

### **Michael T. Bell**

*Senior Investment Officer, Equities, APFC*

As a Senior Investment Officer, Mr. Bell monitors the activities of the Fund's external equity managers. He helps to manage the APFC's asset allocation process and has also helped develop private, APFC-specific websites by the APFC's equity managers to facilitate information exchange. Michael Bell received a Bachelor of Arts degree in Journalism from Louisiana State University in Baton Rouge and a Master of Business Administration degree from the University of Alaska Southeast.

### **Clark C. Gruening**

*Chair, Board of Trustees, APFC*

Governor Knowles appointed Clark Gruening to the APFC Board of Trustees in 1995, and he began his service as chair in 1999. Mr. Gruening is a partner in the Juneau law firm of Gruening & Spitzfaden, APC. In his long history of state service, Mr. Gruening played a major role in shaping the objectives and management structure of the Alaska Permanent Fund. In 1980, Clark Gruening was the democratic nominee for the U.S. Senate. He received his Bachelor's degree in political science from the University of Oregon, and his Jurisdoctorate degree with honors from George Washington University.

### **Jim Kelly**

*Director of Communications, APFC*

Mr. Kelly has been in charge of the APFC public information program since 1985, and oversees all corporate communications efforts, is a member of the Management Committee, and serves as the Fund's legislative liaison. Mr. Kelly is an adjunct professor at the University of Alaska Southeast. He has previously worked as a legislative aid, press secretary for a congressional campaign, a college newspaper editor, a community organizer, a mental health nursing assistant and director of Rent-a-Kid. Jim Kelly attended Rutgers University and

the University of Alaska Anchorage, where he received a Bachelor of Arts Degree in English.

**Peter Naoroz**

*Manager of Real Estate Investments, APFC*

Peter Naoroz has been with the Fund since 1996 and is responsible for the administration and management of the real estate portfolio. Peter has previously held positions as an Investment Officer with the Virginia Retirement System, and as a real estate asset manager with Investors Savings Bank and United Dominion Realty Trust. Peter Naoroz received his undergraduate degree from the University of Virginia, a Masters degree in Planning from the University of Virginia School of Architecture, and a J.D. from the T.C. Williams School of Law, University of Richmond.

**Michael J. O'Leary, Jr., CFA**

*Executive Vice President, Callan Associates*

Mr. O'Leary currently oversees Callan's plan sponsor-consulting practice. He is a member of Callan's Client Policy, Review and Management Committees, and chair of Callan's Manager Search Committee. He has held positions as an investment research analyst, director of research, and director of portfolio management and defined contribution plan product management for major trust companies in Chicago and Hartford. He headed Mercer Asset's investment consulting practice and also served on the firm's National Practice Committee. Mr. O'Leary has worked extensively with major corporate and public funds. He has taught investments at the graduate level and has spoken frequently before professional and industry groups. Mr. O'Leary received his Bachelor's degree from Fordham University and is a Chartered Financial Analyst.

**Christine K. Phillips, CFA**

*Director of Finance, APFC*

Ms. Phillips oversees all accounting, financial reporting, and custodial relationships for the Fund. She previously served as an Investment Officer for the State of Alaska, Department of Revenue, Treasury Division and was employed by Klukwan, Inc. where she held various positions, including Financial Accounting Manager, Assistant Treasurer, and Controller. Ms. Phillips holds a Master's of Business Administration and a Bachelor's of Administration with an emphasis in accounting, both from the University of Alaska Southeast. In addition Christine Phillips has passed the CPA exam and holds a Chartered Financial Analyst designation.

**Randy Sears**

*Manager of Fixed Income Investments, APFC*

Mr. Sears is responsible for managing duration, term structure, sector weighting and individual security selection of approximately \$10 billion in internally managed APFC fixed income assets. He has principal responsibility in managing our Corporate Bond portfolio. Mr. Sears has also worked as Vice President within the Fixed Income Division of Morgan Stanley and at Citicorp, and as a global relationship manager in credit for Citibank. Randy Sears received his MBA with emphasis in Finance from University of California at Berkeley, and a Bachelor of Arts in Biology from Colorado College.

# Presentation To The Alaska State Legislature

## Callan Capital Market Projections

Michael J. O'Leary, CFA  
Executive Vice President  
Callan Associates Inc.  
January 2000



## Background

- Annually, Callan develops 5 year risk, return & correlation estimates for each major asset class
  - forecast is for a range of probable returns, not a single point
  - projections will always be consistent with long run real return patterns. For example, projected median stock returns will always exceed projected median bond returns.
  - Use of range allows for the possibility that there will be protracted periods when stocks return less than bonds and when bonds return less than T-bills
  - Long run projections have to relate to the economy so if Gross National Income grows 7-8% in nominal terms, it is unrealistic to expect corporate earnings to grow significantly faster over the long run.

## Critical Concepts & Beliefs

- Higher returns can only be achieved by accepting greater risk
  - risk is defined as variability in rate of returns
- Diversification is essential in reducing risk but...
  - that also means that you probably will not have everything working together at the same time
- Market timing does not work
  - the evidence is overwhelming that those who attempt to time tend not to do as well as those who don't

## The Current Economic Environment

- U.S. economy coming off fourth straight year of GDP growth  $>3\%$ , and will set a record in March for the longest expansion in US history.
- Low inflation, or low unemployment, or both?
- Global Recovery
- Oil prices double that of last year, but so what!
- Highest interest rates since May '97 - soft landing?
- Y2K bug passes - we're still here (thanks Greg)
- Biggest threat is faster growth

# We Have a Point of View

(hmm...this looks familiar)

- The U.S. economy will slow, but avoid recession
- Asian financial crisis has stabilized. Asia is in recession, but the bottom is in sight. Stock markets have taken off.
- The dollar has peaked
- Inflation is near its trough.
  - We expect rising inflation
  - We expect a falling dollar
- Our Capital Market projections incorporate our economic expectations

# Current Capital Markets

## Refuse to Conform to Theory

### 1999 Returns

Callan Broad	22.80
S&P 500	21.04
Callan Small	33.87
Russell 2000	21.26
EAFE	26.96
<b>NASDAQ</b>	<b>86.10</b>
LB Agg	-0.82
SB Non-US	-5.07

# The 90's vs. the 80's:

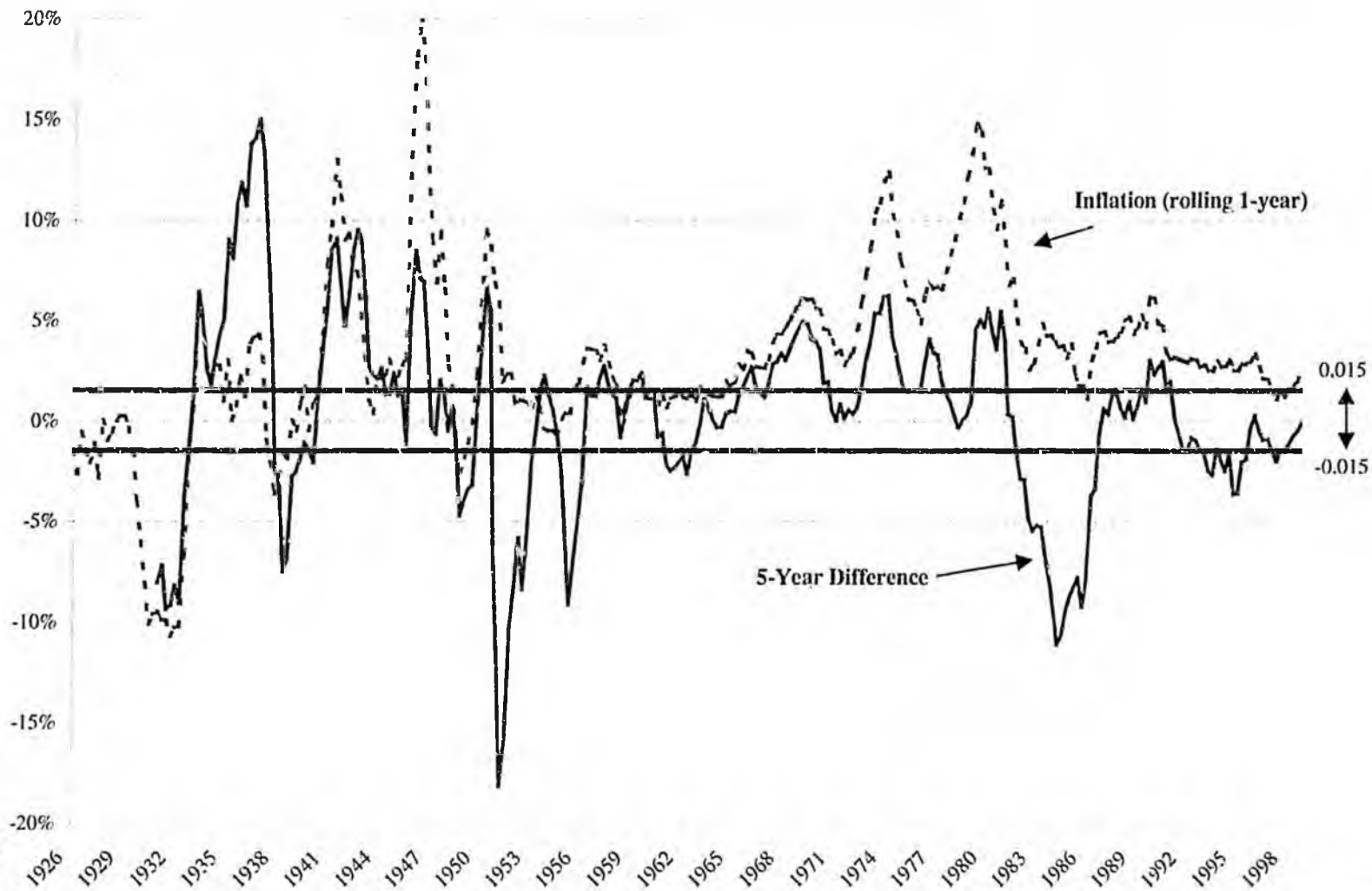
## *What a Difference a Quarter Makes*

### Average Annual Returns: 1990s vs. 1980s

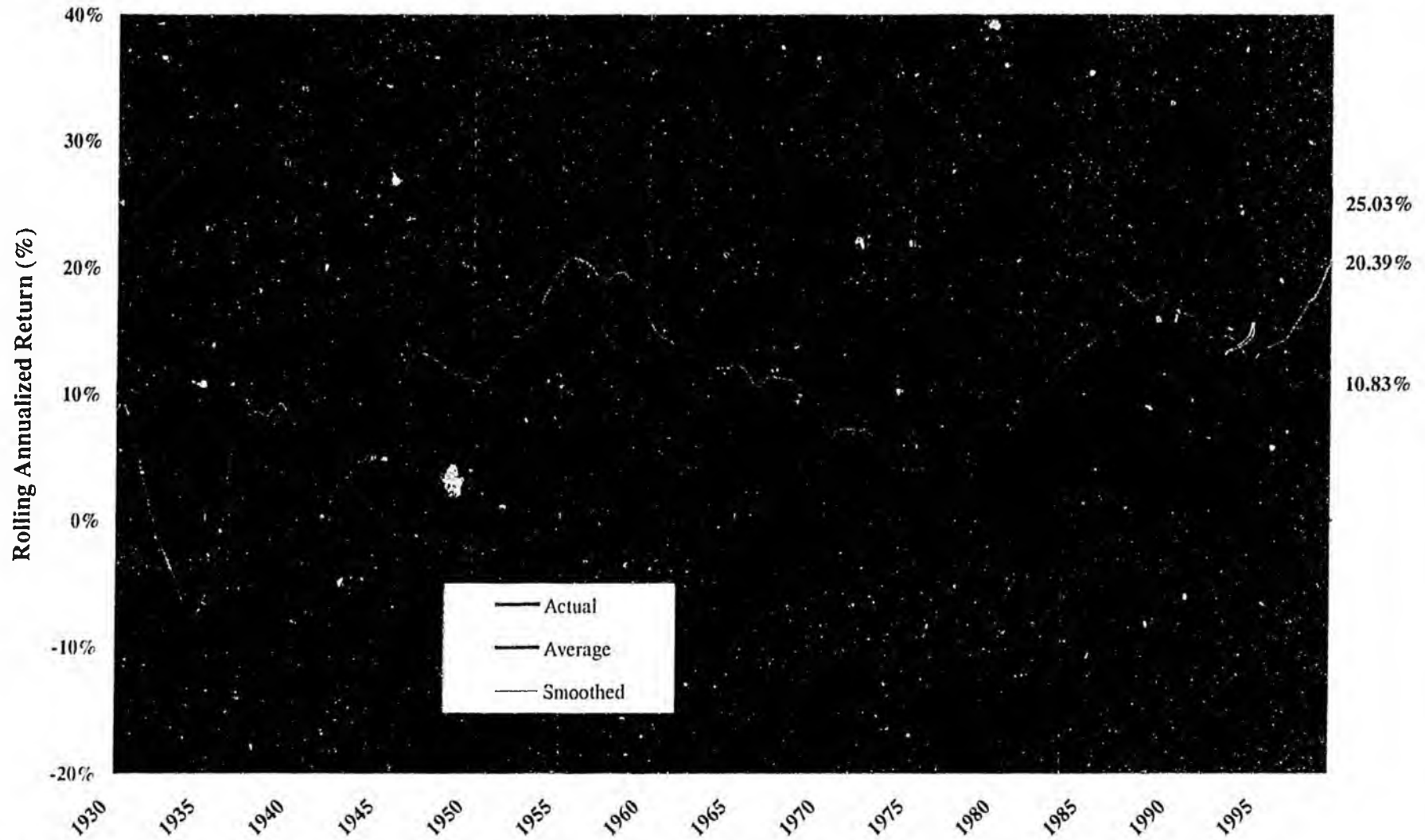
Annualized Returns	1980:Q1- 1989:Q4	1990:Q1- 1999:Q3	1990:Q1- 1999:Q4
Russell 3000	16.61	16.37	17.69
S&P 500	17.55	17.04	18.21
Growth	16.31	18.97	20.60
Value	18.26	14.77	15.37
Russell 2000	14.52	11.81	13.40
Growth	11.50	10.56	13.51
Value	17.44	12.62	12.46
EAFE	22.00	5.49	7.02
LB Agg	12.42	7.91	7.70

# Inflation Matters To Capital Markets

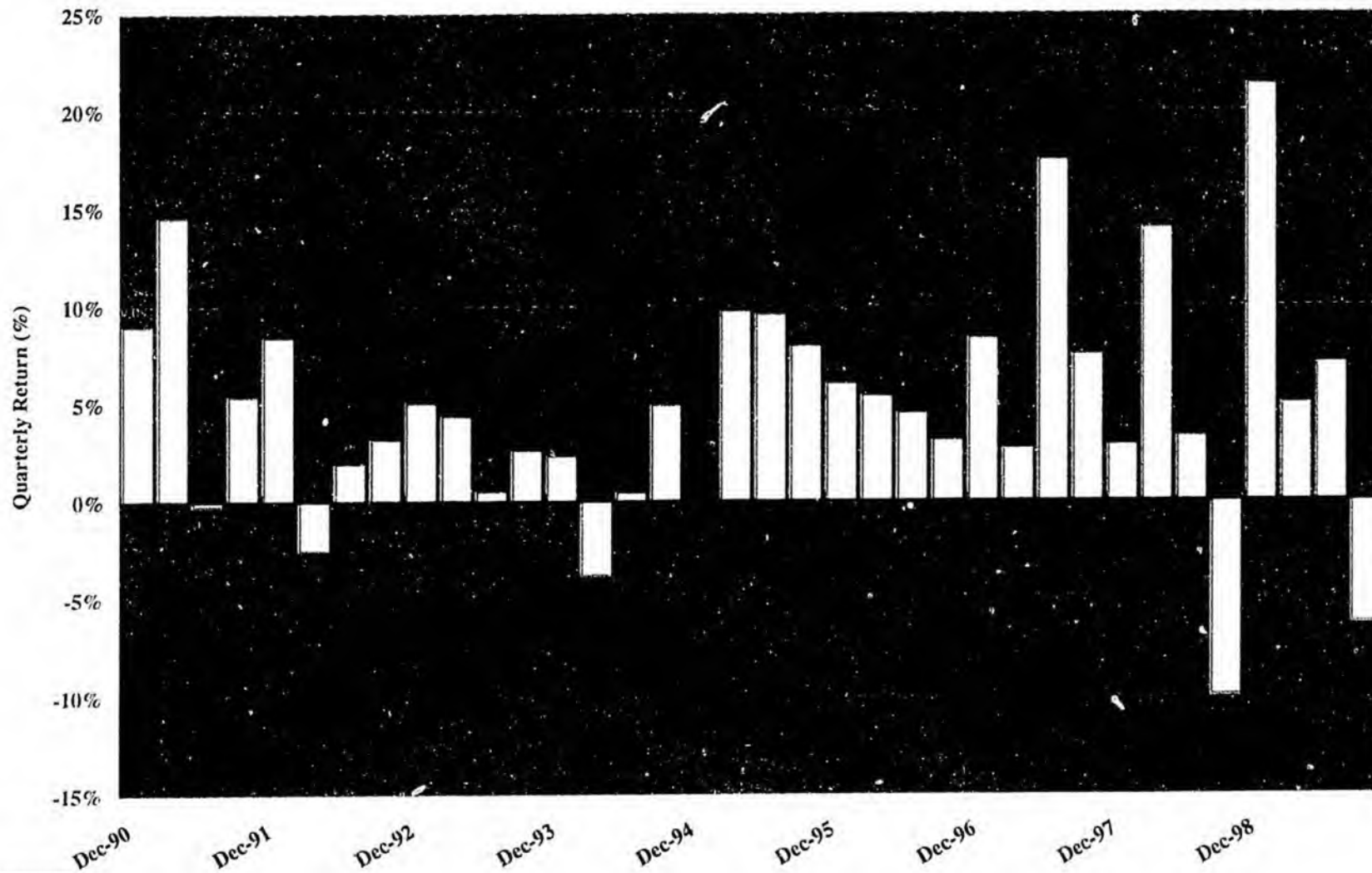
## *Long-Term Inflation Patterns*



### Rolling 5 Year Return for S&P 500 (1926 - Present)



### Quarterly Returns Over Current Bull Market



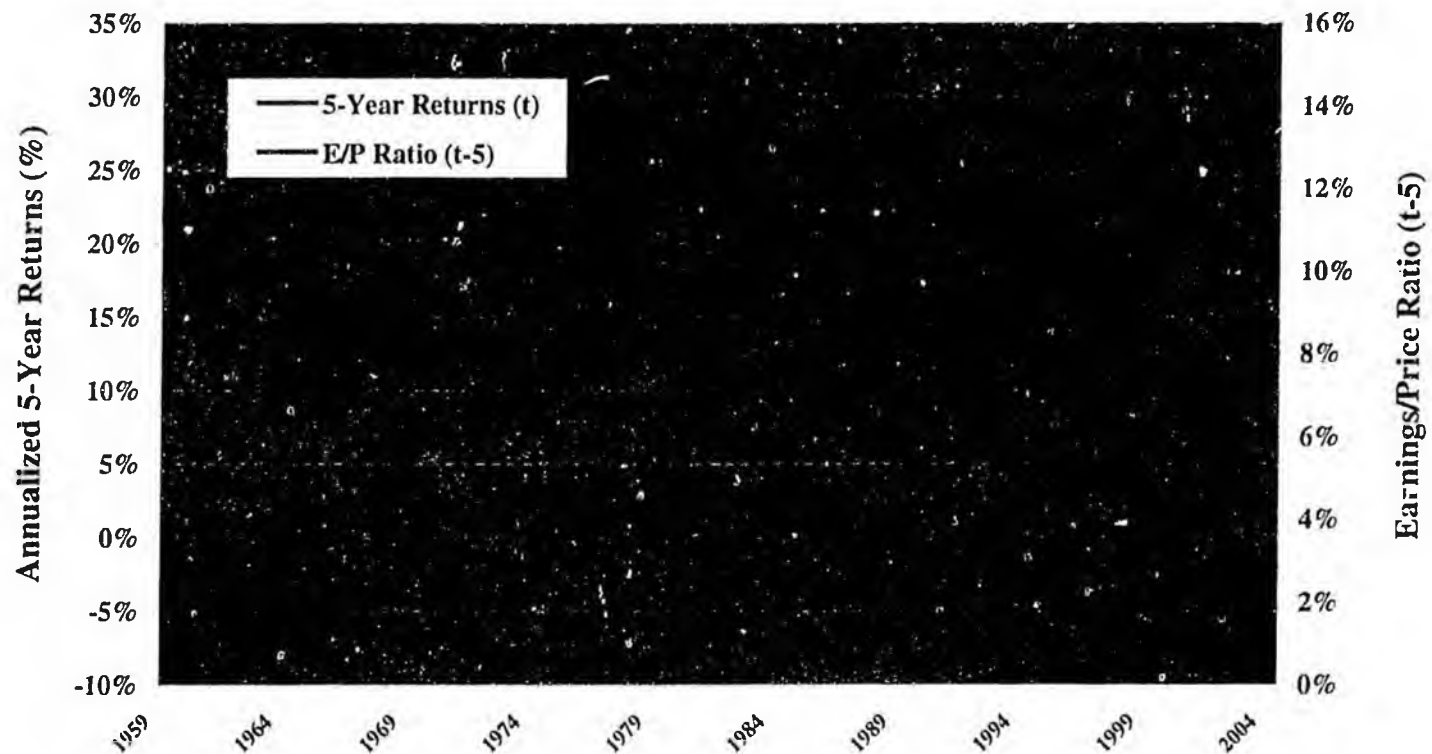
## Fundamentals Are Also Included

(although we're starting to wonder)

- P/E ratios are astoundingly high, and are becoming inconsistent with long-term interest rates
  - markets may be overvalued (but the high p/e overstates the problem)
  - almost all appreciation in the S&P500 during 1999 was due to price appreciation - earnings growth has reappeared, but is not enough to explain current stock valuations
- Bias towards long-run averages

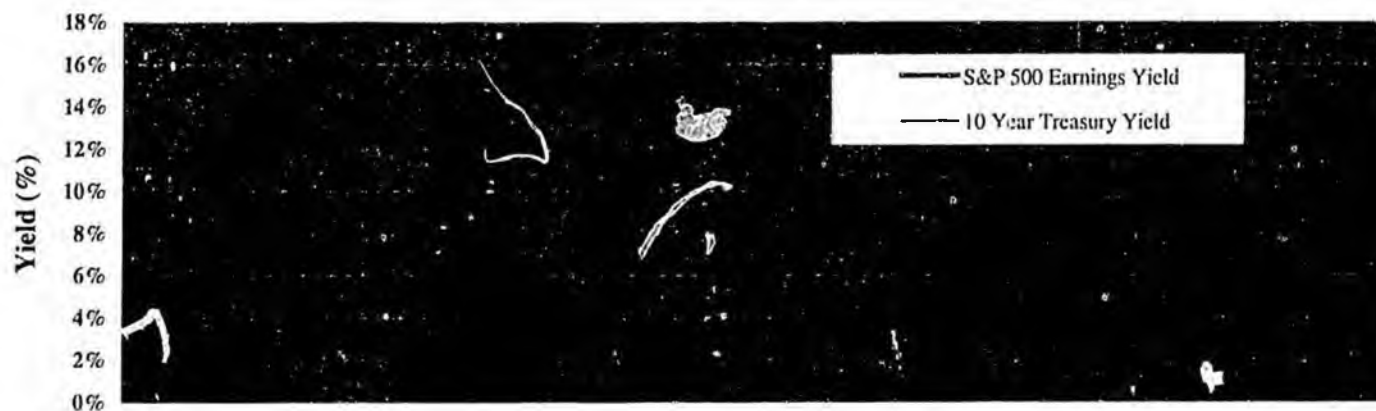
# Large Cap Domestic Equity

S&P 500 5-Year Returns vs. Lagged Earnings/Price (1954 - 1999)

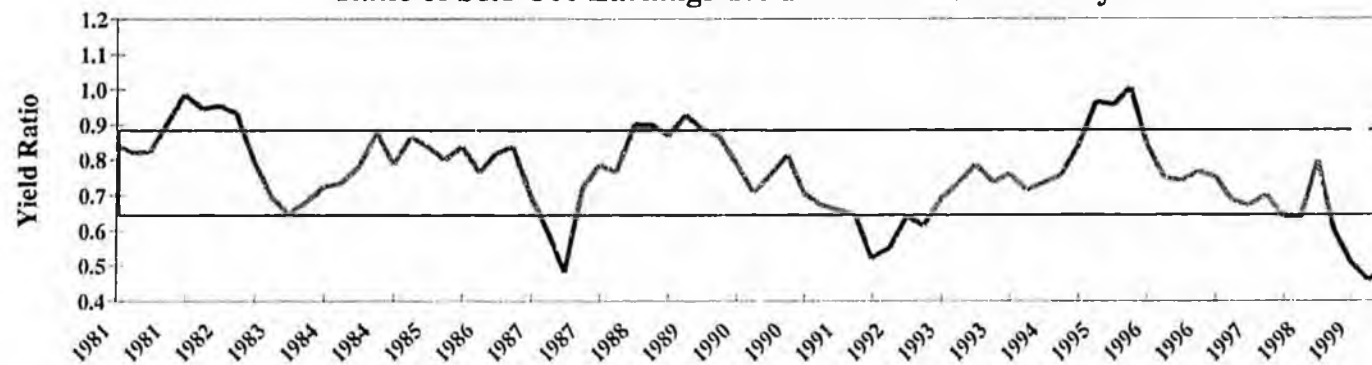


# Large Cap Domestic Equity

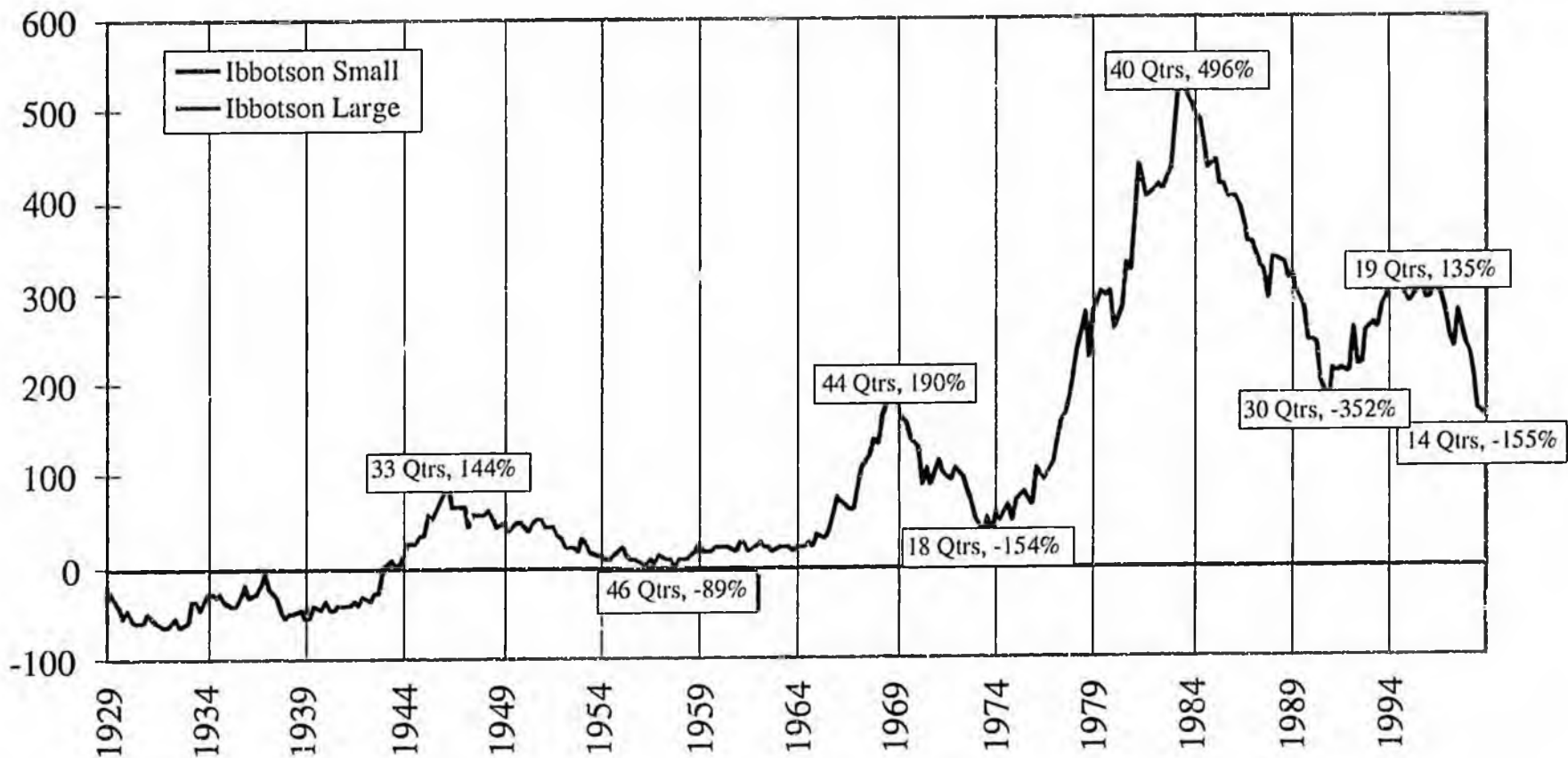
## S&P 500 Earnings Yield vs. 10 Year Treasury Yield



## Ratio of S&P 500 Earnings Yield and 10 Year Treasury Yield

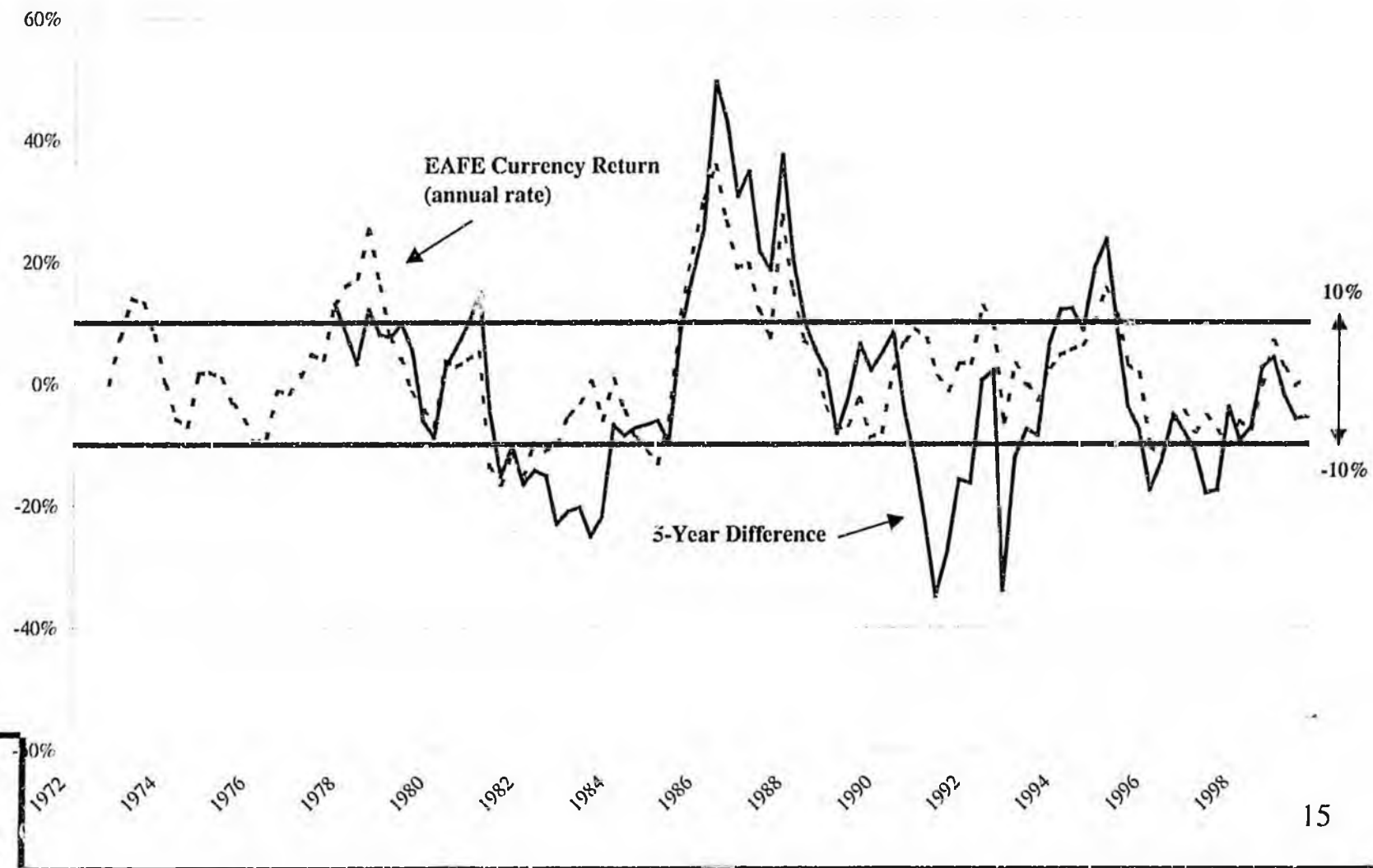


**Cumulative Return - Small Cap Equity Relative to Large Cap Equity  
70 Years Ended December 31, 1998**



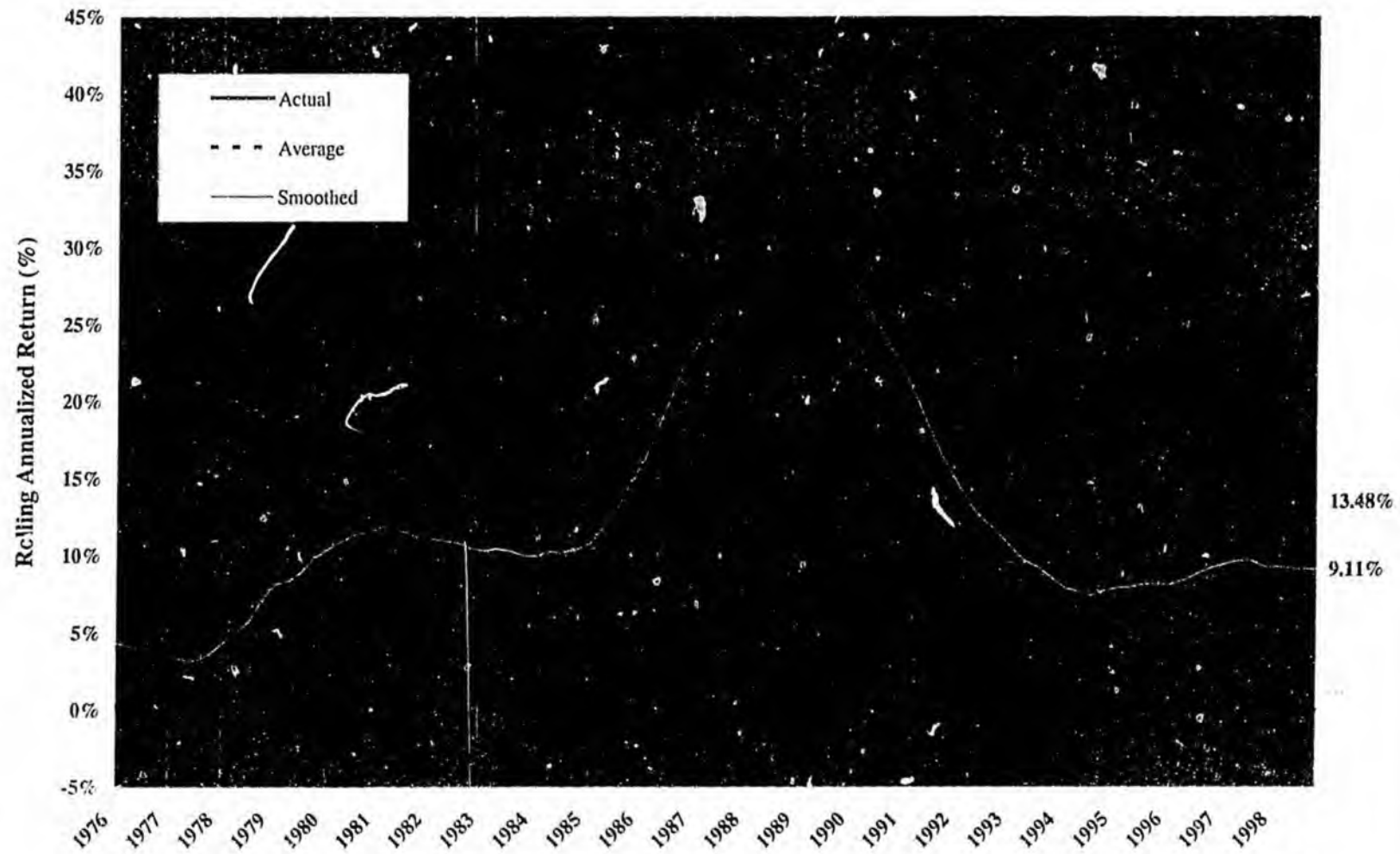
# The Dollar Matters to International Capital Markets

## *EAFE Currency Returns*



# International Equity Returns

## Rolling 5 Year Return for MSCI EAFE

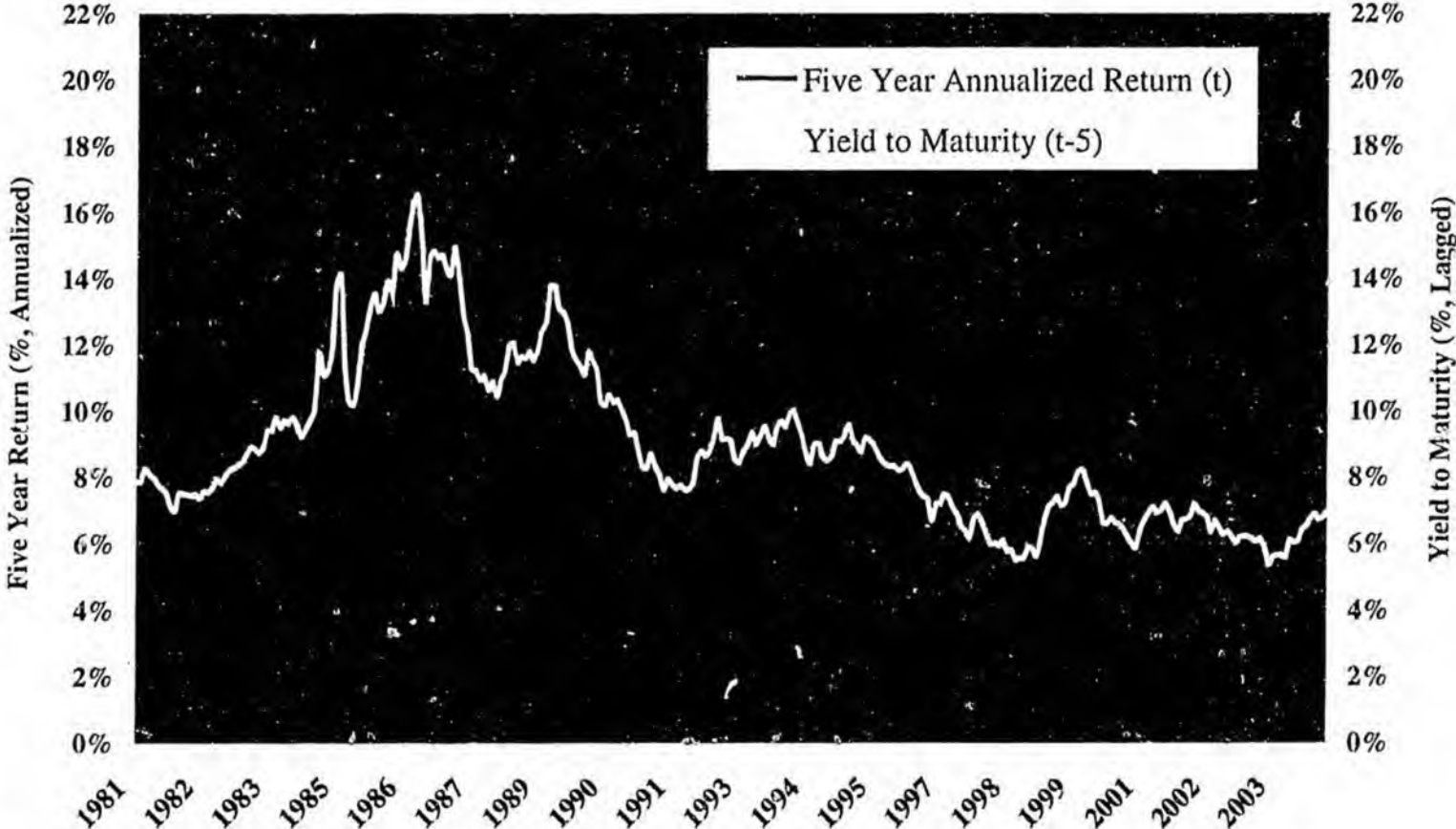


## Domestic Fixed Income - Fundamentals

- Hypothesis: Future fixed income returns are foreshadowed by current YTM.
- Yield on the Lehman Aggregate Index is nearly 7.0% (130 bp higher than one year ago).
- Our 2000 Projection, at 6.7%, reflects our rising inflation assumption.

# Domestic Fixed Income

Lehman Aggregate Index 5 Year Returns vs. Lagged Yield to Maturity



# 2000 Capital Market Projections

Asset Class	Index	Expected Return			Expected Risk		
		2000	1999	Change	2000	1999	Change
<b>Equities</b>							
Broad Dom. Equity	CAI Broad	9.20%	9.40%	-0.20%	16.20%	16.30%	-0.10%
Large Cap	S&P 500	8.90%	9.00%	-0.10%	15.00%	15.00%	0.00%
Small Cap	CAI Small	10.40%	11.20%	-0.80%	25.00%	25.30%	-0.30%
Int'l Equity	EAFE	9.75%	10.00%	-0.25%	21.50%	21.50%	0.00%
<b>Fixed Income</b>							
Domestic Fixed	LB Agg	6.70%	5.60%	1.10%	5.50%	5.30%	0.20%
Non US\$ Fixed	SB Non US	6.50%	5.60%	0.90%	10.00%	11.00%	-1.00%
<b>Other</b>							
Real Estate	CRES	8.30%	8.00%	0.30%	16.50%	16.50%	0.00%
Alternatives	VECO 100	11.50%	12.30%	-0.80%	36.00%	36.00%	0.00%
Cash Equiv.	T-bill	5.00%	4.40%	0.60%	0.70%	0.70%	0.00%
<b>Inflation</b>	CPI-U	3.25%	3.00%	0.25%	1.90%	1.75%	0.15%

# Five-Year Capital Market Projections

*Higher Returns at the Price of Higher Risk*



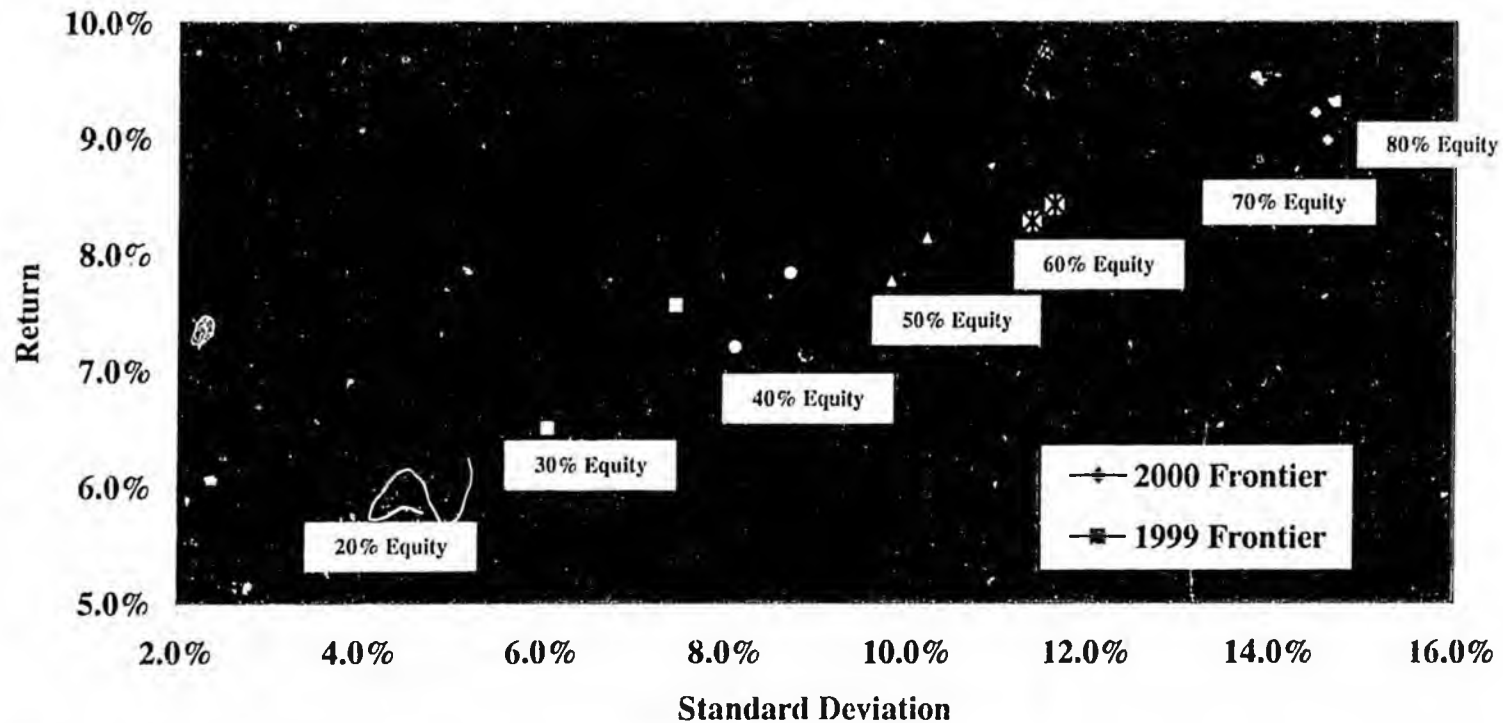
## Range of Efficient Alternatives Using Callan's 5 Year Projections

2000 <i>Asset Classes</i>	Limits		Asset Mix Alternatives								
	Min	Max	1	2	3	4	5	6	7	8	9
Large Dom Eq	0%	100%	9%	10%	15%	20%	25%	30%	35%	39%	44%
Small Dom Eq	0%	100%	2%	3%	4%	5%	6%	8%	9%	10%	11%
International Eq	0%	100%	5%	6%	8%	11%	14%	16%	19%	22%	24%
Dom Fixed	0%	100%	68%	72%	63%	53%	43%	33%	23%	13%	4%
International Fixed	0%	100%	5%	5%	5%	5%	5%	6%	6%	6%	6%
Real Estate	0%	100%	3%	4%	5%	5%	6%	7%	8%	9%	10%
Cash	0%	100%	9%	0%	0%	0%	0%	0%	0%	0%	0%
Totals			100%	100%	100%	100%	100%	100%	100%	100%	100%
Projected Return			7.00%	7.25%	7.50%	7.75%	8.00%	8.25%	8.50%	8.75%	9.00%
Projected Risk			5.65%	6.36%	7.23%	8.27%	9.44%	10.69%	11.99%	13.33%	14.70%



# Comparison of Efficient Frontier 2000 vs. 1999 Projections

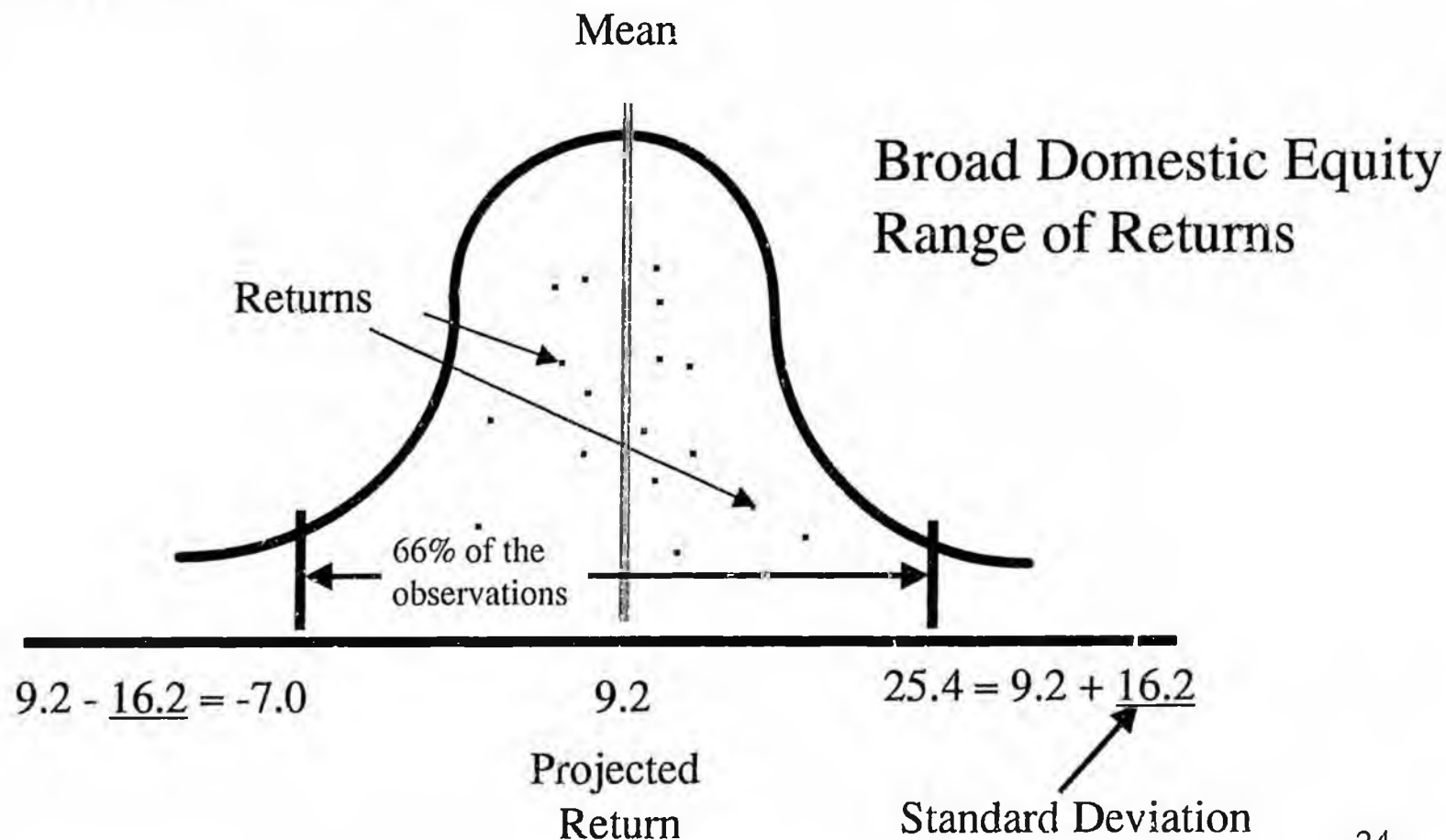
Efficient Frontier (Alternative Investments Excluded)



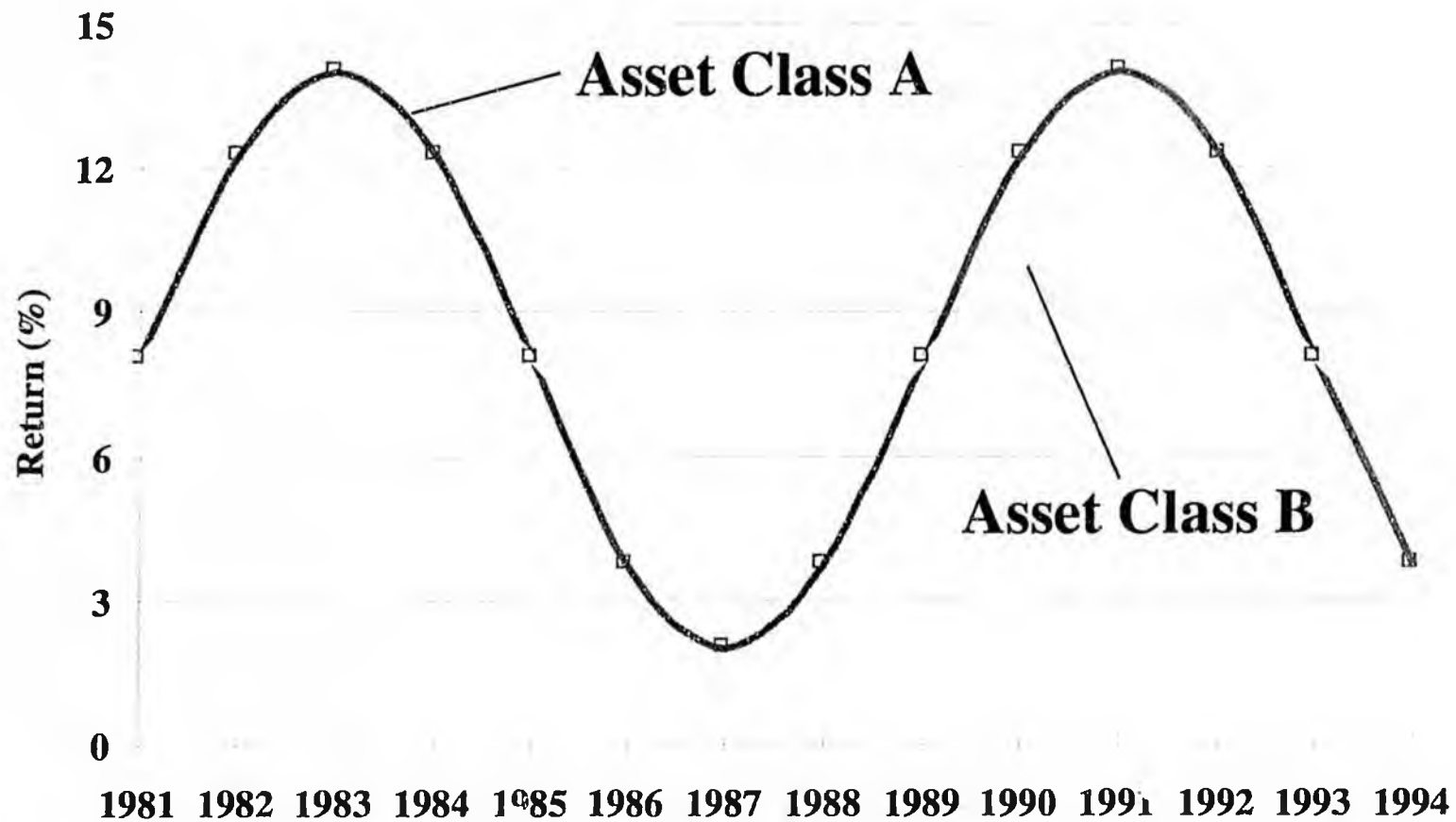
# Supplemental Exhibits

# Measuring Risk

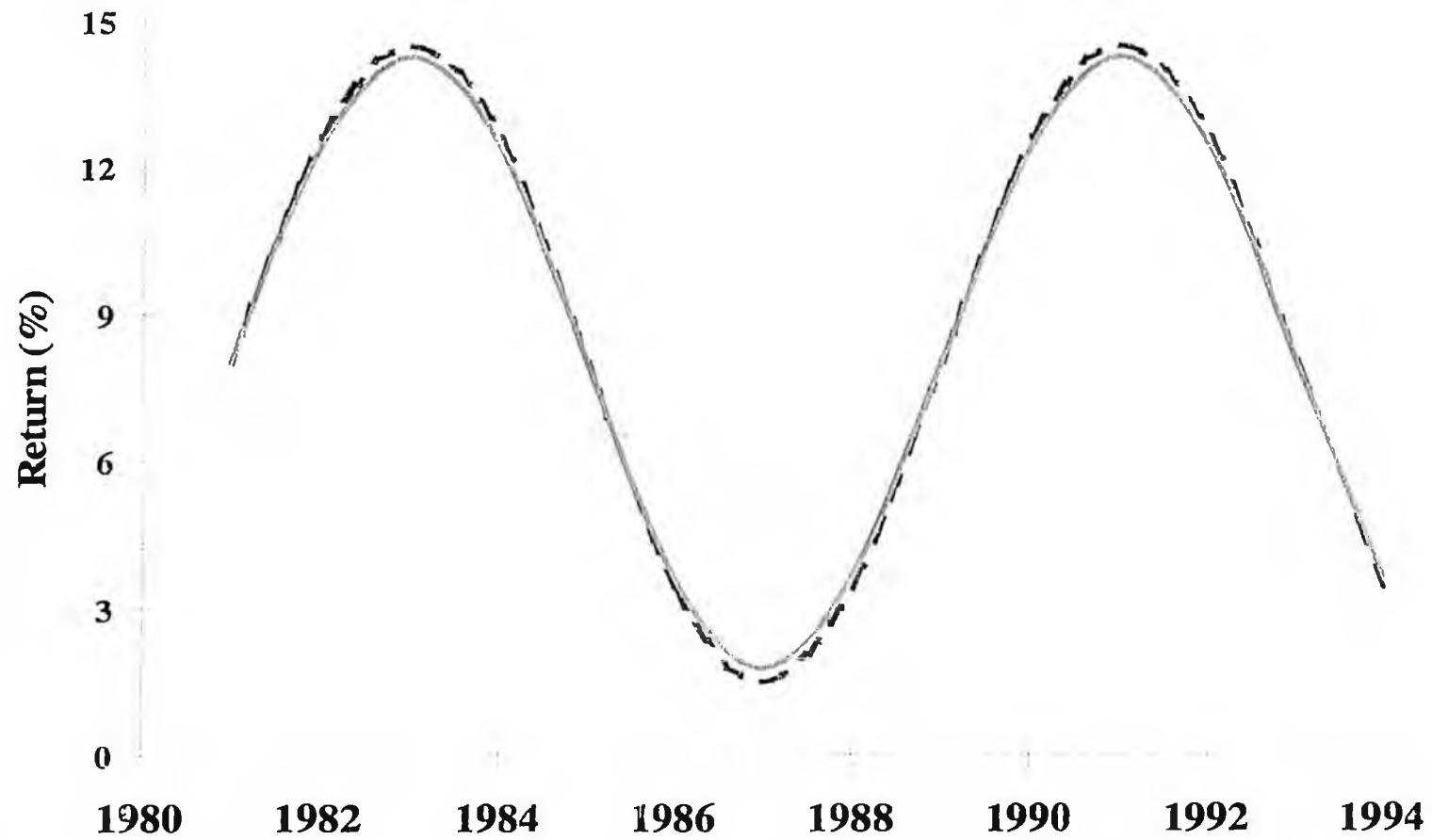
- Standard Deviation - Measures the Variability of Returns from Their Mean



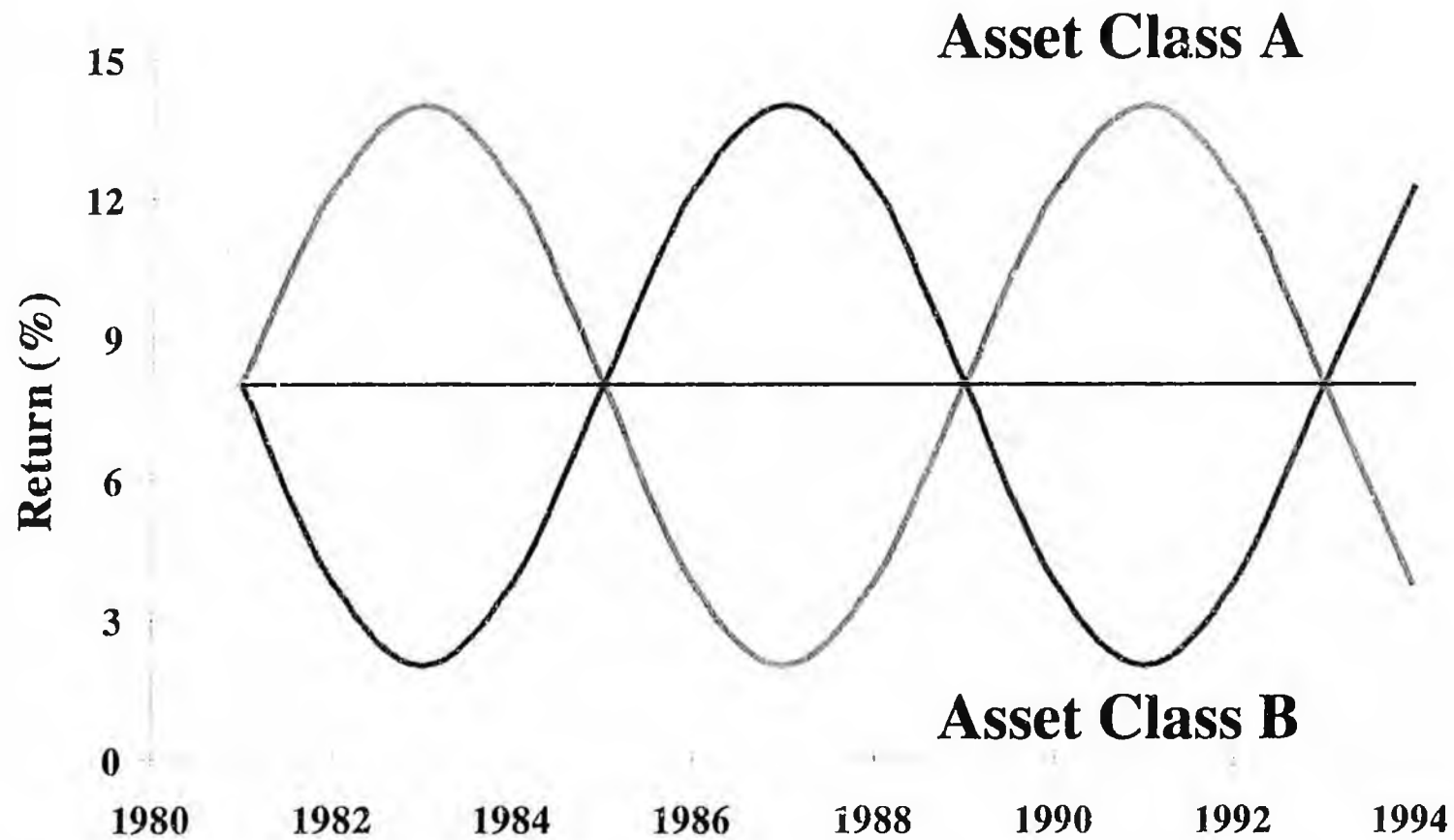
# Returns Will Go Up and Down



## Perfect Correlation (+1)

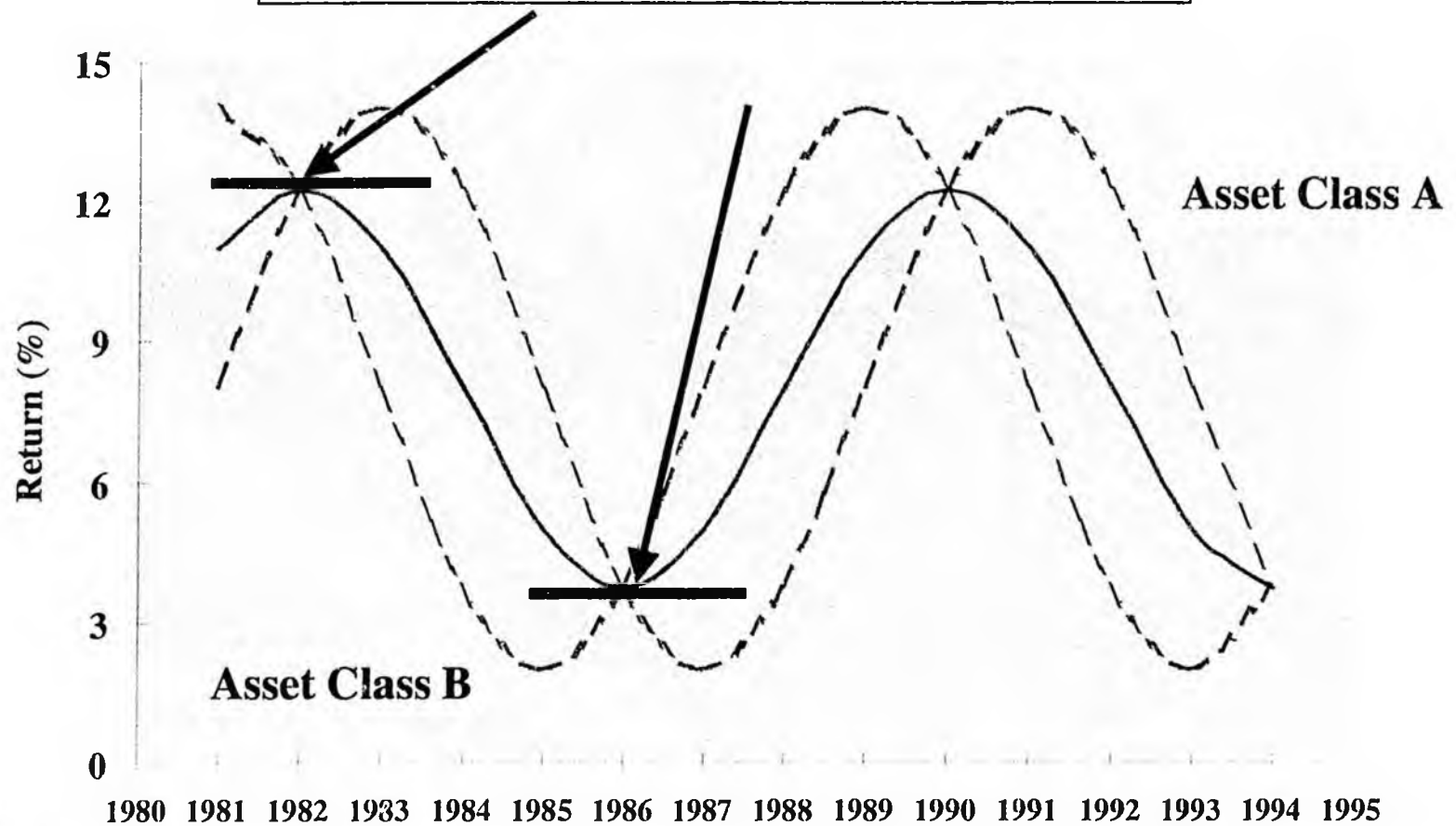


# Perfect Negative Correlation (-1)



# Correlation and Diversification

**Portfolio Volatility Reduced  
with 50% Asset Class A & 50% Asset Class B**





# Board of Trustees

## Monthly Management Report - December 31, 1999

*Consolidated Assets - Dollars in millions. Market values provided by BONY. Returns for periods greater than one year are annualized. All returns are provided by Callan and are adjusted for fees.*

### Section 1: Equity & Fixed Income Performance (post-fees)

	12/31/1999 Market Value	----- % return as of 12/31/99 -----					--- % return as of 9/30/99 ---	
		Last Month	Last 3 Months	Fiscal Y-T-D	Last 12 Months	Last 3 Years	Last 5 Years	Last 15 1/2 Years
<b>FUND SUMMARY</b>								
Unallocated Cash Pool	\$ 4.3							
Transition Cash	2.9							
U.S. Equities	9,886.8	6.88	15.44	6.94	18.45	23.48	21.87	16.26
Non-U.S. Equities	5,180.0	12.09	23.25	26.47	34.88	18.50	11.03	
U.S. Fixed Income	9,308.3	(0.54)	(0.30)	0.34	(2.97)	5.30	7.55	9.44
Non-U.S. Fixed Income	594.8	0.41	(1.12)	(1.69)	(3.65)			
Alaska CDs	209.5	0.41	1.24	2.46	5.33	5.37	5.38	
Real Estate	2,424.0	0.24	0.72	1.44	8.47	10.76	9.72	
	<b>\$ 27,610.7</b>	<b>4.37</b>	<b>9.02</b>	<b>6.95</b>	<b>10.98</b>	<b>14.09</b>	<b>13.09</b>	<b>11.52</b>
<b>U.S. EQUITIES</b>								
S&P 500 Index		5.89	14.88	7.71	21.04	27.56	25.03	17.36
Deutsche Asset Mgt. S&P 500	\$ 3,030.1	5.76	14.75	7.74	20.93	27.57	25.03	17.33
Ark Asset	559.3	0.00	(0.47)	(13.07)	(2.67)	9.82	17.12	15.53
Invesco	535.4	2.93	6.03	(8.00)	0.59	14.59	18.72	
Alliance Capital Management	210.6							
McKinley Capital Management	212.7							
Russell 1000 Index		6.02	16.06	8.40	20.90			
Putnam	1,072.8	12.08	25.13	19.08	31.10			
S&P 400 Index		5.94	17.19	7.35	14.73	21.91		
Society Asset	445.5	3.10	8.94	(2.31)	0.07	6.13		
S&P 1000 Index		6.54	15.81	7.20	14.10			
Deutsche Asset Mgt. S&P 1000	759.1	6.54	15.80	7.60	14.29			
<b>NON-U.S. EQUITIES</b>								
MSCI EAFE Index		8.98	16.98	22.12	26.96			
Deutsche Asset Mgt. EAFE	1,386.3	9.41	17.51	22.55	27.66			
MSCI Europe Index		10.25	17.39	18.76	15.90	22.62		
Clay Finlay	907.7	15.61	28.33	27.03	21.94	23.72		



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### Section 1: Equity & Fixed Income Performance (continued)

	12/31/1999 Market Value	----- % return as of 12/31/99 -----					-- % return as of 9/30/99 --	
		Last Month	Last 3 Months	Fiscal Y-T-D	Last 12 Months	Last 3 Years	Last 5 Years	Last 15 1/2 Years
<b>BLENDDED EQUITIES</b>								
S&P 500/EAFE Blended Index		7.13	15.72	13.42	23.60	22.89		
Brinson Partners	\$ 978.8	4.99	9.20	2.06	9.56	13.32		
Lazard Freres	1,128.8	3.04	7.74	3.61	15.25	17.31		
Russell/EAFE Blended Index		7.91	16.87	10.53	19.92	26.51	23.74	17.15
Dresdner RCM	1,900.6	14.40	31.96	29.43	47.31	40.31	27.46	18.84
Russell/EAFE/EMF Blended Index		10.62	19.53	18.09	26.71	15.61	9.08	
Capital Guardian	1,466.1	15.06	28.40	32.75	72.71	30.96	17.34	
Pacific Basin/EMF Blended Index		9.95	21.51	20.16	59.35	(3.80)	(0.50)	
Schroder	573.0	11.54	25.02	22.61	59.25	(2.92)	(1.59)	
<b>FIXED INCOME</b>								
Lehman Gov/Corp Index		(0.61)	(0.41)	0.13	(2.15)	5.54	7.77	9.64
APFC	\$ 8,714.1	(0.55)	(0.33)	0.29	(3.13)	5.28	7.57	9.45
Lehman Aggregate Index		(0.48)	(0.12)	0.56	(0.82)			
APCM	151.3	(0.49)	0.02	0.78	(1.34)			
Brinson Partners	202.7	(0.29)	0.13	1.19	(0.62)			
Sanford Bernstein	240.2	(0.23)	0.30	1.09	0.87			
Short-term Custom Index		0.45	1.30	2.69	5.37			
Unitized Cash Fund	171.9	0.50	1.40	2.78	5.17			
Salomon WGB 50% Hedged Index		0.13	(0.20)	3.09	(6.30)			
Julius Baer	269.9	0.80	(1.33)	(1.55)	(3.34)			
Rogge	325.0	0.09	(0.93)	(1.79)	(3.89)			



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### Section 2: Blended Manager Performance Breakdown (post-fees)

	12/31/1999 Market Value	----- % return as of 12/31/99 -----					-- % return as of 9/30/99 --	
		Last Month	Last 3 Months	Fiscal Y-T-D	Last 12 Months	Last 3 Years	Last 5 Years	Last 15 1/2 Years
<b>BRINSON PARTNERS</b>								
S&P 500 Index		5.89	14.88	7.71	21.04	27.56		
Large Cap Domestic	\$ 428.8	0.66	2.54	(12.20)	(3.35)	10.89		
MSCI EAFE Index		8.98	16.98	22.12	26.96	15.75		
Non-U.S. Developed	450.0	9.53	16.32	17.43	22.40	14.79		
	<b>\$ 878.8</b>							
<b>LAZARD FRERES</b>								
S&P 500 Index		5.89	14.88	7.71	21.04	27.56		
Large Cap Domestic	\$ 573.4	(0.03)	3.74	(7.57)	6.68	15.98		
MSCI EAFE Index		8.98	16.98	22.12	26.96	15.75		
Non-U.S. Developed	555.5	6.41	12.21	18.69	25.84	18.40		
	<b>\$ 1,128.8</b>							
<b>DRESDNER RCM</b>								
Russell 1000 Index		6.02	16.06	8.40	20.90	26.85	23.74	17.15
U.S. Large Cap	\$ 1,387.2	14.09	30.83	28.41	47.31	40.31	27.46	18.84
Russell 2000 Index		11.32	18.44	10.95				
U.S. Small Cap	293.2	14.38	29.35	19.75				
MSCI EAFE Index		8.98	16.98	22.12				
Non-U.S. Growth	220.3	16.46	43.66	53.61				
	<b>\$ 1,900.6</b>							
<b>CAPITAL GUARDIAN</b>								
Russell 2000 Index		11.32	18.44	10.95				
U.S. Small Cap	\$ 378.8	11.06	18.24	10.94				
MSCI EAFE Index		8.98	16.98	22.12	26.96	15.75	9.08	
Non-U.S. Developed	694.3	15.49	29.67	41.43	72.71	30.96	17.34	
MSCI Emerging Markets Index		12.72	25.44	18.98				
Emerging Markets	393.0	18.40	37.40	33.63				
	<b>\$ 1,466.1</b>							
<b>SCHRODER</b>								
Custom Pacific Index		7.48	17.94	21.54	59.35	(3.11)	(3.80)	
Pacific Rim, Japan 50%-weighted	\$ 323.5	7.08	20.07	22.61	59.25	(2.92)	(1.59)	
MSCI Emerging Markets Index		12.72	25.44	18.98				
Emerging Markets	249.5	15.24	29.12	20.65				
	<b>\$ 573.0</b>							



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### Section 3: Real Estate Performance (post-fees)

	12/31/1999 Market Value	% return as of 9/30/99			
		Last 3 Months	Last 12 Months	Last 3 Years	Last 5 Years
<b>REAL ESTATE</b>					
<i>Direct</i>					
NCREIF Classic Index		2.65	12.24	14.28	12.37
AEW	\$ 187.3	2.15	24.46	27.46	
CB Richard Ellis	291.1	2.21	8.46	13.14	11.39
Heitman	92.5	7.09	15.39	13.94	7.52
Henderson	73.9	2.56	12.40	12.47	14.15
Kennedy	235.7	5.33	14.01	11.04	10.71
L&B	298.7	1.52	9.10	8.83	8.68
LaSalle	169.8	1.98	4.70	6.83	7.21
Raymond James <sup>1</sup>	0.0	2.31	11.69	10.95	10.20
RREEF	46.0	2.24	9.26	14.44	12.31
Sentinel	192.8	2.29	10.05	11.06	11.24
SSR	33.1	1.57	7.61	10.28	11.49
	<u>\$ 1,621.0</u>				
<i>Commingled</i>					
NCREIF Classic Index		2.65	12.24	14.28	12.37
Total Commingled	\$ 18.5	4.46	15.38	15.40	12.54
<i>REITs</i>					
Morgan Stanley REIT Index		(8.09)	(5.88)	4.36	
AEW REIT	\$ 341.1	(6.99)	0.13		
AEW Focus	95.7	(6.00)			
Simon Property Group	54.3	3.16	(8.18)	6.26	6.27
	<u>\$ 491.0</u>				
<i>Mortgages</i>					
Lehman Corporate A Index		0.19			
Lend Lease	\$ 293.4	0.19			
<i>Total Real Estate</i>					
65 NCREIF/20 MS REIT/15 LB Corp A Index		0.14	6.83	10.39	10.06
Total	\$ 2,424.0	0.72	8.47	10.76	9.72

<sup>1</sup> In November, Raymond James' assets were transferred to LaSalle. Separate performance is provided for historical periods.



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### Section 4: Asset Allocation

	Market Value	Actual %	Target		Over/Under
			%	Range	
<b>U.S. Equities</b>	\$ 9,764.2	35.4	37.0	± 4.0	(1.6)
Value Style	4,751.2	17.2	18.5		(1.3)
Growth Style	5,013.0	18.2	18.5		(0.3)
<b>Non-U.S. Equities</b>	5,124.6	18.6	16.0	± 4.0	2.6
Developed Markets	4,492.0	16.3	13.6		2.7
Emerging Markets	632.6	2.3	2.4		(0.1)
<b>U.S. Fixed Income</b>	9,433.9	34.2	35.0	+7.0,-3.0	(0.8)
<b>Non-U.S. Fixed Income</b>	591.0	2.1	2.0	± 2.0	0.1
<b>Real Estate</b>	2,386.8	8.6	10.0	+2.0,-3.0	(1.4)
Direct	1,621.0	5.9	6.0		(0.1)
Commingled	18.5	0.1	0.0		0.1
REIT's	459.8	1.7	2.0		(0.3)
Mortgages	287.5	1.0	1.5		(0.5)
Opportunistic	0.0	0.0	0.5		(0.5)
<b>Alaska CDs</b>	209.5	0.8	0.0		0.7
<b>Cash &amp; Equivalents</b>	100.5	0.4	0.0		0.4
	<b>\$ 27,610.5</b>	<b>100.0</b>	<b>100.0</b>		

### Section 5: Turnover

	Currnt Mnth	12-Mnth Rate
<b>ACTIVE EQUITY</b>		
Alliance Capital Mgmt	0.0	
Ark	7.8	75.5
Brinson Domestic	3.9	61.8
Brinson International	10.9	74.6
Capital Guardian	2.8	48.1
Cap Guardian Str Cap	5.2	
Cap Guardian Em Mkts	2.2	
Clay Finlay	4.8	75.8
Invesco	5.9	53.7
Lazard Domestic	2.5	47.4
Lazard International	1.2	29.0
McKinley Capital Mgmt	0.0	
Putnam	5.6	100.7
DRCM Large Cap Dom	5.5	95.2
DRCM Small Cap Dom	11.0	129.2
DRCM International	10.0	183.6
Schroder	1.6	55.6
Schroder Em Mkts	6.6	
Society	4.7	71.9
<b>FIXED INCOME</b>		
APFC	6.5	115.8
APCM	0.0	23.7
Brinson Partners	8.0	87.8
Sanford Bernstein	2.2	275.2
Julius Baer	6.7	294.1
Rogge	1.8	125.9



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### Section 6: Unrealized Gain/Loss Analysis

	Cost	Market	Unrealized Gain/Loss
<b>ACTIVE EQUITY</b>			
Value			
Ark Asset	\$ 612.0	\$ 559.3	\$ (52.7)
Brinson Partners	760.4	878.8	118.4
Capital Guardian	1,023.5	1,466.1	442.6
Invesco	452.9	535.4	82.5
Lazard Freres	864.3	1,128.8	264.6
Society Asset Growth	424.4	445.5	21.0
Alliance Capital Management	200.0	212.7	12.7
Clay Finlay	625.0	907.7	282.6
Dresdner RCM	1,194.6	1,900.6	706.0
McKinley Capital Management	201.4	212.7	11.3
Putnam	724.6	1,072.8	348.2
Schroders	<u>436.8</u>	<u>573.0</u>	<u>136.1</u>
Total Active Equity	\$ 7,520.0	\$ 9,893.3	\$ 2,373.3
<b>PASSIVE EQUITY</b>			
Deutsche Asset Mgt. S&P 500	\$ 1,331.5	\$ 3,030.1	\$ 1,698.6
Deutsche Asset Mgt. S&P 1000	671.8	759.1	87.3
Deutsche Asset Mgt. EAFE	<u>916.3</u>	<u>1,386.3</u>	<u>470.0</u>
Total Passive Equity	\$ 2,919.7	\$ 5,175.5	\$ 2,255.8
Total All Equity Managers	\$ 10,439.7	\$ 15,068.8	\$ 4,629.1

	Cost	Market	Unrealized Gain/Loss
<b>FIXED INCOME</b>			
APFC Internal	\$ 9,057.6	\$ 8,714.1	\$ (343.5)
Unitized Cash Fund	173.2	171.9	(1.2)
APCM	157.5	151.3	(6.2)
Brinson Partners	212.7	202.7	(10.0)
Sanford Bernstein	246.8	240.2	(6.6)
Julius Baer	278.2	269.9	(8.3)
Rogge	<u>347.4</u>	<u>325.0</u>	<u>(22.4)</u>
Total Fixed Income Managers	\$ 10,473.3	\$ 10,075.1	\$ (398.2)

	Cost	Market	Unrealized Gain/Loss
<b>REAL ESTATE</b>			
<b>Direct</b>			
AEW	\$ 113.6	\$ 187.3	\$ 73.7
CB Richard Ellis	279.8	291.1	11.2
Heitman/JMB	89.2	103.2	14.0
Henderson	66.6	73.9	7.3
Kennedy	223.2	235.7	12.5
L&B	283.7	298.7	15.1
LaSalle	163.8	169.8	6.0
Raymond James	0.0	0.0	0.0
RREEF	42.0	46.0	4.0
Sentinel	181.8	192.8	11.0
SSR	<u>31.0</u>	<u>33.1</u>	<u>2.2</u>
Total RE - Direct	\$ 1,474.7	\$ 1,631.6	\$ 156.9
<b>Commingled</b>			
Allegis	\$ 0.0	\$ 4.4	\$ 4.4
CIGNA	<u>4.4</u>	<u>3.4</u>	<u>(1.0)</u>
Total RE - Commingled	\$ 4.5	\$ 7.9	\$ 3.4
<b>REITs</b>			
AEW	\$ 483.2	\$ 436.8	\$ (46.5)
Simon Property Group	<u>55.8</u>	<u>54.3</u>	<u>(1.5)</u>
Total RE - REITs	\$ 539.0	\$ 491.0	\$ (48.0)
<b>Mortgages</b>			
Lend Lease	\$ 301.5	\$ 293.4	\$ (8.1)
Total All RE Managers	\$ 2,319.7	\$ 2,424.0	\$ 104.2

*Executive Summary*

	<i>Outlook</i>
<i>Export Revenues</i>	H2 99 should indicate continued growth in exports, with full year totals exceeding 1998 revenues. 2000 well placed given generally favourable commodity price environment and improving economic growth. Expect at least as good as 1999.
<i>Fish &amp; Fish Products</i>	Unlikely that prices can rise too far from current levels. Further export revenue growth will come from improved volumes.
<i>Oil &amp; Gas</i>	Although oil prices expected to fall from current levels, average annual prices will be up vs. 1999. Possible improvement in LNG export revenues as contract prices rise with a lag.
<i>Wood &amp; Wood Products</i>	Peak prices achieved in 1999. Prices expected to fall, on average, during 2000 as housing starts slow in US and new production capacity reduces prices and margins.
<i>Metals &amp; Mining</i>	Zinc prices to trade higher, although bulk of the gains already achieved in 1999. Lead will rise with other base metals but limited by high and rising inventory profile. Gold expected to remain range bound with limited scope for significant upside surprises.

In last year's commodity outlook, we suggested that prices were set for recovery, 'sometime after the first half of 1999'. We, like others, have been shown to be conservative in both the timing and extent of the recovery in most classes of commodity in 1999. Supply restraint was instrumental to stopping prices from sliding further and improved demand growth came from recovery in Asia and from economies elsewhere, which accelerated away from the threat of deflation and recession.

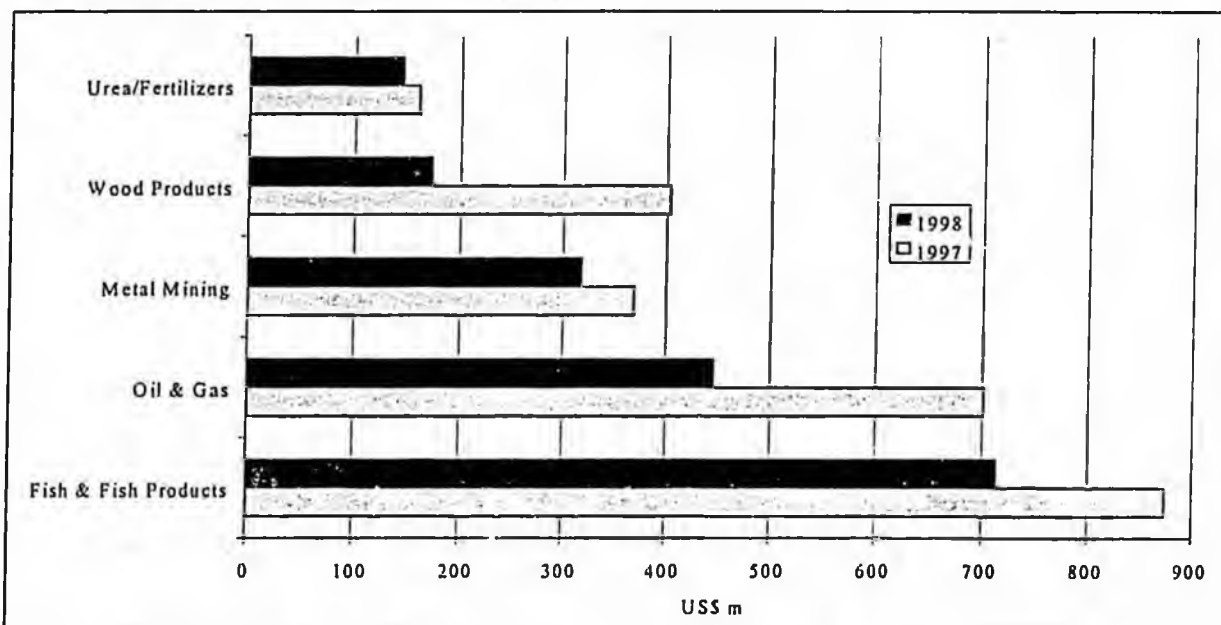
What we have to consider now is the extent to which price recovery can continue from here and whether expected synchronised global growth will lead to another prosperous year for commodities in 2000.

For Alaska, the most significant contribution to export demand growth in 2000 will be growth acceleration in Japan as it accounts for over 40% of all export revenues. Even without substantial growth, Alaskan exports will continue to benefit from a strong Yen. Exports to Asia and Europe should continue to benefit from improved economic fundamentals in those areas although the weak Euro makes US\$ priced exports less competitive/attractive. For the price outlook, we will discuss each commodity class in turn.

Although H2 99 data are not available, data for H1 99 suggests that export revenue for the full year should be up on 1998. The major contributing groups of fisheries and oil & gas have both benefited from higher prices, which continued to strengthen during H2 99. Zinc price recovery accelerated in H2 99 and therefore the full year

contribution from minerals should increase. Despite weakness in lead and fertilizer prices, total export revenues are expected to have increased year-on-year.

### Alaska's Key Exports by Classification



Source: US Department of Commerce

### Alaska Export Revenue US\$ m January – June 1999 and as % of Full Year 1998

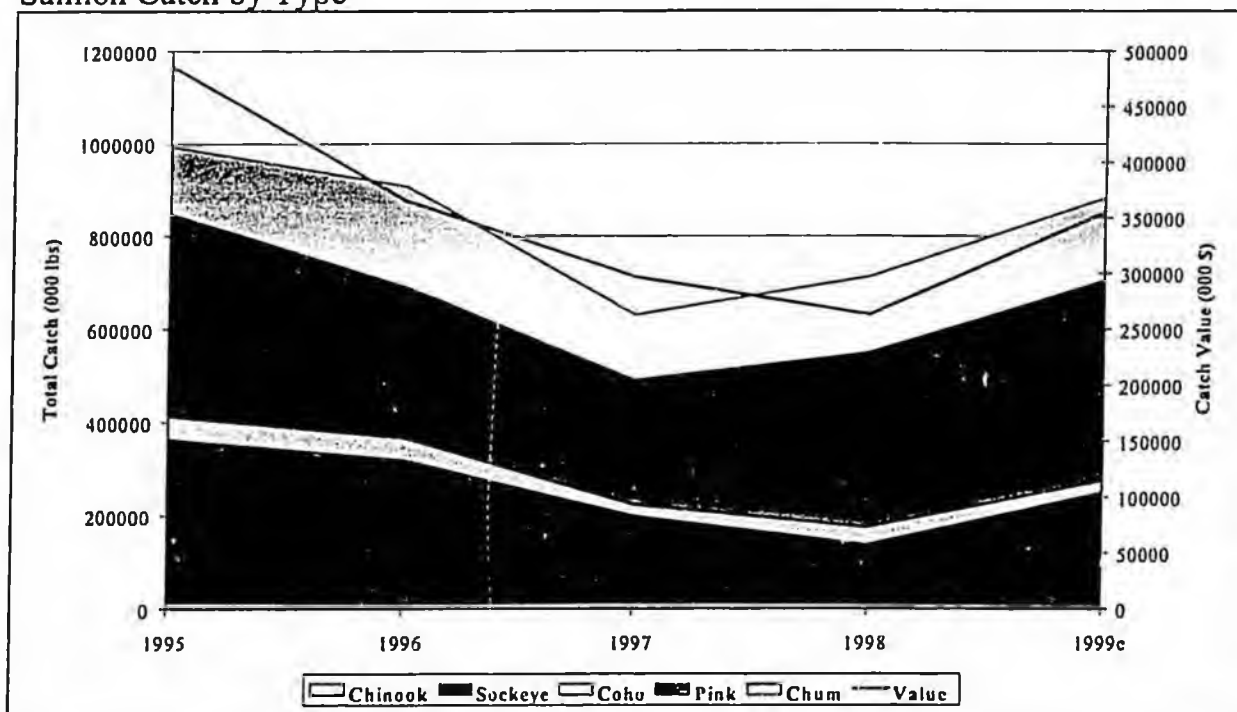
	H1 99 US\$ m	% 1998 revenue
Fish & Fish Products	512	77
Oil & Gas	300	79
Metal Mining	45	14
Wood Products	99	53
Urea/Fertilizers	59	35
<b>Total</b>	<b>1015</b>	<b>52</b>

Source: US Department of Commerce

### Fish and Fish Products

In 1998 fishing related exports made up 36% (\$713m) of total state export revenues. Data for H1 99 indicate a dramatic increase in revenues, to \$512m. Even allowing for seasonality, one would expect full year 1999 revenues to have increased. Exports consist of salmon, fish livers, roes, herring, cod, crustaceans and other fish products. Salmon forms the single most important product group. Based on preliminary salmon catch value data (see chart), the value of salmon caught in Alaskan waters increased 35% to \$355m in 1999. The increase came from a combination of price and volume. The average weight of most classes of salmon declined during 1999, but both the number of fish caught and the average price per pound increased. The biggest price improvement came from chinook and the biggest increased catch came from sockeye, reversing the declining trend that began in 1995. The rebound in sockeye salmon (almost double the number of fish) reflects improving health of the salmon population (enhanced ocean survival). As the largest contributor to catch value, this has been the key driver to the improved fortunes of Alaskan fishing during 1999.

## Salmon Catch by Type



Source: Alaska Department of Fish and Game

Important to the demand for fish product exports is the health of the Asian economies. Dramatic recovery in Korea and initial signs of recovery in Japan, the two largest importers of fish product from Alaska, have been key to selling on higher volumes of fish at generally higher prices. *Schroder Economics* forecasts growth in Japan to accelerate from 0.7% in 1999 to 1.0% in 2000. Combined with a strong Yen exchange rate, imports from Alaska should increase this year. *Schroder Economics* forecasts for South Korea are a slowdown in growth from 10.1% in 1999 to 7.0% in 2000, still impressive given the economic malaise of 1998. Economic recovery in Euroland should also benefit exports in 2000.

Economic growth will support export earnings, although we would question the extent to which unit prices can rise from current levels. Raising prices significantly will simply result in substitution away from wild salmon to cheaper imports of farmed salmon, especially from Chile. Therefore, revenues will depend on catch volumes and run rates, which are dependent upon the health of the salmon population.

Longer term, the issue facing the fishing industry is competition from cheaper farmed product imports. The US now imports more salmon than it exports as farmed product takes market share from wild salmon. Alaska's wild salmon product is superior but obviously more expensive. The growing trend in organic food may benefit salmon fishermen at the expense of the mass produced variety but such a shift in preferences may take a long time to influence export revenues.

## Oil & Gas

1999 was a case study in commodity price volatility as far as hydrocarbons are concerned. New Year predictions suggested that we were entering a period of single digit oil prices. What followed was the re-birth of OPEC influence with a supply-side response to the issue of critically low national budgets. The tri-partite agreement

between Venezuela, Saudi Arabia and non-OPEC member Mexico was critical to the success of the output cuts, as indeed were improved relations between Iran and the Saudis. Markets doubted the first two cuts but the third and largest met with increased confidence and prices started to anticipate the draw down in stocks.

Crude Oil Prices (\$/bl)



Alaska North Slope (ANS) crude oil prices recovered sharply in 1999, up from \$10.70/bl in January to over \$24.00/bl at the end of the year. The recovery in prices was instrumental to the improvement in state finances as over 80% of the state budget is sourced from oil & gas revenues. Alaska oil was also in the news during 1999 due to negotiations with BP Amoco over the proposed merger with Arco. The merger will leave the combined entity with a dominant position in oil pipeline exports from Prudhoe Bay to the US West Coast. Agreement within Alaska has now been reached, but final FTC clearance is still pending.

The oil market is now especially tight. Crude oil inventory in absolute terms is at a three year low. Relative to demand crude oil inventories are now below 1996 levels, one of the unofficial benchmarks targeted by OPEC.

With prices still higher than the long-term trading range of \$15-20/bl (ANS) one has to consider the prospects for prices remaining at such levels. Y2K appears to have passed largely unnoticed and all that remains in the very short term is Northern Hemisphere winter. To date, it has been warmer than average, although a little colder than last year, the warmest on record. If temperatures do not fall sharply soon, destocking following the non-event of Y2K could put further downward pressure on prices. There is data to suggest that OPEC compliance started to fall during December (as low as 75%) and Iraqi exports have resumed faster than initially expected. Increased supply of crude oil and lacklustre final demand points to downward pressure on prices. Indeed, we expect prices to fall from here.

### Crude Oil Price Assumptions

	1998	1999	Q1 00F	Q2 00F	Q3 00F	Q4 00F	2000F	2001F
Brent (spot)	12.76	17.92	21.00	17.00	17.25	17.75	18.25	16.50
WTI	14.35	19.33	22.50	18.75	18.75	19.00	19.75	18.00

Source: Schroder Global Research

Based on the latest GDP forecasts *Schroder Economics* have estimated demand for crude oil. Oil demand is expected to grow 2.2mbd (million barrels per day) in 2000 and 1.5mbd in 2001.

### Summary World Crude Oil Demand and Supply

mbl per day	1995	1996	1997	1998	1999(f)	2000(f)	2001(f)
<b>Supply</b>							
OPEC	27.7	28.5	30.0	30.7	29.6	32.3	33.5
Non-OPEC	42.5	43.6	44.4	44.7	44.5	45.1	45.9
<b>Total</b>	<b>70.1</b>	<b>72.0</b>	<b>74.4</b>	<b>75.3</b>	<b>74.1</b>	<b>77.5</b>	<b>79.4</b>
% change		2.7%	3.2%	1.3%	-1.6%	4.5%	2.5%
<b>Demand</b>							
OECD	44.9	45.9	46.7	46.9	47.9	48.7	49.9
Non-OECD	25.0	25.7	26.8	27.1	27.3	28.7	29.0
<b>Total</b>	<b>69.9</b>	<b>71.6</b>	<b>73.5</b>	<b>74.0</b>	<b>75.2</b>	<b>77.4</b>	<b>78.9</b>
% change		2.4%	2.7%	0.7%	1.6%	2.9%	1.9%
<b>Stock build/(draw)</b>	<b>0.2</b>	<b>0.4</b>	<b>0.9</b>	<b>1.3</b>	<b>-1.1</b>	<b>0.1</b>	<b>0.5</b>

Source: IEA (historic), Schroder Economics, Schroder Global Research (forward estimates)

We assume prices fall further in Q2 2000 as additional supply comes back to the market and seasonal demand falls off. High oil prices in H2 99 are expected to result in increased upstream capital expenditure budgets for 2000 and beyond, although the extent of participation by the Oil Majors in this 'dash for growth' remains to be seen. As such, growth in non-OPEC output may only start to accelerate late 2000/early 2001.

The majority of Alaskan export earnings in oil & gas are derived from crude oil sales. The bulk of the remainder comes from LNG (Liquefied Natural Gas). As volumes are typically fixed via long term take-or-pay contracts it is pricing which determines marginal revenue. LNG prices are typically fixed relative to the competing fuel source (i.e. fuel oil) and will therefore rise as fuel oil prices rise with the oil price. That said, industry dynamics such as the global over supply of LNG limit the extent to which prices can recover. Lower crude oil prices in H1 99 are reflected in lower Alaskan export revenues derived from LNG. For 2000 we would expect the price environment to improve as higher fuel oil prices drive lagged adjustments in LNG prices and as recovery in Asia absorbs the overhang of supply in the region.

### Wood & Wood Products

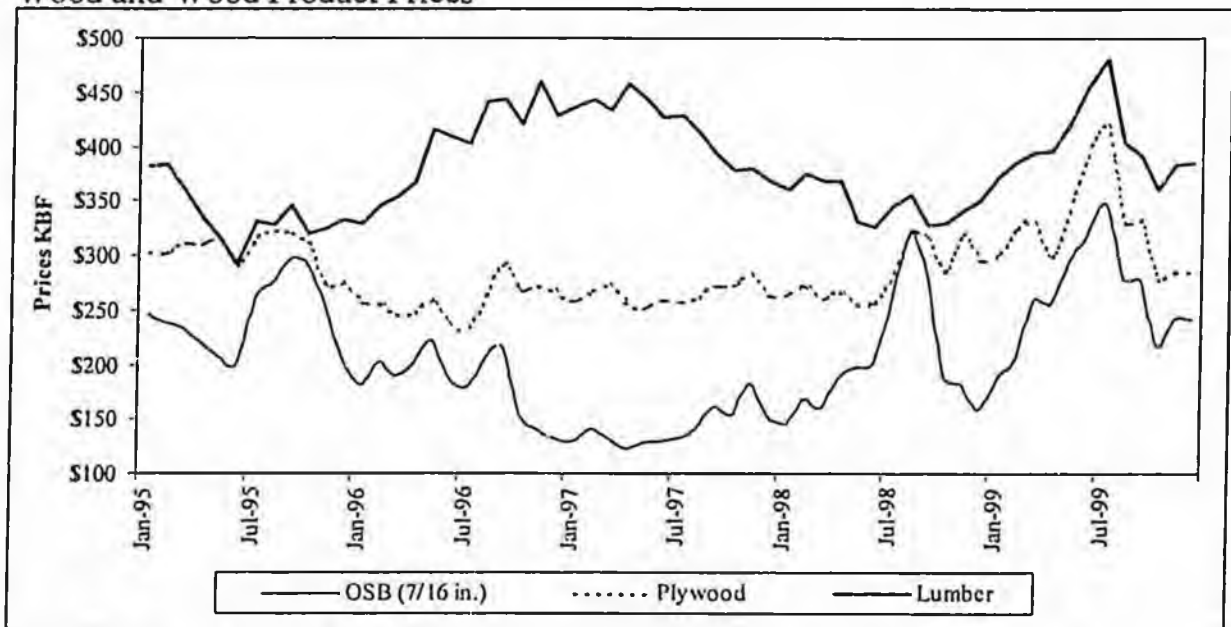
As markets continued to be surprised by continued strength in construction demand in North America, this was reflected in lumber and panel prices. Recovery in the latter part of 1998 continued well into 1999 with benchmark average framing lumber prices rising over 15% year-on-year. Peak-cycle prices were achieved in July 1999 as US housing markets continued to power ahead and new production capacity additions

were limited. This was true for both lumber and plywood. Higher prices are reflected in increased export revenues received during H1 99.

The chart below indicates a sharp fall in prices during the second half of the year. This can be attributed to the slowdown in housing starts. Although growth in commercial property remains relatively strong, that too is showing signs of slowing and is anyway less important to forest product demand.

We continue to expect the US housing market to soften from current levels. New wood product capacity will also act to depress operating rates and reduce prices and margins. Continued recovery in the Asia Pacific region may act to boost export revenues but overall we still expect prices to decline, on average, from peak levels achieved in 1999. For Alaska, sales of chips and scrap wood are material. As such, the forecast rise in pulp prices should lead to higher revenues elsewhere in the production chain.

Wood and Wood Product Prices



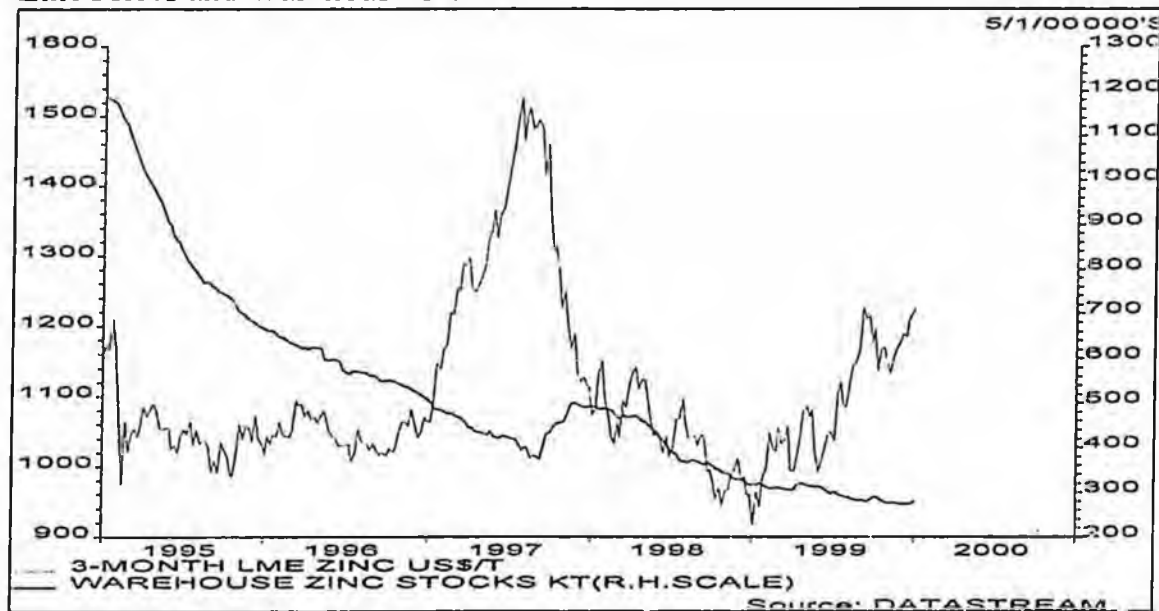
Source: *Random Lengths*

## Metals & Mining

Zinc and lead make up the majority of Alaska's mineral exports, with 81% and 14% respectively. The year started very much where 1998 left off with prices continuing to slide down further as the effects of the Asian crisis continued to be felt.

It then became apparent that Asia was starting to recover and that the US economy was showing few of the expected signs of slow down. As such demand exceeded expectations. With inventories already at low levels, prices started to recover. Benchmark LME zinc prices were up over 30% during the year, although average prices were up only 4% versus 1998. Inventories continued to fall during 1999 especially in Asia, as demand for galvanised steel increased (which accounts for over half of all zinc consumed). The bulk of price increases occurred in H2 99 and this, together with lags in contract prices, meant that H1 99 export revenue fell sharply. We expect H2 99 and H1 00 export revenue to be significantly higher.

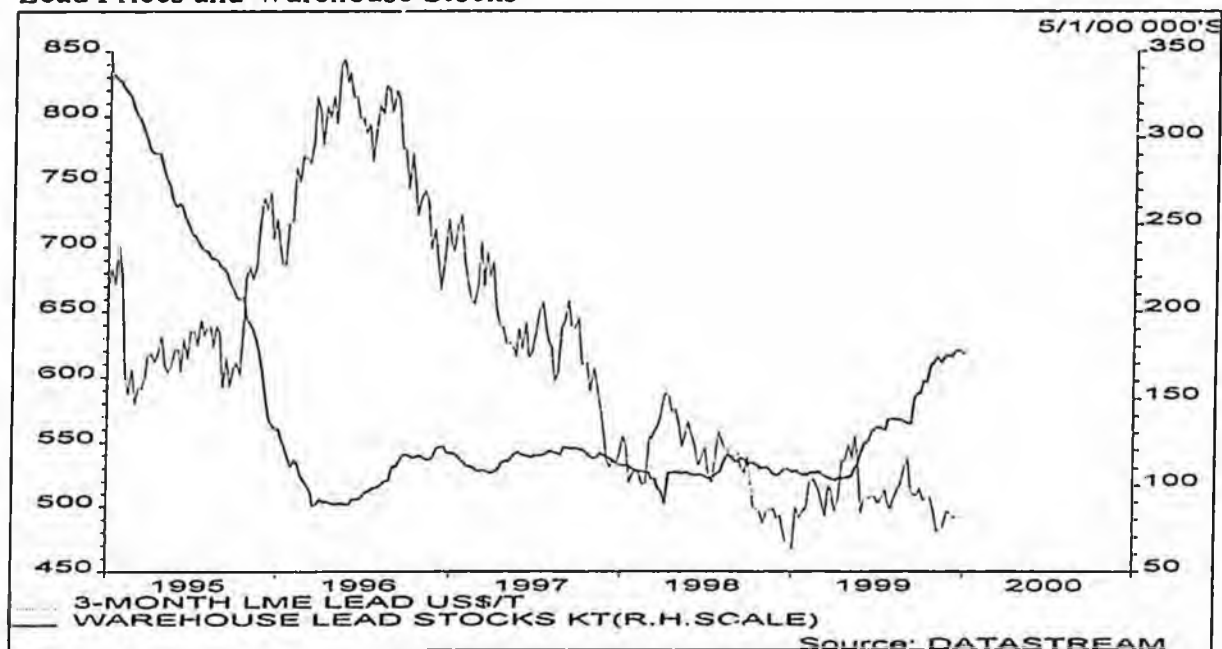
### Zinc Prices and Warehouse Stocks



Additional mine supply of zinc is expected from Australia, Mexico, Ireland and Peru during 2000 but demand growth for refined zinc should ensure that the market remains in deficit. This suggests positive price support for the next few years, although scope for significant price appreciation from current levels is limited. We expect prices to trade in the range \$1,100-1,250/t.

Like zinc, the price of lead started to recover in Q1 99. However, inventory levels started to turn up and, as such, limited further price appreciation. Benchmark average prices actually declined during the year, by 4.7%. Inventories in 1999 increased by over 60%, a great deal of the increase occurring in Singapore, which reflects increased exports of lead from China.

### Lead Prices and Warehouse Stocks



The outlook for lead prices is not particularly exciting. Expansions and start-ups in Australia combined with continued high levels of exports from China should result in continued, if falling, surpluses. As such, we expect prices to recover during the year, but not significantly, to trade in the range \$500-520/tonne. Longer term, the environmental lobby to reduce the use of lead in vehicles (which is the key driver for lead demand) will put downward pressure on prices unless capacity is closed down and/or alternative uses are found for the metal.

Briefly on gold, prices recovered dramatically in September last year as European central banks announced that sales and leasing of gold will be limited over the next five years. Over only a few trading days prices shot up from \$260/troy oz to over \$330/troy oz. The announcement brought to an end speculation regarding multiple sales of central bank reserves, which had sent prices below many producers cash cost level. Since then prices have been volatile, but now appear to have settled into a trading range of \$280-300/troy oz as speculative short positions have been unwound. Demand growth is robust and mine supply growth is, at best, flat so prices should rise towards the top end of this range during the year. That said, unexpectedly high demand growth could be met from increased scrap sales or sales from bank reserves not party to the European agreement.

*Craig Pennington*  
*Global Commodities Research*  
*Schroder Investment Management*  
*January 2000*

# *Alaska Permanent Fund Forecast Model*

January 20, 2000

State of Alaska, Legislative Finance Committees

Gregory C. Allen  
EVP, Callan Associates Inc.

Chris Phillips, CFA  
Director of Finance, APFC

# *Overview of Presentation*

- Brief introduction/overview of model.
- Discussion of input assumptions.
- Projections through 2010 for key fund variables.
- Summary observations and conclusions.

# *MOMA (Mother of Models - All)*

- Build a model of the Permanent Fund that:
  - Projects the future for all key dimensions of the fund.
  - Accurately captures the mechanics of the distribution and Inflation-Proofing rules.
  - Allows for the testing of different investment and spending policies.
  - Does all of this across the full range of potential capital market outcomes (taking into account their volatility).

## *Primary Assumptions*

- Actual Fund results through September, 1999.
- 1999 Callan Associates Inc. capital market assumptions.
- Current APFC Asset Allocation.
- Dividend: Statutory Formula
- Earnings Reserve limitation: Realized Earnings Reserve.
- Oil Revenues: Fall 1999 estimates from Department of Revenue fall forecast.

# *Asset Allocation Assumptions*

<b>Asset Class</b>	<b>Target</b>
Cash Equivalents	0.0%
Domestic Bonds	35.0%
Active Large Cap Dom Eq	17.0%
Passive Large Cap Dom Eq	13.0%
Small Cap Domestic Equity	7.0%
International Equity	16.0%
Real Estate	10.0%
International Bonds	2.0%
<b>Total</b>	<b>100.00%</b>

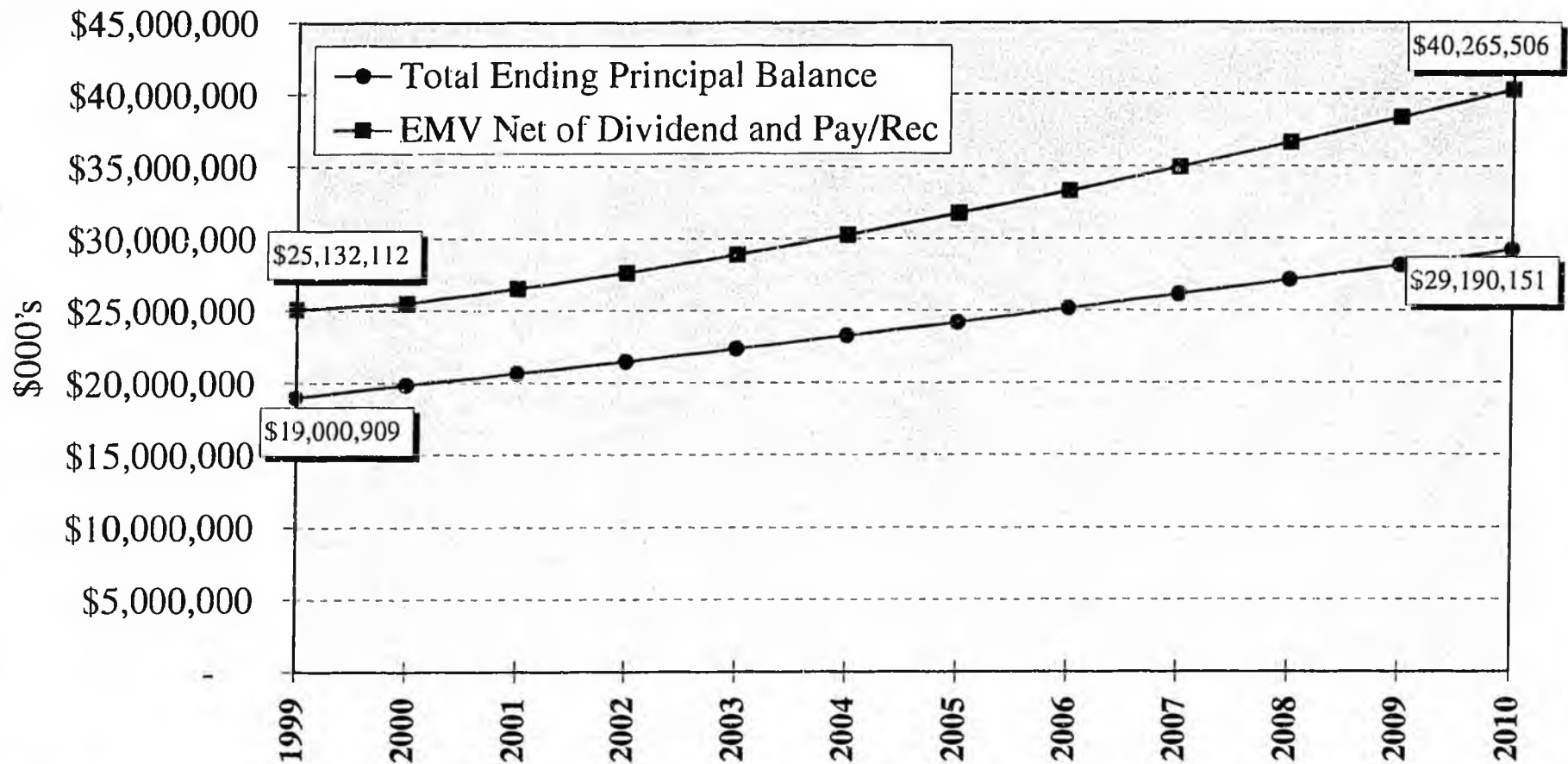
# *1999 Capital Market Assumptions*

Asset Class	Expected Return	Standard Deviation
CPI	3.00%	1.00%
Cash Equivalents	4.40%	0.70%
Domestic Bonds	5.60%	5.30%
Large Cap Domestic Equity	9.00%	15.00%
Small Cap Domestic Equity	11.20%	25.30%
International Equity	10.00%	21.50%
Real Estate	8.00%	16.50%
International Bonds	5.60%	11.00%

*Expected Average Total Rate of Return 7.97%*

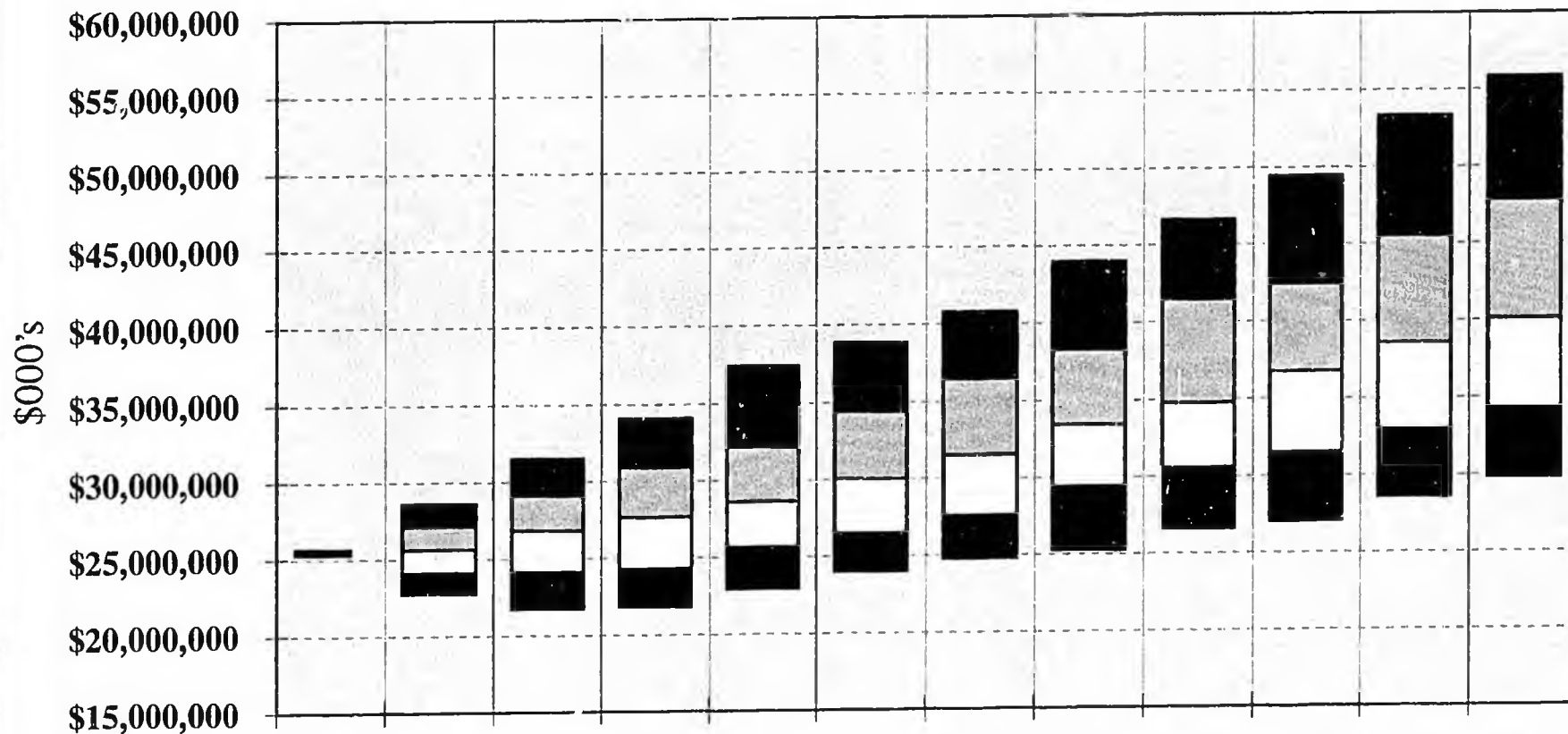
# Fund Value vs Principal Balance

## Ending Market Value vs Ending Principal Balance



# Range of Ending Market Value

## Range of Ending Market Value

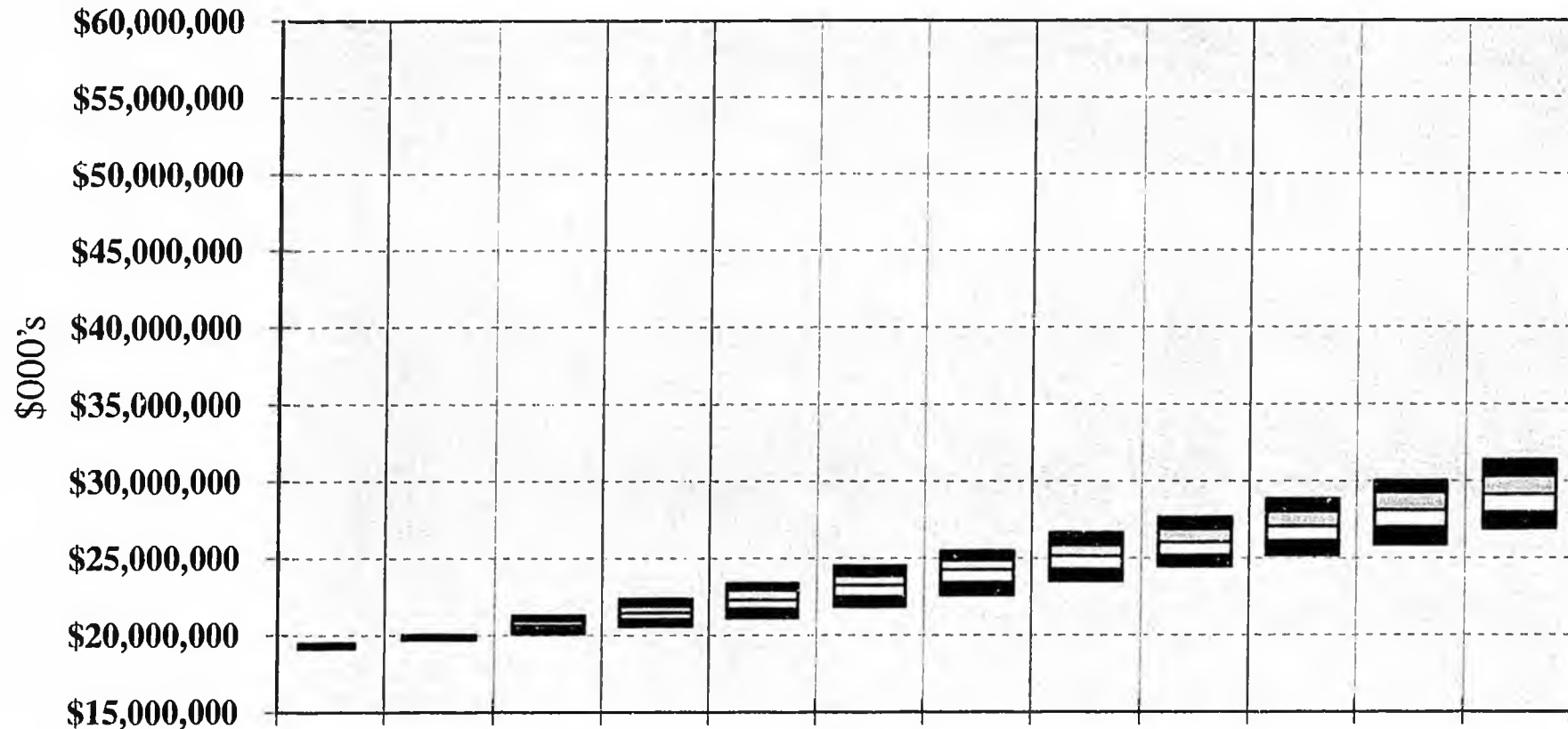


Percentile	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
10th	\$25,132	\$28,586	\$31,503	\$34,039	\$37,357	\$38,823	\$40,799	\$43,999	\$46,636	\$49,407	\$53,300	\$55,796
25th	\$25,132	\$27,163	\$29,122	\$30,894	\$32,153	\$34,367	\$36,412	\$38,265	\$41,474	\$42,423	\$45,510	\$47,822
Median	\$25,132	\$25,649	\$26,835	\$27,672	\$28,607	\$30,026	\$31,520	\$33,408	\$34,766	\$36,729	\$38,566	\$40,110
75th	\$25,132	\$24,125	\$24,120	\$24,287	\$25,643	\$26,465	\$27,581	\$29,403	\$30,552	\$31,512	\$32,976	\$34,310
90th	\$25,132	\$22,772	\$21,765	\$21,829	\$22,957	\$24,043	\$24,808	\$25,302	\$26,610	\$27,065	\$28,625	\$29,804



# Range of Principal Balance

## Range of Principal Balance

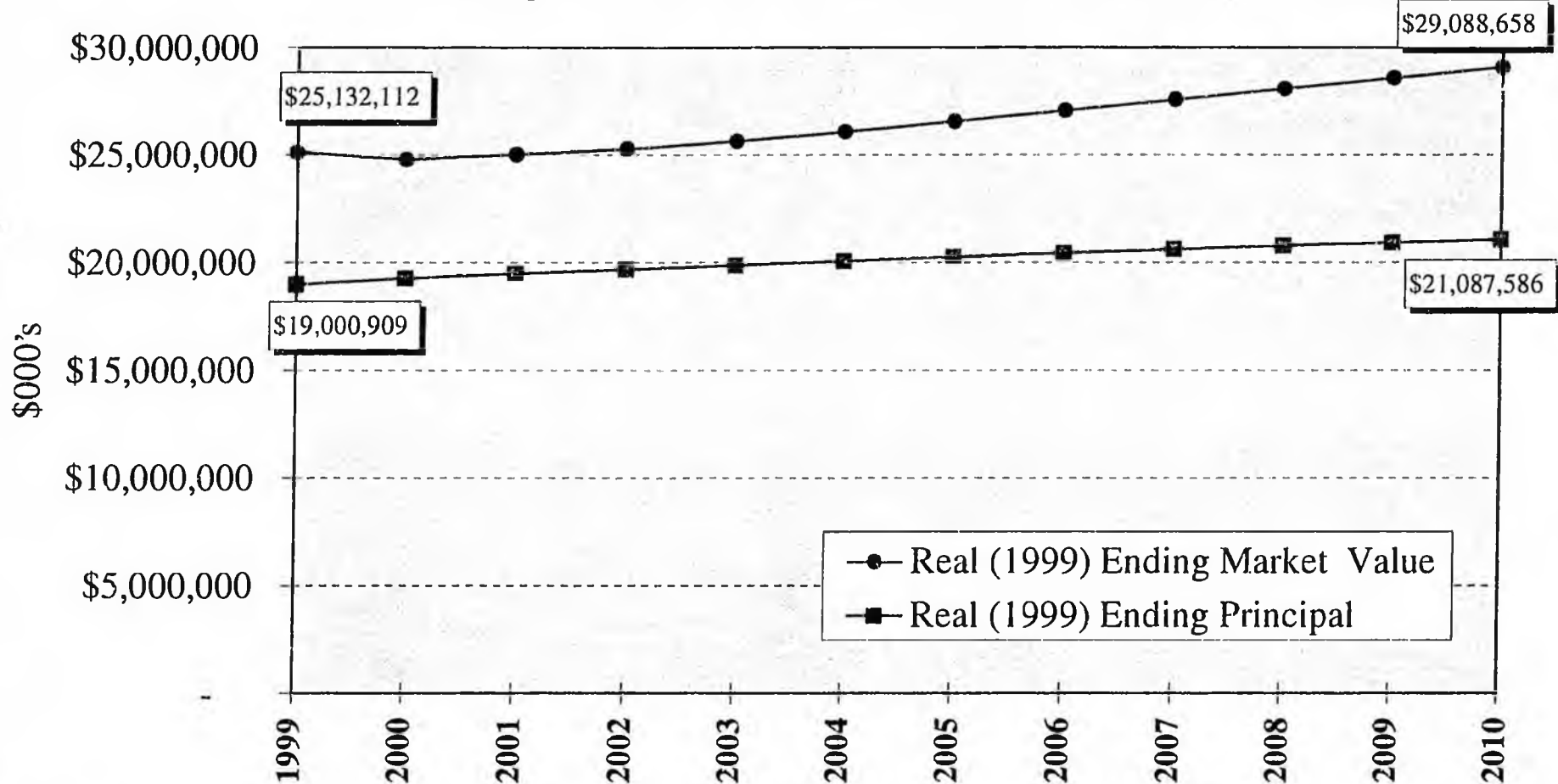


Percentile	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
10th	\$19,001	\$20,023	\$21,258	\$22,360	\$23,372	\$24,486	\$25,456	\$26,638	\$27,647	\$28,819	\$30,016	\$31,372
25th	\$19,001	\$19,961	\$20,960	\$21,892	\$22,923	\$23,844	\$24,856	\$25,816	\$26,879	\$28,010	\$29,247	\$30,302
Median	\$19,001	\$19,868	\$20,646	\$21,439	\$22,309	\$23,221	\$24,238	\$25,143	\$26,056	\$27,060	\$28,098	\$29,127
75th	\$19,001	\$19,780	\$20,376	\$21,013	\$21,716	\$22,477	\$23,401	\$24,270	\$25,173	\$26,105	\$27,010	\$27,957
90th	\$19,001	\$19,731	\$20,111	\$20,601	\$21,142	\$21,867	\$22,620	\$23,516	\$24,497	\$25,194	\$25,879	\$26,922



# Real Fund Value and Principal

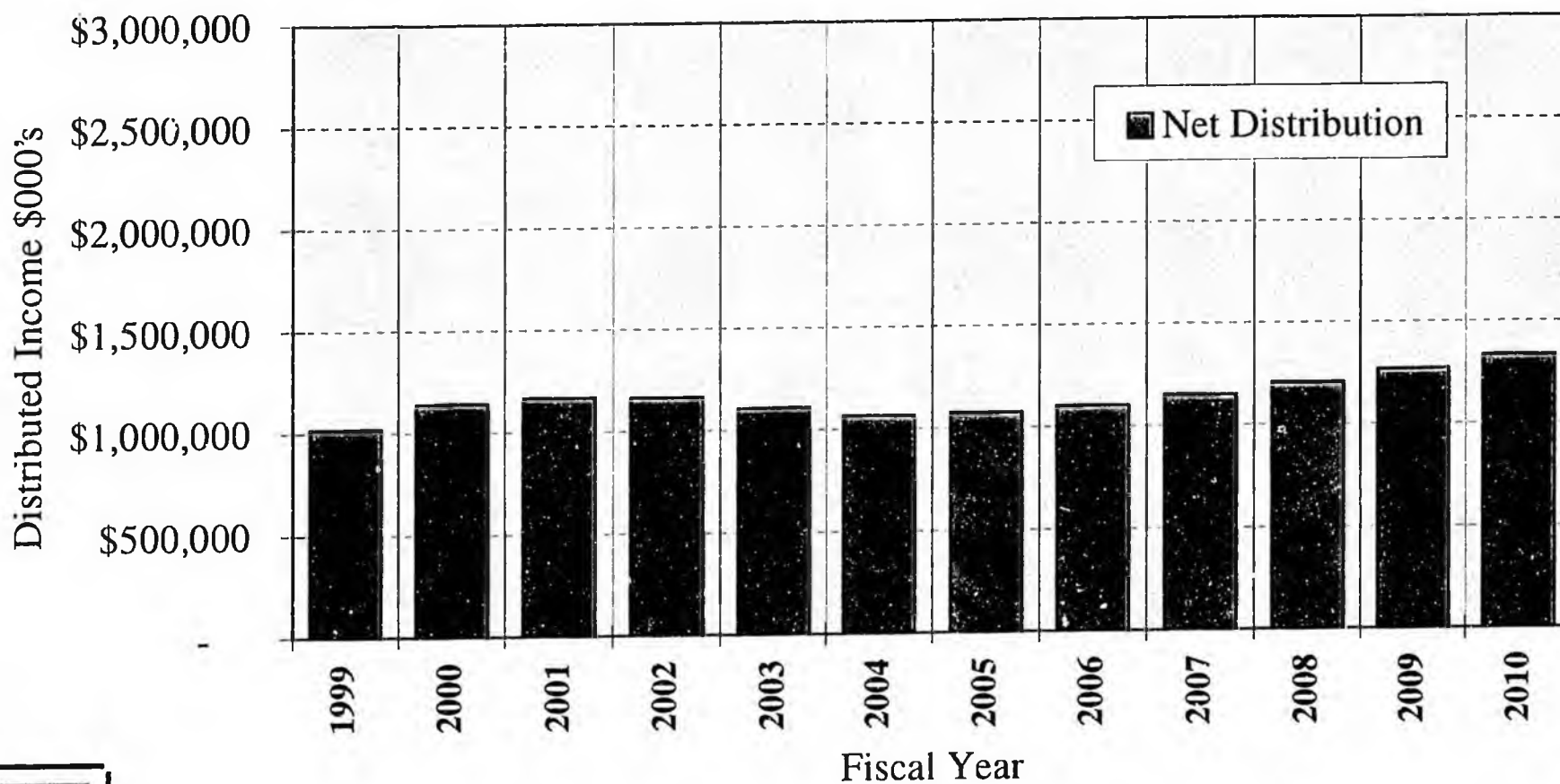
## Real Ending Market Value vs Real Ending Principal Balance



# *Projected Distribution of Income*

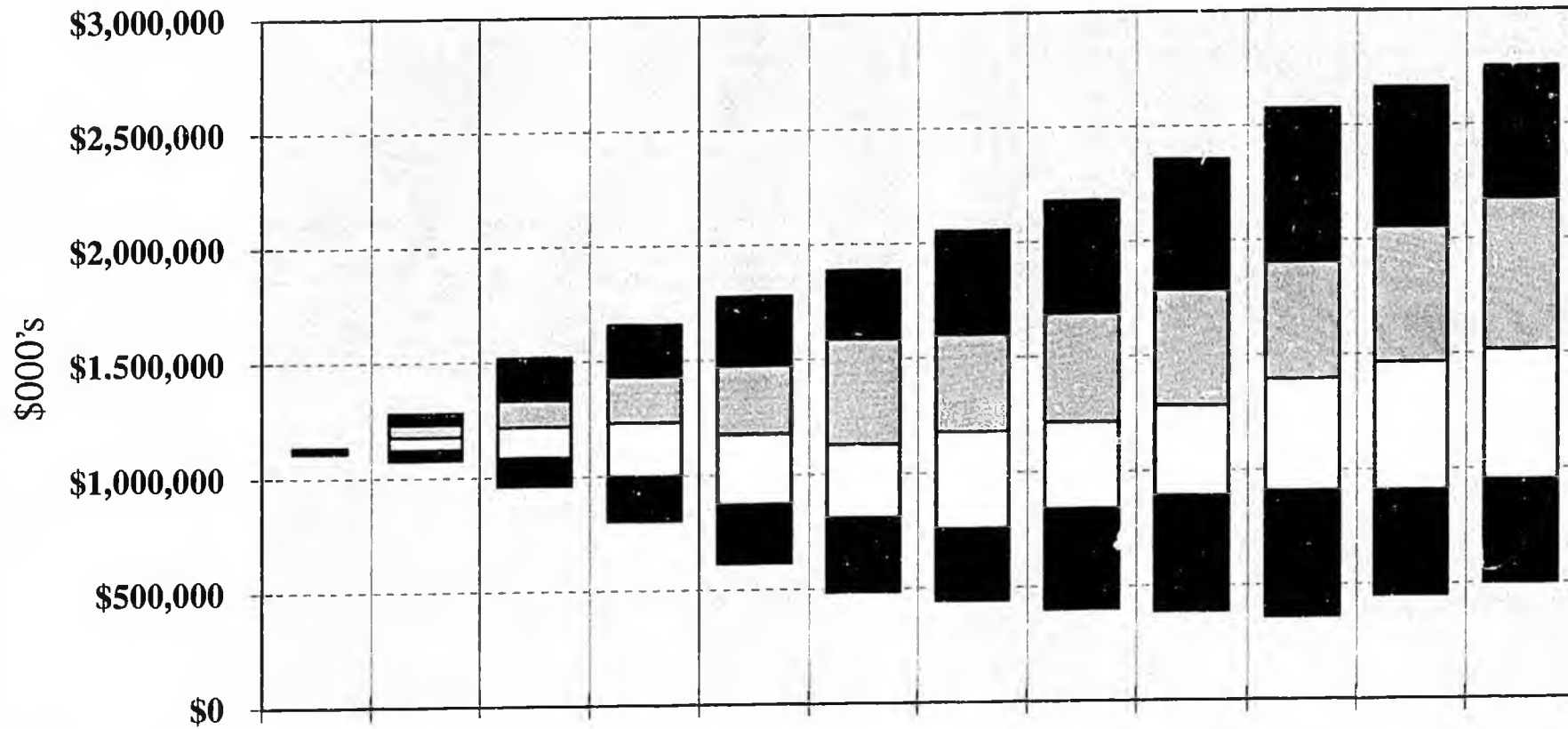
*(Based on Statutory Income)*

## **Distributed Income**



# Range of Distributed Income

## Range of Distributed Income



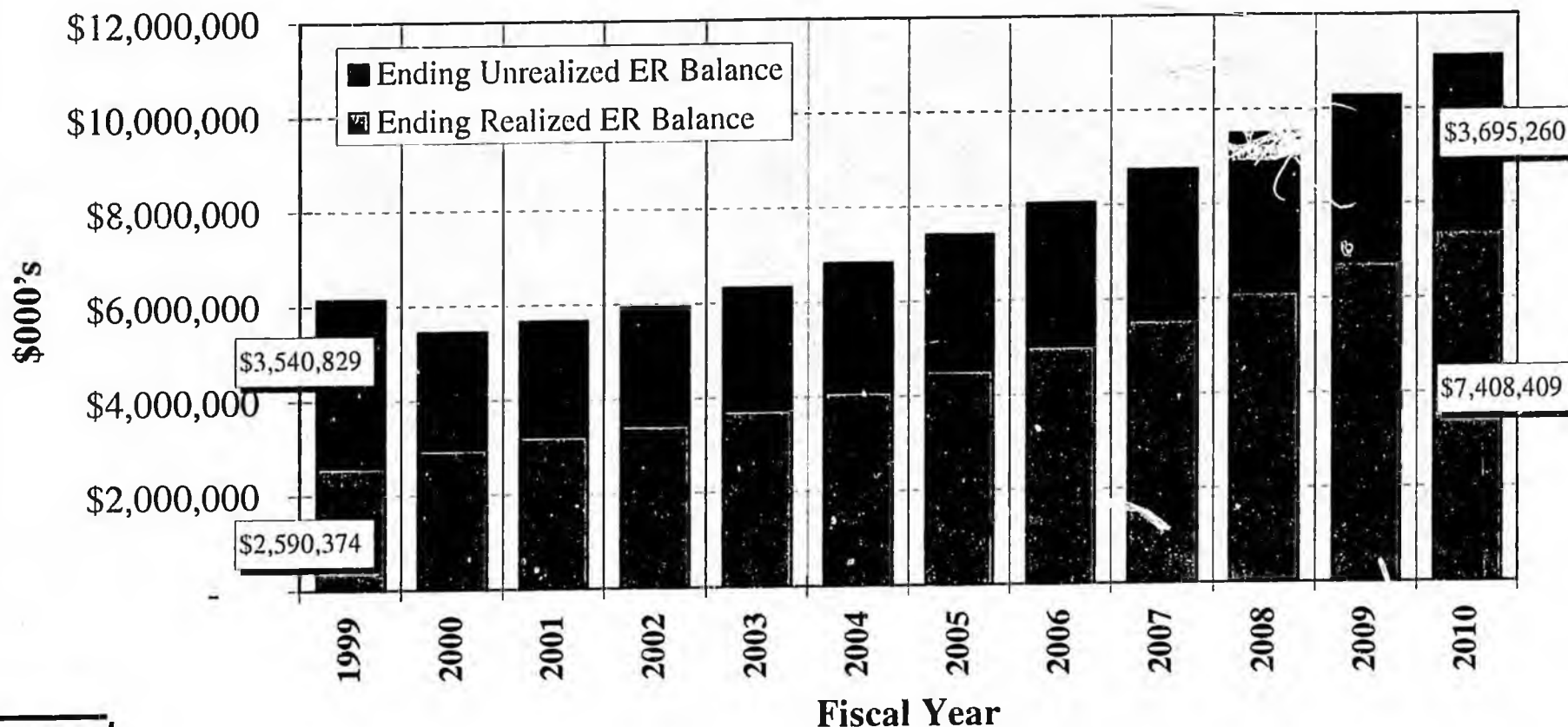
Percentile	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
10th	\$1,045	\$1,281	\$1,517	\$1,657	\$1,775	\$1,885	\$2,052	\$2,179	\$2,354	\$2,572	\$2,661	\$2,750
25th	\$1,045	\$1,231	\$1,333	\$1,431	\$1,476	\$1,583	\$1,600	\$1,686	\$1,786	\$1,905	\$2,055	\$2,175
Median	\$1,045	\$1,178	\$1,218	\$1,232	\$1,178	\$1,129	\$1,178	\$1,215	\$1,283	\$1,395	\$1,464	\$1,515
75th	\$1,045	\$1,121	\$1,084	\$997	\$871	\$809	\$755	\$838	\$890	\$906	\$908	\$949
90th	\$1,045	\$1,078	\$962	\$806	\$618	\$487	\$444	\$401	\$387	\$361	\$452	\$503



# Ending Earnings Reserve Balance

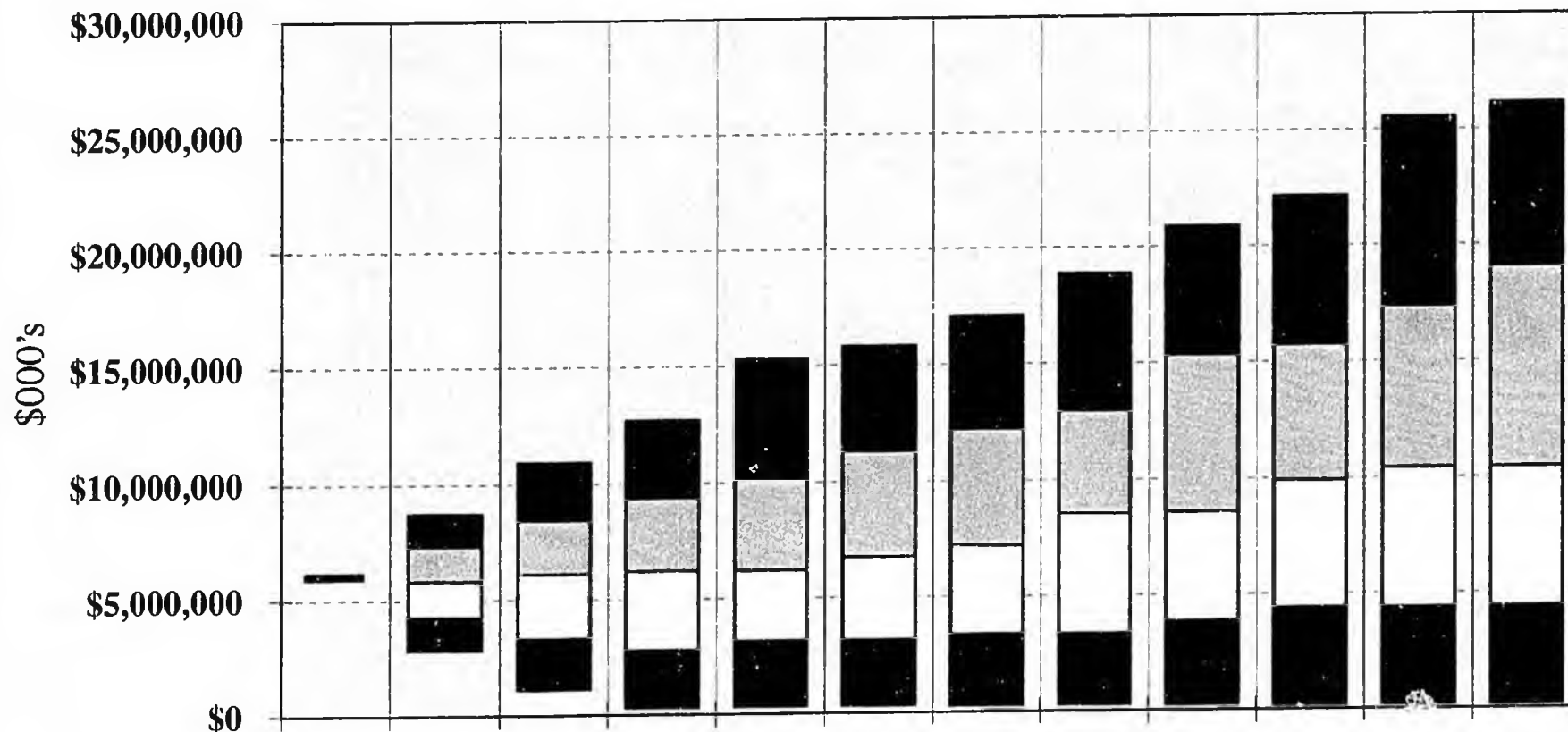
(Both Realized and Unrealized)

Ending Earnings Reserve Balance



# Range of Ending Total Earnings Reserve

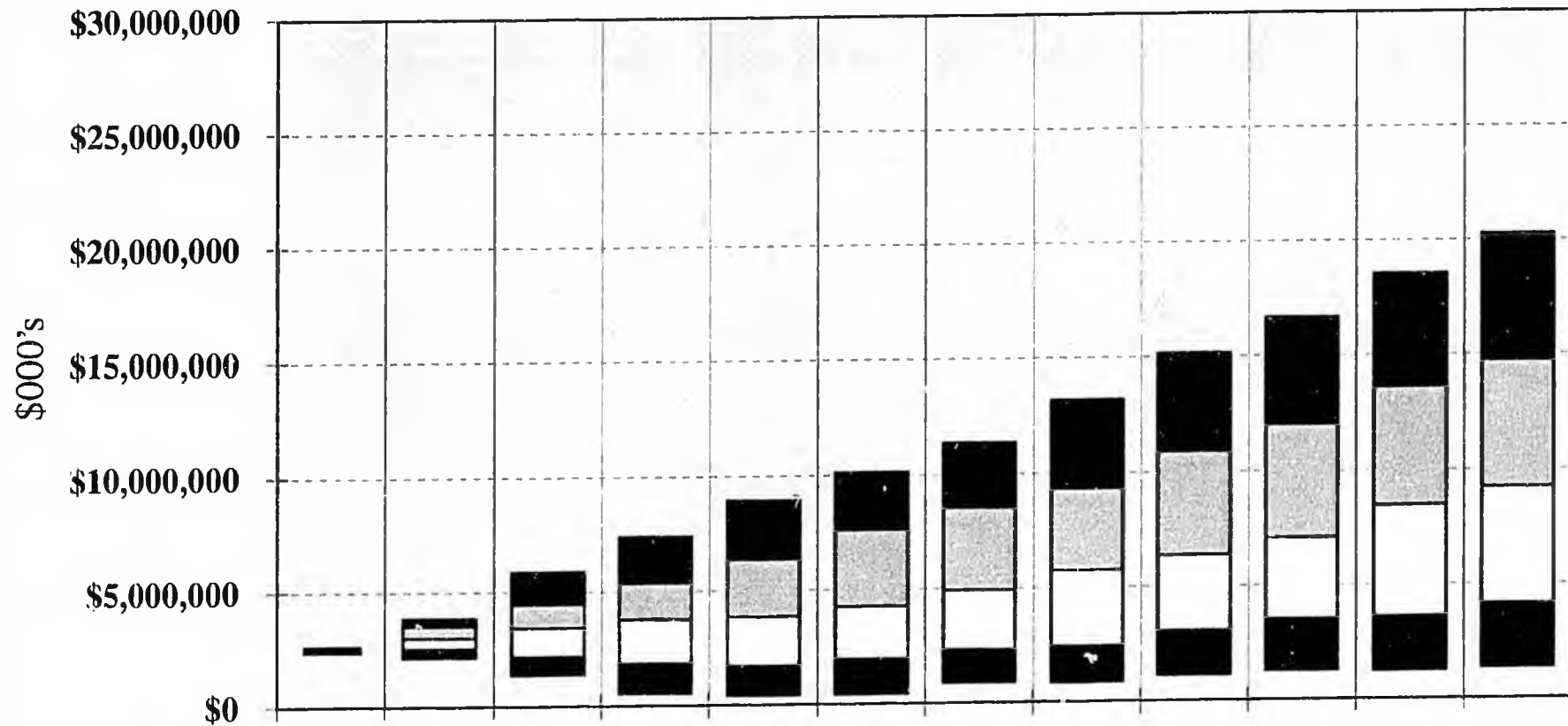
## Range of Ending GAAP Earnings Reserve Balance



Percentile	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
10th	\$6,131	\$8,734	\$10,918	\$12,712	\$15,288	\$15,806	\$17,078	\$18,858	\$20,874	\$22,137	\$25,516	\$26,119
25th	\$6,131	\$7,348	\$8,429	\$9,376	\$10,124	\$11,311	\$12,241	\$12,972	\$15,331	\$15,741	\$17,357	\$19,077
Median	\$6,131	\$5,832	\$6,116	\$6,224	\$6,221	\$6,751	\$7,195	\$8,542	\$8,568	\$9,897	\$10,396	\$10,424
75th	\$6,131	\$4,267	\$3,303	\$2,784	\$3,141	\$3,153	\$3,360	\$3,339	\$3,868	\$4,386	\$4,375	\$4,401
90th	\$6,131	\$2,854	\$1,149	\$325	\$324	\$330	\$290	\$296	\$256	\$205	\$199	\$190

# Range of Ending Realized Earnings Reserve

## Range of Ending Realized Earnings Reserve Balance

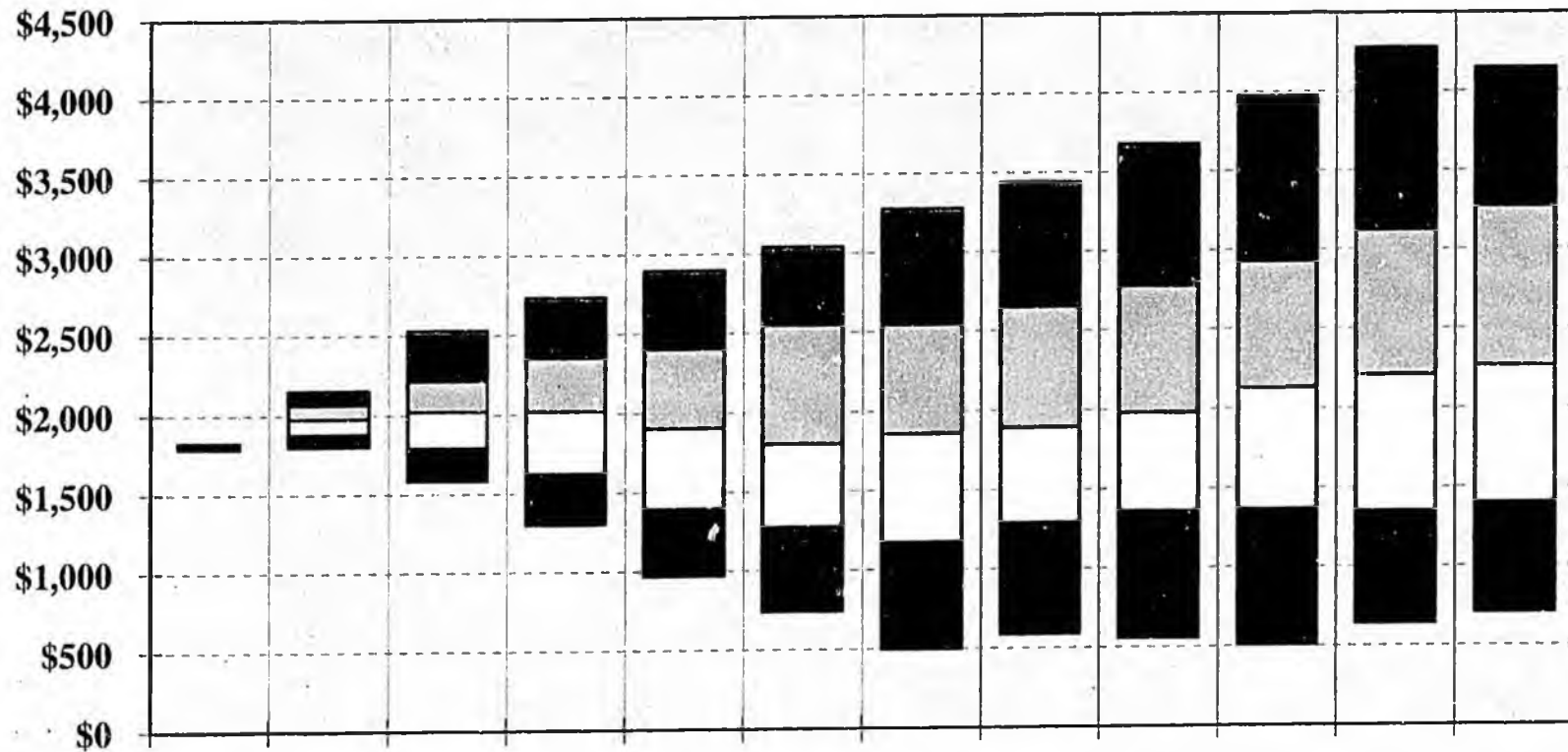


Percentile	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
10th	\$2,590	\$3,860	\$5,873	\$7,376	\$8,906	\$10,102	\$11,352	\$13,161	\$15,139	\$16,658	\$18,529	\$20,237
25th	\$2,590	\$3,532	\$4,471	\$5,370	\$6,368	\$7,611	\$8,531	\$9,316	\$10,893	\$12,029	\$13,637	\$14,722
Median	\$2,590	\$3,024	\$3,421	\$3,791	\$3,864	\$4,254	\$4,936	\$5,759	\$6,378	\$7,084	\$8,446	\$9,218
75th	\$2,590	\$2,546	\$2,184	\$1,842	\$1,685	\$1,961	\$2,336	\$2,426	\$3,051	\$3,515	\$3,596	\$4,112
90th	\$2,590	\$2,163	\$1,413	\$572	\$421	\$448	\$905	\$873	\$1,124	\$1,295	\$1,252	\$1,369



# Range of Per Capita Dividend

## Range of Per Capita Dividend



Percentile	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
10th	\$1,770	\$2,154	\$2,528	\$2,731	\$2,894	\$3,040	\$3,273	\$3,436	\$3,672	\$3,968	\$4,275	\$4,145
25th	\$1,770	\$2,068	\$2,214	\$2,352	\$2,398	\$2,545	\$2,541	\$2,646	\$2,772	\$2,925	\$3,121	\$3,266
Median	\$1,770	\$1,977	\$2,019	\$2,018	\$1,904	\$1,799	\$1,857	\$1,892	\$1,977	\$2,128	\$2,207	\$2,258
75th	\$1,770	\$1,878	\$1,791	\$1,624	\$1,393	\$1,274	\$1,171	\$1,289	\$1,358	\$1,362	\$1,348	\$1,397
90th	\$1,770	\$1,804	\$1,584	\$1,302	\$973	\$747	\$501	\$590	\$561	\$510	\$643	\$713

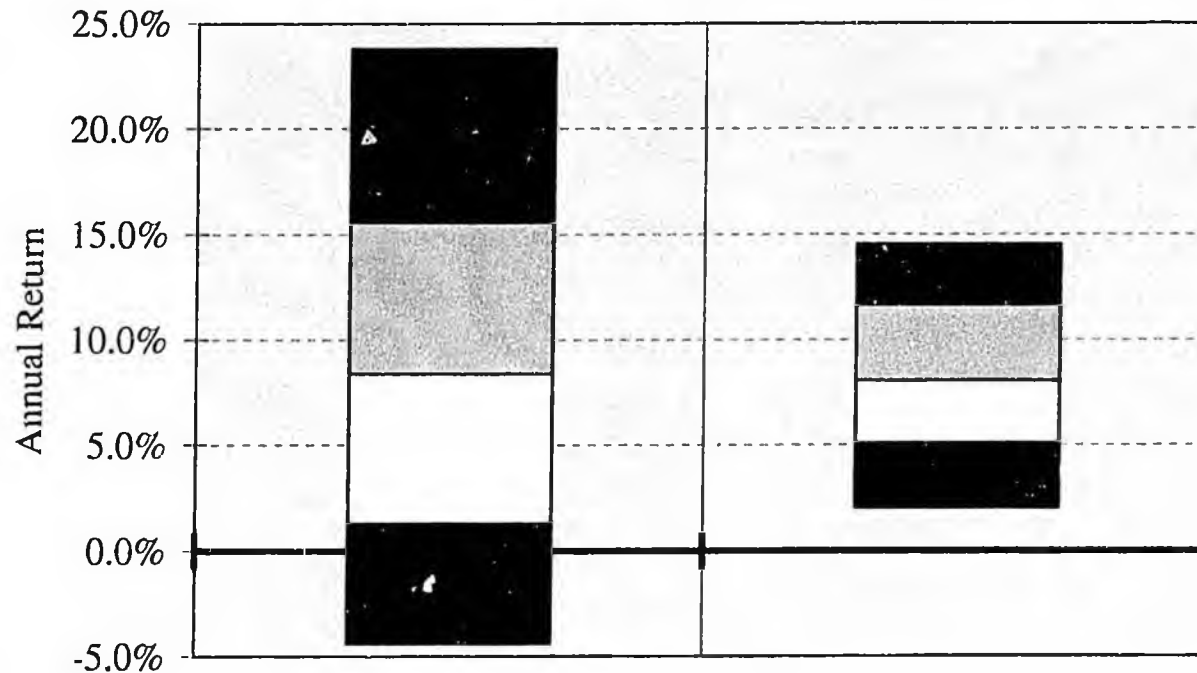
# *Rate of Return Observations*

Median expected total rate of return:	7.97%
Estimated fees to manage the Fund:	.17%
Net-of-fee total return:	7.80%
Estimated inflation:	3.00%
Median real growth of the fund:	4.80%

*Based on the dividend formula, the current pay-out rate is approximately 3.25% - 4.% of market value.*

# Range of One and Five Year Returns for Total Fund

Range of Projected Annualized Total Fund Returns



Percentile

**1 Year**

**5 Year**

10th

23.8%

14.5%

25th

15.6%

11.6%

Median

8.4%

8.0%

75th

1.3%

5.1%

90th

-4.4%

2.0%



# *Summary Observations*

- Given the volatility of the markets, there is a 10% chance that the Fund's total return will be as low as -4.4% and a 10% chance that it will be as high as 23.8% in any given year. Over longer investment time periods volatility is reduced.
- There is approximately a 20% chance that the Fund will generate a negative return in any given year, but over five years the chance of a cumulative negative return is 5%. Over even longer time periods, volatility is reduced.
- Given the simulated interaction of investment performance and Fund mechanics, the model indicates that there is a 75% chance that, over the next 10 years, the Fund will be able to support the dividend every year, with no limitation imposed by the Realized Earnings Reserve balance.
- Given these same interactions, the model indicates that there is an 70% chance that over the next 10 years, the Fund will be able to support inflation-proofing every year, with no limitation imposed by the Realized Earnings Reserve balance.

# *Payout as a Percent of Market Value*

- Typical pay-out method of large endowment funds and is a preferred method of pay-out by the APFC Trustees.
- The pay-out rate is set below the long-term projected inflation rate, making inflation proofing a priority.
- A percent of the average market value pay-out method of an average total Fund value will result in a more stable distribution stream than the current income based distribution rule.
- Disconnects investment decisions from short-term spending considerations.
- The spending provision becomes a part of the long-term investment strategy rather than a tactical response to market cycles.
- Distributing income in excess of a sustainable real rate of return creates potential shortfalls in future distributions due to the Fund's requirement to preserve principal ("if you payout more today, you must pay out less tomorrow.")



25 Years

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