



**California Municipal Treasurers Association (CMTA)
Annual Conference**

**April 24, 2008
San Francisco, California**

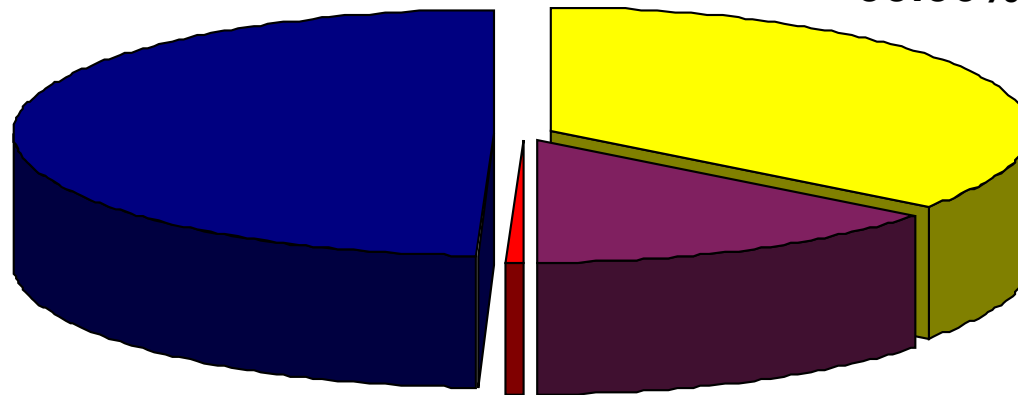
LAIF - Portfolio Decisions: From Soup to Nuts

**Presented by
Pam Milliron
LAIF Administrator
California State Treasurer's Office**

SOURCE OF FUNDS
Pooled Money Investment Account
Quarter Ending 03/31/08
Average Quarterly Balance
\$64.137 Billion

***SMIF**
49.53%

LAIF
35.56%

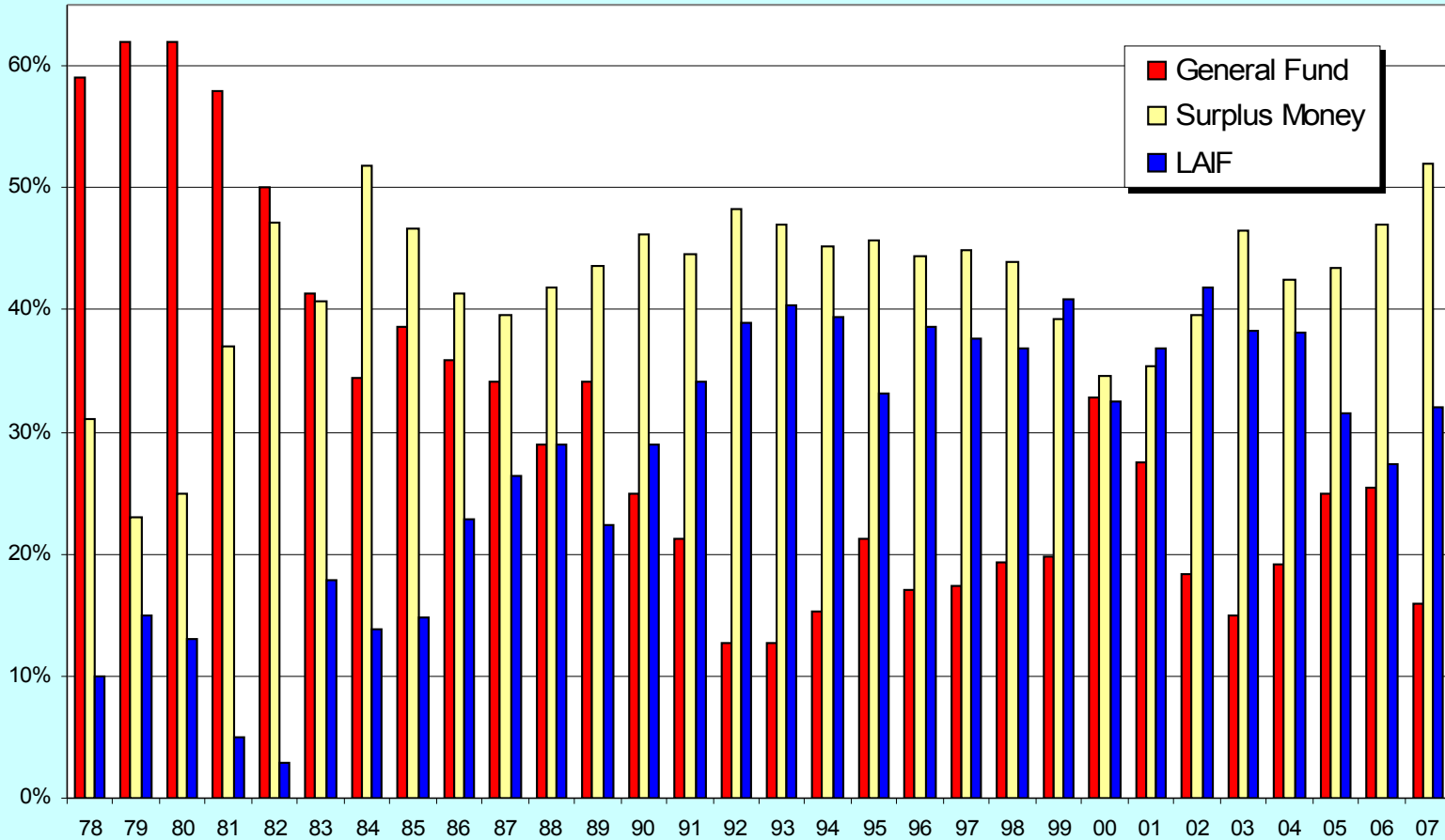


Other
0.38%

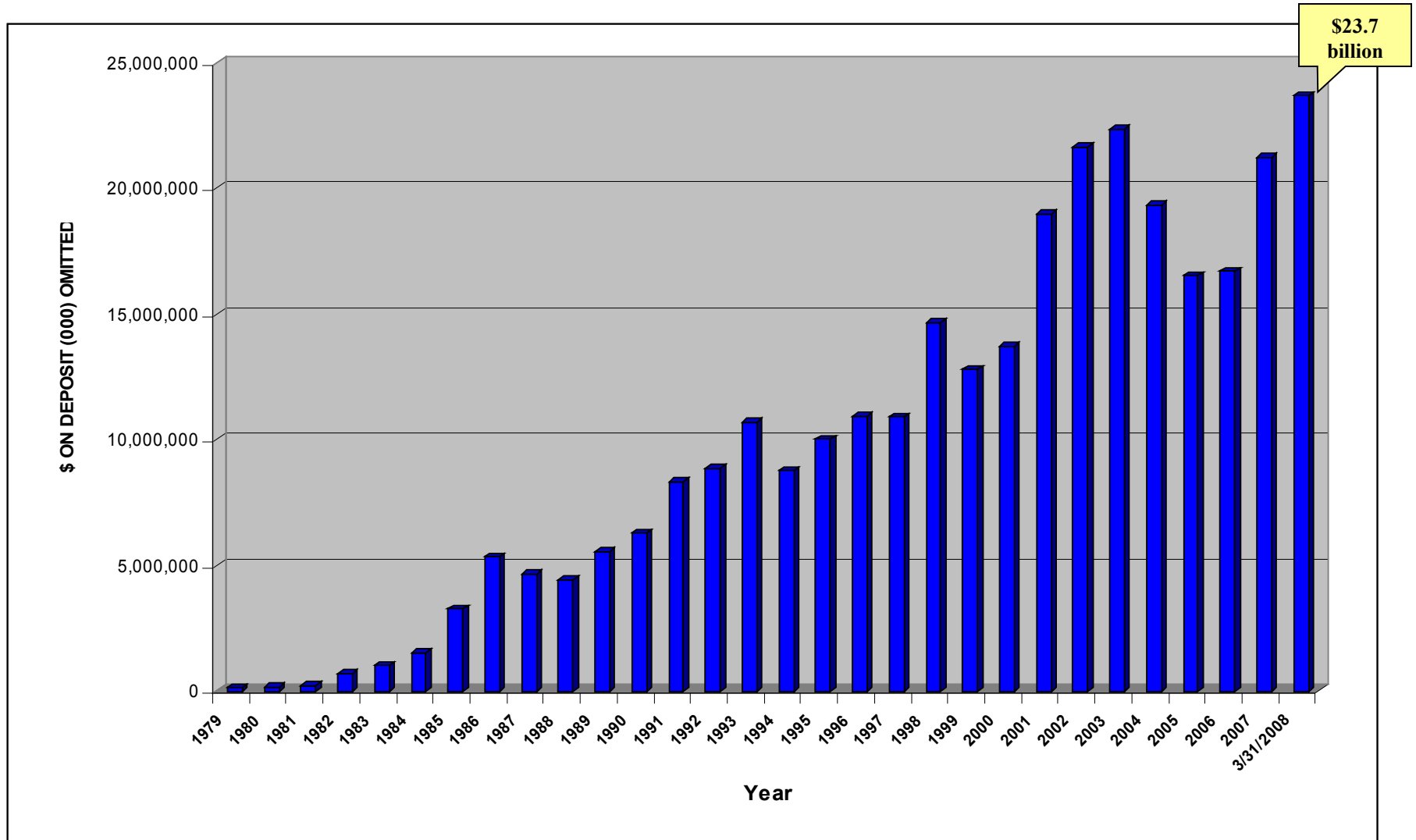
**General
Fund**
14.53%

***SMIF: Surplus Money Investment Fund**

SOURCE OF FUNDS
Pooled Money Investment Account
6/78 to 6/07



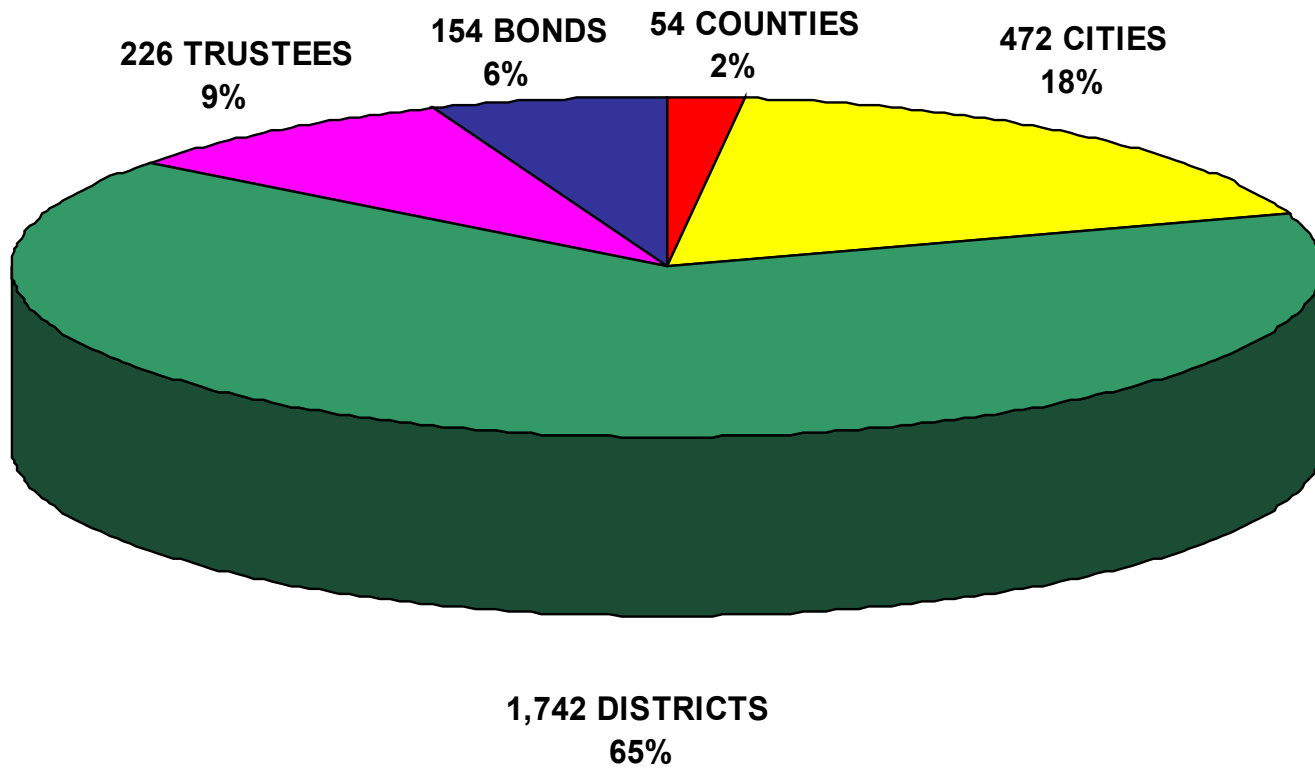
LOCAL AGENCY INVESTMENT FUND DEPOSITS AS OF MARCH 31, 2008



LOCAL AGENCY INVESTMENT FUND

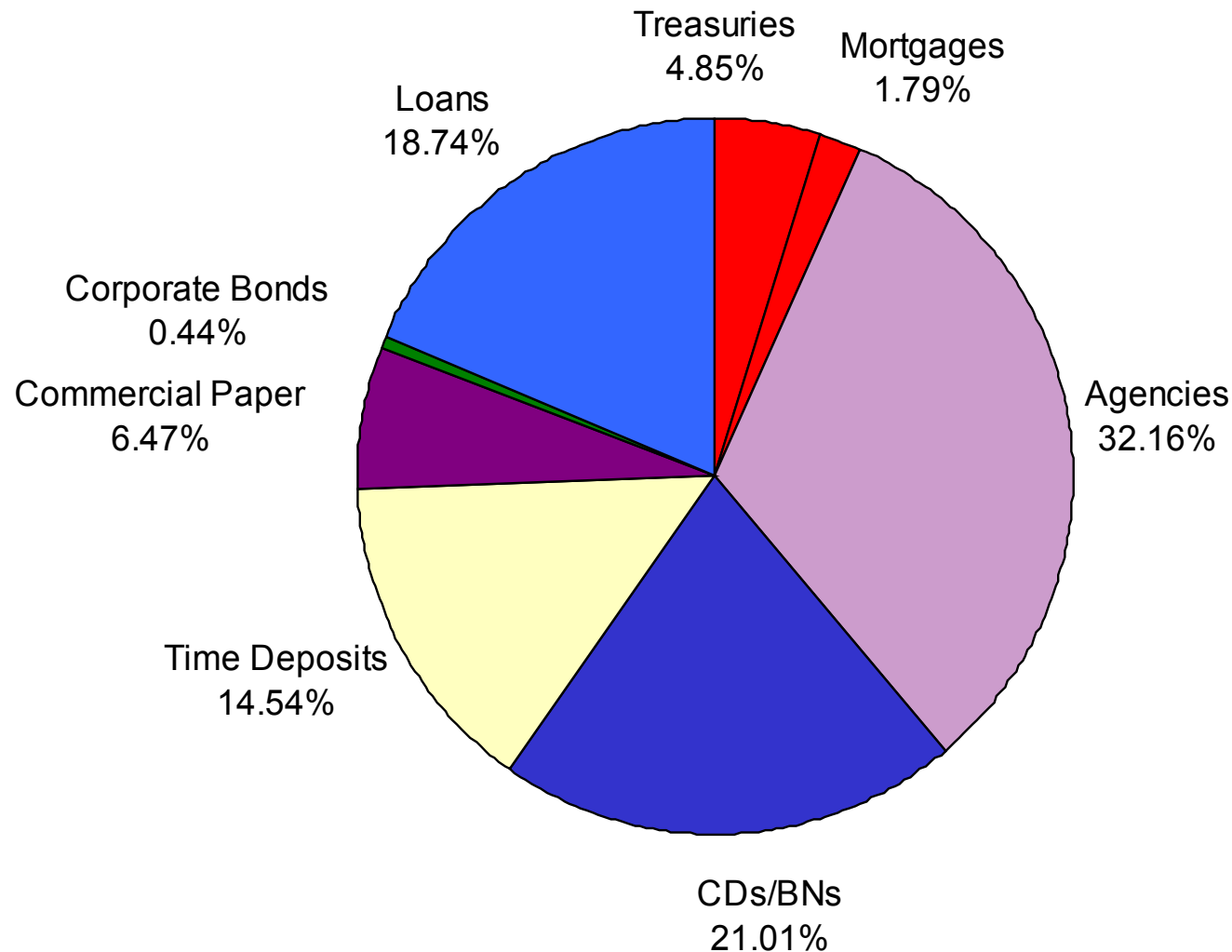
Participation as of 03/31/08

2,648 Agencies



PMIA Portfolio Composition 03-31-08

\$65.0 billion

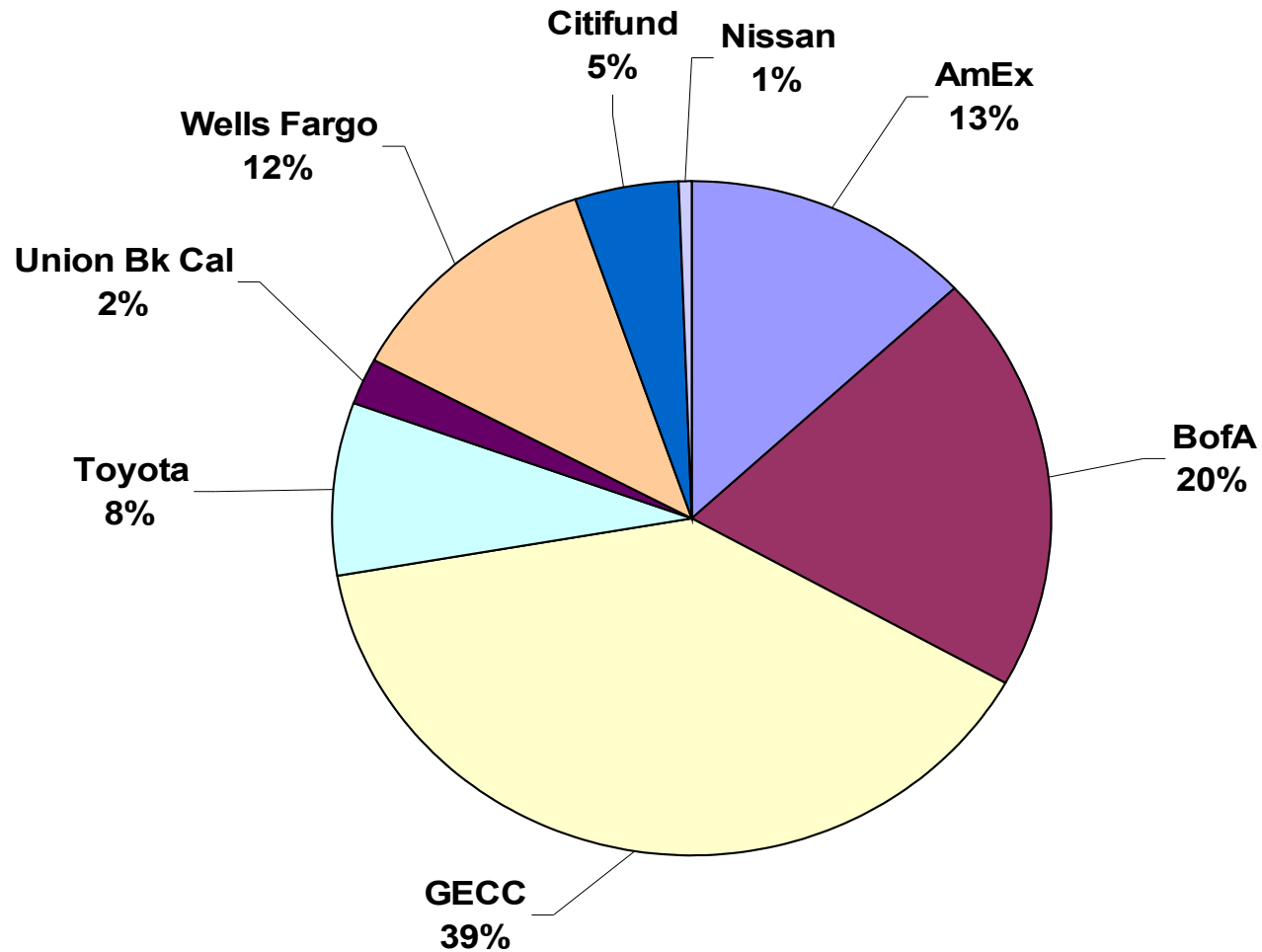


POOLED MONEY INVESTMENT ACCOUNT

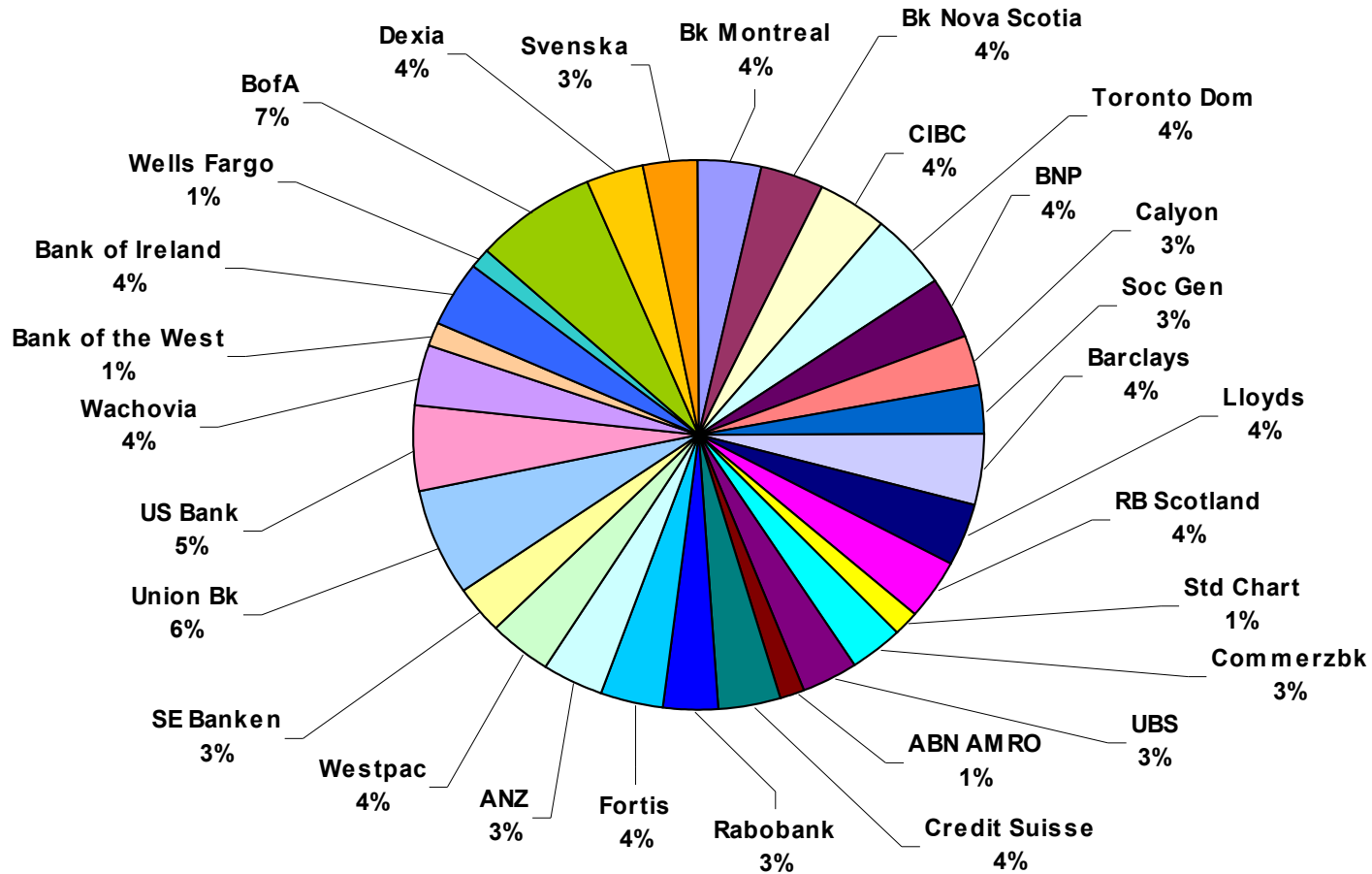
HISTORICAL PORTFOLIO STRUCTURE

	Percentage Distribution		
Type of Security	March 31, 2007	March 31, 2008	5 yr. Port. Avg.
Treasuries	6%	5%	10%
Agencies	14%	19%	13%
CD's/Bank Notes	20%	21%	20%
Bankers' Acceptance	0%	0%	0%
Repurchases	0%	0%	0%
Discount Notes	8%	14%	14%
Time Deposits	14%	14%	13%
Commercial Paper	16%	7%	16%
Reverse Repurchases	-1%	0%	-1%
Corporate Bonds	1%	1%	2%
Other (GF loans)	9%	7%	2%
Pool Loans	13%	12%	11%
TOTAL	100%	100%	100%

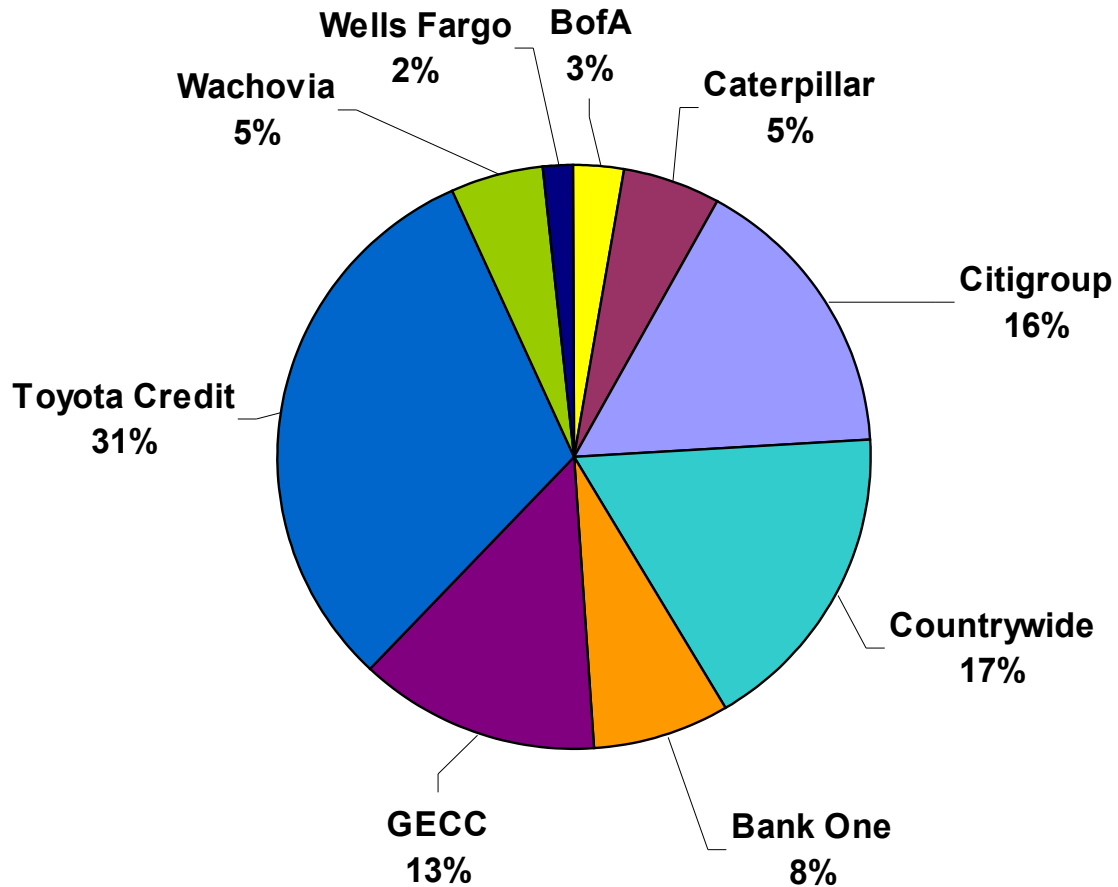
PMIA Commercial Paper Holdings 3/31/08
\$4.2 Billion



PMIA CDs and Bank Note Holdings 3/31/08
\$13.7 Billion



PMIA Corporate Holdings 3/31/08
\$286 Million



PAR VALUES MATURING BY DATE AND TYPE

Maturities in Millions of Dollars

ITEM	1 day to 30 days	31 days to 60 days	61 days to 90 days	91 days to 120 days	121 days to 150 days	151 days to 180 days	181 days to 210 days	211 days to 270 days	271 days to 1 year	1 year to 2 years	2 years to 3 years	3 years to 4 years	4 years to 5 year/out
TREASURY		\$ 600		\$ 2,550									
REPO													
TDs	\$ 2,898	\$ 1,770	\$ 2,009	\$ 798	\$ 1,305	\$ 666							
AGENCY	\$ 2,060	\$ 1,714	\$ 5,072	\$ 4,492		\$ 707	\$ 363	\$ 701	\$ 1,294	\$ 4,802	\$ 1,175	\$ 377	\$ 399
BAs													
CP	\$ 1,525	\$ 1,325	\$ 100	\$ 1,275									
CDs + BNs	\$ 4,605	\$ 4,195	\$ 400	\$ 4,250				\$ 200					
CORP BND	\$ 33		\$ 45	\$ 9	\$ 27	\$ 35		\$ 54	\$ 46	\$ 37			
TOTAL													
\$ 53,912	\$ 11,121	\$ 9,604	\$ 7,626	\$ 13,374	\$ 1,331	\$ 1,408	\$ 363	\$ 955	\$ 1,340	\$ 4,839	\$ 1,175	\$ 377	\$ 399
PERCENT	20.6%	17.8%	14.1%	24.8%	2.5%	2.6%	0.7%	1.8%	2.5%	9.0%	2.2%	0.7%	0.7%

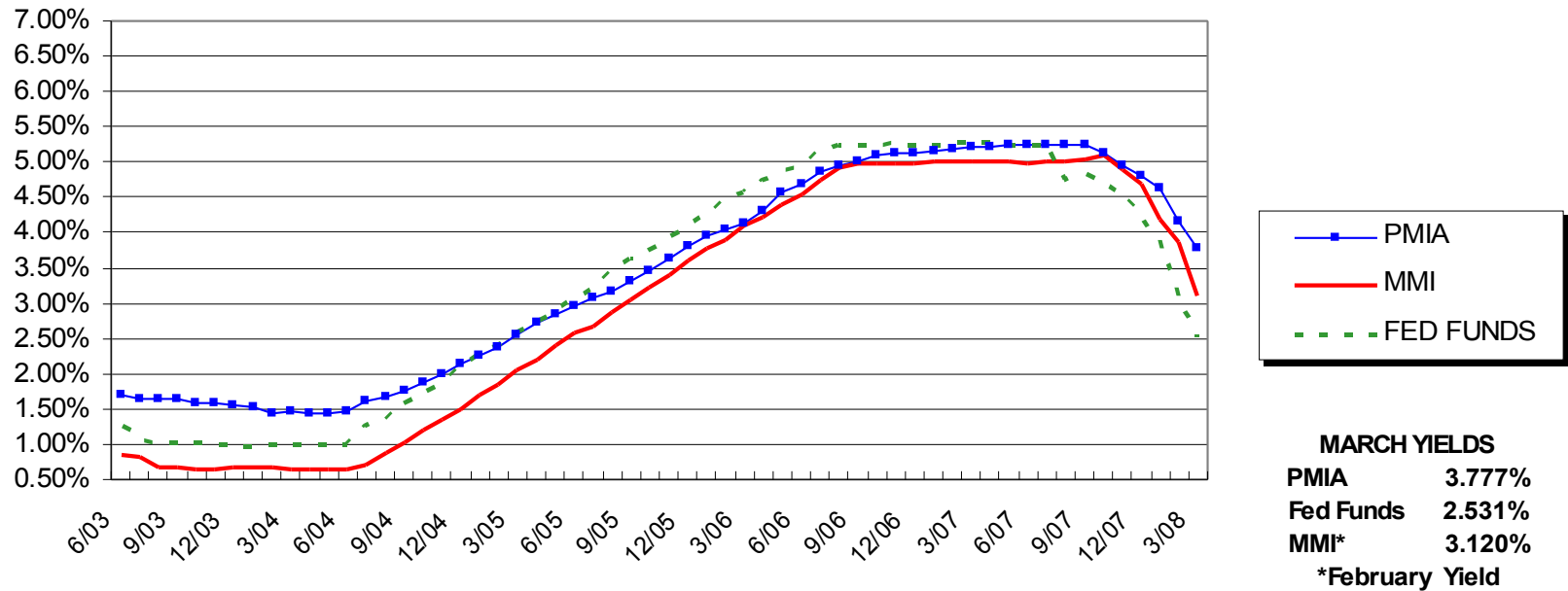
Notes:

1. SBA Floating Rate Securities are represented at coupon change date.
2. Mortgages are represented at current book value.
3. Figures are rounded to the nearest million.
4. Does not include AB55 and General Fund loans.

STATE OF CALIFORNIA

POOLED MONEY INVESTMENT ACCOUNT

Average Monthly Yield Comparison - 06/03 through 03/08





California Municipal Treasurers Association Annual Conference

April 24, 2008

Portfolio Decisions: From Soup to Nuts

Presented by
Christine Solich
Assistant Director of Investments
California State Treasurer's Office



The Fiscal Year in Review...and More

07/01/06 – 06/30/07

I. Portfolio Review

- a) Average daily investment**
- b) Earnings**
- c) Effective yield**

II. Investment Activity

- Average holdings vs. June '07
portfolio holdings**
- b) Earnings and performance by sector**
- c) Maturity range volume**



III. Reporting Earnings

- a) Calculating apples and oranges**
- b) Simple interest: keep it simple**
- c) Cumulative date—daily,
quarterly, year-to-date**

IV. Allocating Earnings

- Apportioning to the PMIA**
- Calculating charges**
- Allocating to LAIF**
- Crediting participants**



June 30, 2007

Average Daily Portfolio	\$58,147,441,341
Earnings	\$2,977,625,501
Effective Yield	5.12%

March 31, 2008

Average Daily Portfolio	\$61,211,210,276
Earnings	\$2,201,500,360
Effective Yield	4.78%

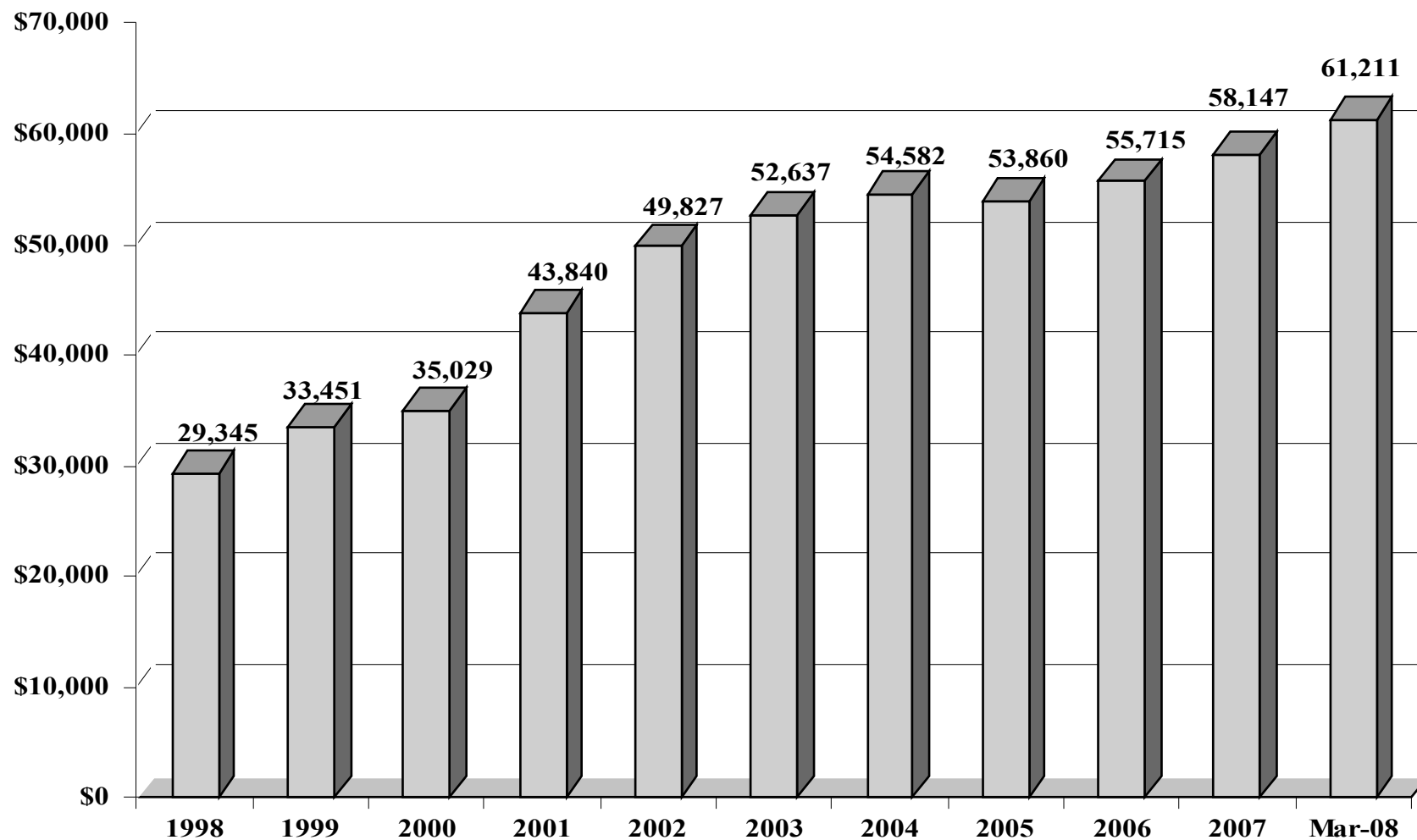


June 30, 2007

Resources	\$	58,596.8	million per day on the average
Demand Accounts.....	\$	449.4	million per day on the average
Portfolio.....	\$	58,147.4	million per day on the average
Earnings	\$	2,512.1	million from security investments
		431.5	million from bank time deposits
		34.0	million from General Fund loans
Earning Rate		5.12	percent average for all investments
Dollar Value of Investment Transactions	\$	395.0	billion
Number of Investment Transactions		9,448	transactions
Time Deposits		98	banks, credit unions and savings banks held PMIA money at year-end

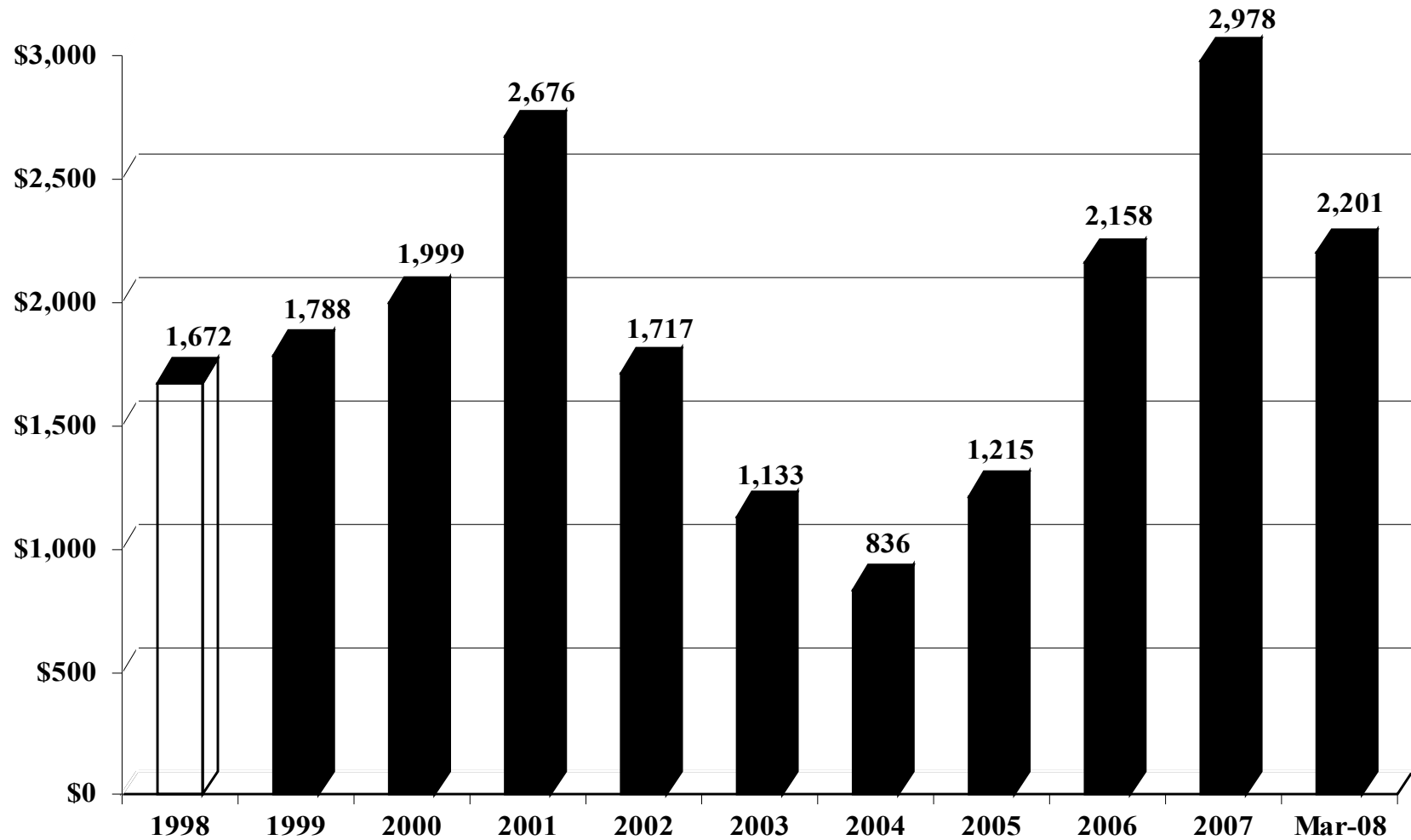
Average Daily Portfolio Balance

(\$ in Millions)



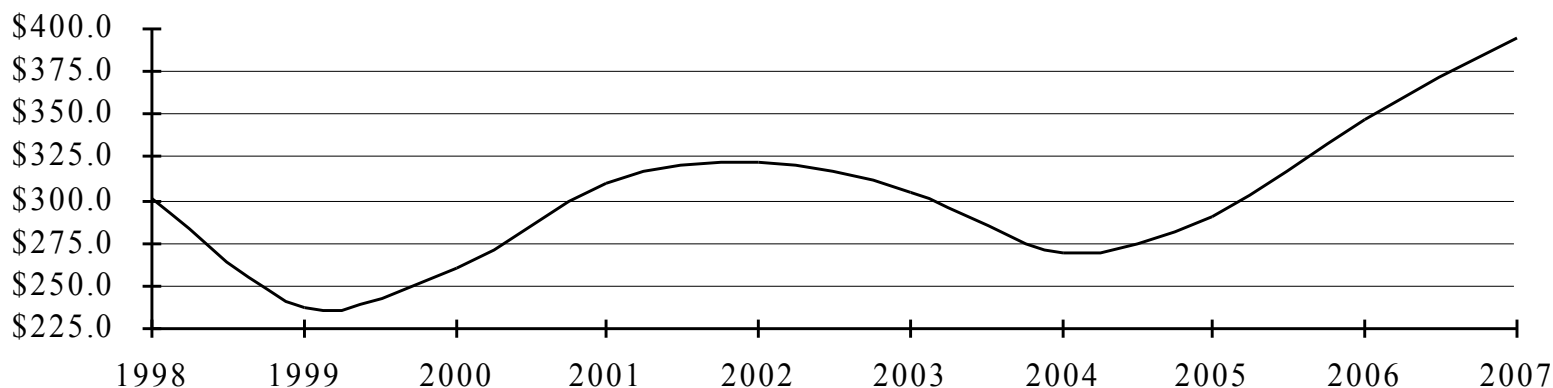
Annual Earnings

(\$ in Millions)



Fiscal Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Mar-08
Amount	\$301.6	\$237.3	\$260.6	\$310.2	\$322.3	\$305.1	\$269.1	\$289.8	\$346.8	\$395.0	\$328.00
Transactions	7,108	5,804	6,447	7,889	8,025	7,524	6,630	6,961	8,242	9,448	7,909

Investment Activities
Fiscal Years Ending June 30
(\$ In Billions)



Analysis of Portfolio 2006-07 Fiscal Year						
Type Of Security	Average Daily Portfolio	Percent of Portfolio	Earnings For Year	Effective Percentage Yield For Year	Average Portfolio Life on 6/30/07 (In Days)	Percent of Portfolio on 6/30/07
U.S. Treasury Bills/Strips	\$2,919,941,365	5.02	\$148,179,539	5.07	88	5.07
U.S. Treasury Bonds & Notes	279,841,989	0.48	8,473,388	3.03	152	0.00
Federal Agency Cpn Securities	9,492,392,479	16.32	459,442,988	4.84	278	12.38
Federal Agency Discount Notes	5,229,599,339	8.99	274,743,469	5.25	194	8.71
GNMA	224,927	0.00	26,788	11.91	4,381	0.00
FHLMC	840,330,134	1.45	36,949,094	4.40	4,381	1.32
Negotiable CDs	13,349,462,188	22.96	717,896,169	5.38	82	25.73
Time Deposits	8,349,640,205	14.36	431,451,747	5.17	58	13.32
Bankers Acceptances	0	0.00	0	0.00	0	0.00
Commercial Paper	8,908,203,382	15.32	478,875,773	5.38	40	21.90
Corporate Bonds	540,711,592	0.93	24,418,502	4.52	401	0.59
Repurchase Agreements	452,055	0.00	24,164	5.35	2	0.00
Reverse Repurchase Agreements	(260,651,555)	-0.45	(12,938,607)	4.96	236	0.00
AB 55 Loans	7,842,868,584	13.49	376,049,044	4.79	236	10.98
General Fund Loans	654,424,657	1.13	34,033,443	5.20	97	0.00
Total Portfolio	\$58,147,441,341	100%	\$2,977,625,501	5.12%	176	100%

Analysis of Portfolio

2006-07 Fiscal Year vs. March 31, 2008

Type Of Security	FY 2006-07		3/31/2008		
	Avg Daily Portfolio	% of Portfolio	Month End Portfolio	% of Portfolio	% of Portfolio on 6/30/07
U.S. Treasury Bills/Strips	\$2,919,941,365	5.02	\$1,340,974,000	2.06	5.07
U.S. Treasury Bonds & Notes	279,841,989	0.48	1,812,293,000	2.79	0.00
Federal Agency Cpn Securities	9,492,392,479	16.32	10,903,933	16.79	12.38
Federal Agency Discount Notes	5,229,599,339	8.99	9,984,443,000	15.37	8.71
GNMA	224,927	0.00	173,000	0.00	0.00
FHLMC	840,330,134	1.45	1,161,572,000	1.79	1.32
Negotiable CDs\Bank Notes	13,349,462,188	22.96	13,651,068,000	21.01	25.73
Time Deposits	8,349,640,205	14.36	9,444,795,000	14.54	13.32
Bankers Acceptances	0	0.00	0	0.00	0.00
Commercial Paper	8,908,203,382	15.32	4,200,791,000	6.47	21.90
Corporate Bonds	540,711,592	0.93	285,306,000	0.44	0.59
Repurchase Agreements	452,055	0.00	0	0.00	0.00
Reverse Repurchase Agreements	(260,651,555)	-0.45	0	0.00	0.00
AB 55 Loans	7,842,868,584	13.49	7,858,053,000	12.26	10.98
General Fund Loans	654,424,657	1.13	4,208,500,000	6.48	0.00
Total Portfolio	\$58,147,441,341	100%	\$64,951,901,000	100%	100%

Schedule of Security Purchases by Term
2006-07 Fiscal Year
(At Cost - \$ In Thousands)

Month	Under 10 Days	10-29 Days	30-89 Days	90 Days- 1 Year	1 - 3 Years	Over 3 Years	TOTALS
July 2006	\$3,159,158	\$1,248,382	\$895,897	\$4,927,438	\$100,000	\$6,244	\$ 10,337,119
August	4,043,498	850,721	1,222,573	4,000,521	250,000	0	10,367,313
September	202,836	2,999,443	826,916	8,658,360	128,114	27,030	12,842,699
October	5,138,425	760,929	1,802,677	2,330,156	552,826	393,164	10,978,177
November	2,142,224	3,314,019	2,629,882	2,778,210	442,560	0	11,306,895
December	3,832,833	1,593,764	2,621,205	8,057,875	628,088	0	16,733,765
January 2007	2,521,878	2,393,982	2,425,038	4,945,901	928,780	143,445	13,359,024
February	3,498,881	2,035,851	3,418,571	4,644,729	100,140	0	13,698,172
March	4,459,425	2,222,876	2,450,720	3,606,163	40,048	9,943	12,789,175
April	3,298,303	2,103,913	3,396,926	10,856,690	719,176	20,796	20,395,804
May	3,673,637	1,192,360	2,898,373	7,041,504	496,373	0	15,302,247
June	4,064,845	2,256,466	2,115,966	8,966,051	1,108,367	14,539	18,526,234
Total	\$40,035,943	\$22,972,706	\$26,704,744	\$70,813,598	\$5,494,472	\$615,161	\$166,636,624
Percent	24.03%	13.79%	16.03%	42.50%	3.30%	0.37%	100.00%



Day Counts: Apple to Oranges

Treasuries:	Actual/365	
Agencies:	30/360	
Corporates:	30/360	
CDs:	Actual/360	
Repo:	Actual/360	
Bills:	Actual/360	discounted
DNs:	Actual/360	discounted
Etc....		



Industry Standard to Simple Interest

- **Fact:** The dollar amount that a security will earn over its portfolio life is a product of its description, its price, and its nominal coupon or discount—all industry standards
- **Fact:** A portfolio cannot increase or decrease this number
- **Fact:** The rate at which this industry standard of earnings is accumulated can be stated in a number of ways determined by individual portfolios



Simple Interest: Keep It Simple

Industry standard earnings

Plus (+) amortized discount or minus (-) premium

Divided by:

Portfolio Life (maturity – purchase date)

Equals: daily earnings straight line

So:

**Straight line daily earning (simple interest) x 366 =
annual simple earning**

**Divided by current amortized cost
= simple interest yield annualized**



How to Calculate Quarterly Earnings & Apportionment

Following are three examples of how the apportionment of quarterly earnings is computed, based on 6/30/96 quarter-ending portfolio information.

The first example simply equates the information to a mathematical formula used to compute the earning rate for the entire pool. The formula is a true yield annualized calculation, which is also adjusted to reflect leap year, when necessary.

The second example, using the information derived from the portfolio and verified by calculation, breaks the numbers down to a LAIF percentage participation. As of 6/30/96, the LAIF balance represented 38.56432654% of the total pool.

The third example carries the breakdown further to reflect the individual participation, earnings, and apportionment of a single account in the LAIF. The process of determining the weighted deposits, as well as the final dollars credited, is outlined and adjusted to reflect any appropriate charges.

QUARTERLY EARNINGS & APPORTIONMENT

(POOL)

D = Number of days in the quarter

E = Interest income + sales gain/loss

B = Average quarterly book total

R = Quarterly earnings rate

Quarterly earnings calculation

$$[E/D \times *365]/B = R$$

(*366 in a leap year)

For example purposes, figures for quarter ending 6/30/96 will be used throughout as follows:

$$D = 91$$

$$E = 383,440,553.06 + 170,705.67 = 383,611,258.73$$

$$B = 27,903,592,062.85$$

$$R = 5.529310$$

or stated as a formula:

$$[383,611,258.73/91 \times 366]/27,903,592,062.85 = 5.529310$$

* Actual Apportionment Rate is figured after charges have been subtracted. The subtraction of charges results in the 5.518751% apportionment rate reported 6/30/96 for LAIF.



Quarterly Earnings & Apportionment (Pool)

Q ended 3/31/08

D = Number of days in quarter	91
E = Int. inc. + sales gain/loss	\$667,363,534
B = Avg. quarterly book total	\$64,137,343,298
R = Quarterly earnings rate	4.185

Formula:

$$(E/D \times 366)/B = R$$

QUARTERLY EARNINGS & APPORTIONMENT

(LAIF)

Dollar days of pool = Book value x # of days in the quarter

$$27,903,592,062.85 \times 91 = 2,539,226,877,719.08$$

2,539,226,877,719.08 dollar days = 100% of pool

LAIF is 38.56432654% of the pool = 979,235,744,667.88 dollar days

D = 1 (Since the book value has been converted to 1 dollar day)

E = 38.56432654% x 383,611,258.73 = 147,937,098.46 (Less charges)

B = 979,235,744,667.88 (1 Dollar day)

R = 5.529310 (Less charges)

or stated as a formula:

$$[E/D \times 366]/B = R$$

$$[147,937,098.46 \times 366]/979,235,744,667.88 = 5.529310$$

(Less charges)

Quarterly Earnings & Apportionment (LAIF) ***Q ended 3/31/08***

Dollar days of pool = (Port. book value) x (# of days in Q)

$$\text{\$64,137,343,298} \times 91 = \text{\$5,836,498,240,118} \text{ or (1 \$ day)}$$

LAIF (B)ook Value is 35.56% = \text{\\$2,075,250,237,271}

LAIF (E)arnings = 35.56% x \text{\\$667,363,534} = \text{\\$237,290,628}

(D)ollar day = 1

(R)ate = 4.185 (less charges)

Formula:

$$\text{(E/D} \times 366\text{)/B} = \text{R (less charges)}$$

QUARTERLY EARNINGS & APPORTIONMENT

(LAIF/PARTICIPANT)

AGENCY: ABC Sanitation District

Beginning Balance: 3,575,000

	<u>Transaction Amount</u>	<u>Balance</u>
04/09/96	-377,000	3,198,000
04/28/96	+1,425,000	4,623,000
05/02/96	+377,000	5,000,000
06/02/96	-75,000	4,925,000
06/19/96	+75,000	5,000,000

Ending Balance: 5,000,000

04/01/96 - 04/09/96	8 Days x 3,575,000 =	28,600,000	Dollar day
04/09/96 - 04/28/96	19 Days x 3,198,000 =	60,762,000	Dollar day
04/28/96 - 05/02/96	4 Days x 4,623,000 =	18,492,000	Dollar day
05/02/96 - 06/02/96	31 Days x 5,000,000 =	155,000,000	Dollar day
06/02/96 - 06/19/96	17 Days x 4,925,000 =	83,725,000	Dollar day
06/19/96 - 06/30/96 inc.	<u>12 Days</u> x 5,000,000 =	<u>60,000,000</u>	Dollar day
	91 Days	406,579,000	Dollar day (Total)

406,579,000
x 0.00015078554349553
61,306.24

Total dollar day
6/30/96 earnings ratio (on quarterly interest statement)
Apportioned earnings

OR

$$D = 1$$

$$E = .0004152003 \times 147,937,098.46 \text{ (\% of LAIF x LAIF earnings)} = 61,423.53 \text{ (Less charges)}$$

$$B = 406,579,000 \text{ (1 Dollar day)}$$

$$R = 5.529310 \text{ (Less charges)}$$

$$[61,423.53 / 1 \times 366] / 406,579,000 = 5.529310 \text{ (Less charges)}$$

LAIF CHARGES

Total charges for LAIF for the quarter were 282,497.00.

ABC Sanitation District is .04152003% of LAIF.

ABC Sanitation District = $.0004152003 \times 282,497.00 = \117.29
share of charges.

Apportionment will reflect this charge.

ABC Sanitation District computed earnings =	61,423.53
Less share of charges = -	<u>117.29</u>
Apportioned earnings =	61,306.24

Computed earning rate	5.529310
Less 117.29 charges	
Actual earning rate	5.51875129

Quarterly Earnings & Apportionment (LAIF Participant)
Q ended 3/31/08

ABC's total Dollar day = \$ 406,579,000

ABC is .000195918 of LAIF

ABC's Earnings = .000195918	x	\$ 237,290,628
	=	\$ 46,490

LAIF charges for Q = \$419,000

ABC's portion .0001959 x \$419,000 = \$82

ABC's apportioned earnings = \$46,408

ABC Earnings Rate **4.178**

PMIA Earnings Rate **4.185**

LOCAL AGENCY INVESTMENT FUND QUARTERLY APPORTIONMENT RATES

	MARCH	JUNE	SEPTEMBER	DECEMBER
1977	5.68	5.78	5.84	6.45
1978	6.97	7.35	7.86	8.32
1979	8.81	9.10	9.26	10.06
1980	11.11	11.54	10.01	10.47
1981	11.23	11.68	12.40	11.91
1982	11.82	11.99	11.74	10.71
1983	9.87	9.64	10.04	10.18
1984	10.32	10.88	11.53	11.41
1985	10.32	9.98	9.54	9.43
1986	9.09	8.39	7.81	7.48
1987	7.24	7.21	7.54	7.97
1988	8.01	7.87	8.20	8.45
1989	8.76	9.13	8.87	8.68
1990	8.52	8.50	8.39	8.27
1991	7.97	7.38	7.00	6.52
1992	5.87	5.45	4.97	4.67
1993	4.64	4.51	4.44	4.36
1994	4.25	4.45	4.96	5.37
1995	5.76	5.98	5.89	5.76
1996	5.62	5.52	5.57	5.58
1997	5.56	5.63	5.68	5.71
1998	5.70	5.66	5.64	5.46
1999	5.19	5.08	5.21	5.49
2000	5.80	6.18	6.47	6.52
2001	6.16	5.32	4.47	3.52
2002	2.96	2.75	2.63	2.31
2003	1.98	1.77	1.63	1.56
2004	1.47	1.44	1.67	2.00
2005	2.38	2.85	3.18	3.63
2006	4.03	4.53	4.93	5.11
2007	5.17	5.23	5.24	4.96
2008	4.18			

LOCAL AGENCY INVESTMENT FUND **ADMINISTRATIVE EARNINGS (COST)**

QUARTER ENDING	PERCENTAGE OF EARNINGS (COST) ₁	EQUIVALENT BASIS POINT VALUE ₂
12/31/99	0.22	1.2
03/31/00	0.22	1.3
06/30/00	0.28	1.7
09/30/00	0.20	1.3
12/31/00	0.20	1.3
03/31/01	0.18	1.1
06/30/01	0.21	1.1
09/30/01	0.21	0.9
12/31/01	0.31	1.1
03/31/02	0.34	1.0
06/30/02	0.35	1.0
09/30/02	0.44	1.2
12/31/02	0.47	1.1
03/31/03	0.46	0.9
06/30/03	0.32	0.6
09/30/03	0.50	0.8
12/31/03	0.47	0.7
03/31/04	0.47	0.7
06/30/04	0.47	0.7
09/30/04	0.45	0.8
12/31/04	0.49	1.0
03/31/05	0.37	0.9
06/30/05	0.24	0.7
09/30/05	0.35	1.1
12/31/05	0.29	1.0
03/31/06	0.24	1.0
06/30/06	0.13	0.6
09/30/06	0.21	0.8
12/31/06	0.21	1.1
03/31/07	0.17	0.9
06/30/07	0.22	1.2
09/30/07	0.17	0.9
12/31/07	0.17	0.8
03/31/08	0.18	0.7