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April 25, 1996

TO: Members of the California State Legislature

FROM: Gene Erbin Bob Naylor

RE: Orange County Bankruptcy

As you know, this office represents Merrill Lynch and Co., Inc. The enclosed report was released this morning at a press conference in Orange County.

The report, prepared by Nobel Laureate Merton H. Miller, concludes the following:

- The financial condition of the Orange County Investment Pool did not mandate bankruptcy.
- If the Fund had not been liquidated, the County would have avoided the losses it incurred.

Please contact us if you wish to discuss this matter.

Cordially,

Genè Erbin

Rober

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# THE ORANGE COUNTY BANKRUPTCY AND ITS AFTERMATH: SOME NEW EVIDENCE

Merton H. Miller

and

Lexecon Inc.

April 25, 1996

Merton H. Miller is Robert R. McCormick Distinguished Service Professor Emeritus at the Graduate School of Business of the University of Chicago and recipient of the 1990 Nobel Memorial Prize in Economic Science. Lexecon inc. is an economics consulting firm based in Chicago, Illinois. Miller and Lexecon inc. have been retained as consultants to Merrill Lynch & Co., Inc.

#### I. INTRODUCTION AND SUMMARY

As most citizens of Orange County are well aware, the County announced on December 1, 1994 that the market value of the assets held in the Orange County Investment Pool ("OCIP"), an investment fund managed by its then Treasurer, Robert L. Citron, had fallen by approximately \$1.5 billion. Within days of this announcement, Orange County and OCIP filed petitions under Chapter 9 of the Bankruptcy Code, began liquidating the fund's assets and reinvested the proceeds in short-term money-market securities. These actions by Orange County effectively converted OCIP's \$1.5 billion in unrealized losses into a reported \$1.63 billion in realized losses.

We have been asked by Merrill Lynch to address two questions with respect to these decisions. First, did the financial condition of OCIP necessitate the declaration of bankruptcy and the liquidation of the fund? Second, what would have happened to the value of the fund if the County had <u>not</u> filed bankruptcy petitions and not put the proceeds from sale of the portfolio into money market securities? We have concluded that the financial condition of OCIP did not mandate bankruptcy; and, that if the fund had not been liquidated, the County would have avoided the losses it realized and reported.

# II. DID THE FINANCIAL CONDITION OF OCIP NECESSITATE BANK-RUPTCY?

Although the precise reasons for the Orange County bankruptcy filings of December 6 are still matters of dispute, there are at least two things of which we can be absolutely sure: (1) OCIP's assets exceeded its liabilities, and (2) OCIP had sufficient current cash and prospects of future cash to pay its maturing obligations as they came due. Therefore, the financial condition of OCIP did not compel the bankruptcy filings. Nevertheless, many of the County's public statements regarding the bankruptcy petitions have suggested that the financial condition of OCIP somehow did necessitate the filings. On December 3, 1994, for example, Matthew Raabe, Orange County's assistant treasurer, stated that collateral calls had cut the County's cash reserves from between \$1.3 and \$1.5 billion at the end of August to \$350 million.<sup>1</sup> Similarly, Bruce Bennett, the County's lead bankruptcy lawyer, has stated that "(t)he county had no cash.<sup>\*2</sup> Regarding the Chapter 9 filing, Thomas F. Riley, the Chairman of the County Board of Supervisors, stated that this action was "in response to the decision of a number of investment bankers to decline to roll over or renew existing reverse-repurchase agreements . . . in the amount of \$1.2 billion.<sup>\*3</sup> At the time, some even speculated that more cash was draining out of OCIP for reverse repurchase costs than OCIP was earning.<sup>4</sup> The County's bankruptcy court filings also raise the specter of possible future cash margin calls due to reverse repurchase agreements involving the securities in the portfolio.<sup>5</sup>

To see whether OCIP really was unable to meet its obligations as they were becoming due, we have examined the composition of OCIP on December 1, 1994. We refer to this portfolio hereafter as the "Original Portfolio."<sup>6</sup> Table 1 shows that the Original Portfolio consisted of 206 different securities and 198 different reverse repurchase agreements. For simplicity, we have divided the assets held into four categories: cash, fixed income securities, collateralized mortgage obligations and structured notes. The structured note category is

<sup>1.</sup> Los Angeles Times, December 4, 1994, at A1.

<sup>2. &</sup>lt;u>New York Times</u>, August 4, 1995, at D6.

<sup>3. &</sup>lt;u>The Orange County Register</u>, December 7, 1994, at A19.

<sup>4. &</sup>lt;u>The Wall Street Journal</u>, December 2, 1994, at A4.

<sup>5.</sup> Second Amended Disclosure Statement With Respect To The Plan Of Adjustment For The County of Orange, March 20, 1996, at 33.

Merrill Lynch provided us with data regarding the Original Portfolio that it obtained from Sungard, the service bureau which maintains the County's investment records. We collected information regarding interest payments, maturities and redemptions from various public sources and Merrill Lynch.

further sub-divided into four categories -- floating rate notes, inverse floating-rate notes, indexamortizing notes, and dual index notes.

"Cash." which includes overnight repurchase agreements and money market accounts came to more than \$640 million.<sup>7</sup> "Fixed income securities" includes all investments with interest payments that are either fixed or that vary according to a pre-determined schedule and covers Treasury securities, securities issued by U.S. Government Sponsored Entities, various high-grade corporate debt securities and term repurchase agreements. The total book value of these fixed income securities was approximately \$11.9 billion. Table 1 also shows that the fund held collateralized mortgage obligations with a book value of about \$229 million.

"Structured Notes" are investments with periodic payments that depend upon future events. The structured notes portion of the Original Portfolio consisted principally of "inversefloaters", i.e., debt securities whose coupon payments varied inversely with some short-term interest rate such as six-month LIBOR.<sup>8</sup> The value of such securities would thus be expected to increase when either long-term or short-term interest rates decreased. The structured note portion of the Original Portfolio, however, also contained floating-rate securities, index-amortizing notes and dual index notes. The structured notes purchased by OCIP were issued principally by U.S. Government Sponsored Entities (such as Fannie Mae, Freddie Mac and the Federal Home Loan Bank) and by various highly rated corporations (such as the Bank of America and Ford Motor Credit). The total book value of the structured note portion of the Original Portfolio was approximately \$7.8 billion and the total book value of all assets in the

<sup>7.</sup> OCIP also had approximately \$185 million in repurchase agreements that would have matured within 35 days.

<sup>8.</sup> The issuers of the structured notes were required to repay 100 percent of principal at maturity no matter what happened to interest rates. Moreover, many of the structured notes had step-up provisions. These features would limit the possible losses that could occur if interest rates increased.

Original Portfolio was approximately \$20.5 billion. 9

Table 1, as noted, also shows the book value of reverse repurchase agreements in the Original Portfolio. In a reverse repurchase agreement, an investment entity like OCIP sells a security to a dealer and simultaneously agrees to repurchase the security at a later date. The difference between the sale price and the agreed repurchase price is the cost of the funds to OCIP. When the proceeds from the sale of the reverse repurchase agreements are used to purchase other securities, the portfolio becomes "leveraged". The book value of reverse repurchase agreements in the Original Portfolio as of December 1, 1994 was approximately \$13.0 billion, and the net book value of the Original Portfolio was approximately \$7.6 billion. Thus, measured in terms of book value, the overall leverage ratio for the portfolio was about 2.7 to 1.

In addition to book values, Table 1 also presents information about market values. We obtained market value data from Gifford Fong Associates ("GFA"); GFA has developed software which uses actual market data to implement state-of-the-art models developed by financial economists for valuing debt securities.<sup>10</sup> As of December 1, 1994, the market value of the Original Portfolio, net of reverse repurchase agreements, was approximately \$6.1 billion including accrued interest and costs.<sup>11</sup>

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<sup>9.</sup> Approximately \$1.7 billion in investments were sold or matured and approximately \$1.6 billion worth of reverse repurchase agreements were retired between December 1 and December 6. Therefore, OCIP had fewer investments and reverse repurchase agreements as of December 6, 1994.

<sup>10.</sup> As a check for accuracy, we compared the GFA valuations on the dates OCIP securities were sold with the actual proceeds from sale. Because the Orange County records we obtained contain settlement date information only, these valuations are as of settlement date, not trade date. Nevertheless, the difference between the GFA valuations and the proceeds from sale is less than 1 percent for the portfolio as a whole.

<sup>11.</sup> Approximately \$800 million of OCIP securities were the subject of "reverse to maturity agreements" with Merrill Lynch in which the repurchase date is the same date as the maturity date of the securities and the principal amount to be received at maturity is (continued...)

Table 2 presents a snapshot of the monthly interest income and outgo of the Original Portfolio as of December 1, 1994 at the then current accrual rates. Note that positive amounts of cash were being generated even after taking into account the costs of reverse repurchases. The total amount of interest earned for the portfolio as a whole was about \$94 million per month. "Reverse Repurchase Costs", the monthly costs the Original Portfolio was incurring by virtue of outstanding reverse repurchase agreements, were running about \$62 million per month. Thus, interest earnings were still exceeding the cost of funds by about \$32 million per month.

These tables demonstrate convincingly that OCIP was not "out of cash," and that the financial condition of the Original Portfolio did not necessitate bankruptcy. Table 1 shows, among other things, that OCIP had over \$640 million in money market accounts and overnight reverse repurchase agreements alone. But this greatly understates the ability of OCIP to pay its obligations as they became due because the assets OCIP held were marketable securities that could have been used to raise cash via sale or through additional reverse repurchase agreements. Table 1 shows that the value of the portfolio's marketable assets exceeded the value of the portfolio's reverse repurchase obligations by more than \$6 billion.<sup>12</sup> OCIP surely could have paid its obligations as they came due.<sup>13</sup>

<sup>11.(...</sup>continued)

the same as the repurchase price. Because OCIP could not repurchase and sell these securities prior to maturity, we report the sales price from the reverse to maturity agreements as the market value in all of our tables.

<sup>12.</sup> Orange County's assets also greatly exceeded its liabilities; its Comprehensive Annual Financial Report shows that the County's assets (excluding Trust and Agency balances) exceeded its liabilities by approximately \$2.6 billion as of June 30, 1994. This surplus greatly exceeds the County's share of OCIP's losses, which amounted to \$593.9 million. Second Amended Disclosure Statement, at 34.

<sup>13.</sup> Nor was a formal bankruptcy filing necessary to forestall a "bank run" on the fund by other fund participants. The County's announcement that any withdrawals would be subject to a 20 percent reduction (representing each participant's share of estimated losses) effectively eliminated any incentives for a run.

# III. WHAT WOULD HAVE BEEN THE CONSEQUENCES FOR ORANGE COUNTY IF IT HAD NOT DECLARED BANKRUPTCY AND LIQUIDAT-ED OCIP?

Immediately after Orange County filed its bankruptcy petitions, most of the securities held pursuant to reverse repurchase agreements with OCIP were sold.<sup>14,15</sup> County officials also announced plans for an "orderly" liquidation. Between December 15, 1994 and January 20, 1995, the County liquidated the bulk of the remaining portfolio and invested the proceeds in short-term money market securities (which the County calls the "Money Market Investment Pool Policy").<sup>16</sup> To understand the consequences of the change in OCIP's investment strategy, we have analyzed how the Original Portfolio would have performed and compared this performance with the performance of money market securities.

The results of our analysis appear in Table 3, Table 4, and Figure 1. Table 3 compares the book value and the market value (excluding accrued interest) of Original Portfolio assets outstanding as of December 1, 1994 and on the last Friday of each month from December 1994 through March 1996. The size of the portfolio shown declines over time because some of the securities held in the Original Portfolio either mature or are redeemed. The table shows that as of December 1, 1994, the Original Portfolio had an unrealized loss of

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<sup>14.</sup> As noted previously, approximately \$1.7 billion in securities were sold and \$1.6 billion in reverse repurchase agreements were closed between December 1 and December 6. We analyze the December 1 portfolio because this is the date Orange County announced that it had an estimated, unrealized loss of \$1.5 billion. The qualitative findings described below would be unaffected if we had used the December 6th portfolio instead of the December 1st portfolio.

<sup>15.</sup> There appears to be considerable misunderstanding over exactly what is involved when a reverse repurchase agreement is not rolled over. When reverse repurchase agreements are initiated, the value of the security sold typically exceeds the amount financed so that any reverse repurchase obligation can be automatically settled by selling the security.

<sup>16.</sup> Second Amended Disclosure Statement, March 20, 1998, at 42-43, 48 & 111.

approximately \$1.64 billion, an amount slightly greater than the County's initial estimates.<sup>17</sup> It is important to note, however, that this figure does not measure the success of OCIP's investment strategy prior to December 1994 because it does not take into account the additional interest income that OCIP had previously earned under its strategy of leveraged holdings of intermediate-term securities. During the previous twelve years, OCIP had reported average annual returns of 7.8 percent, nearly twice as much as the 4.2 percent annual returns reported by the State of California's investment pool.<sup>18</sup>

Table 3 also shows that if the Original Portfolio had not been liquidated, its unrealized losses would have been greatly reduced by June 1995 and virtually eliminated by January 1996 (fluctuating somewhat from month to month as interest rates changed). The change in the unrealized loss, however, is an incomplete measure of the performance of the Original Portfolio because it does not take into account interest income, reverse repurchase costs, maturities and redemptions, or the performance of alternative investments.

Table 4 does account for these factors. The column labelled "Value of Cumulative Cash Inflows" reflects the month-end values of any cash flows that would have occurred between December 1, 1994 and the date shown as a result of coupon payments, maturities, calls, and redemptions of securities held in the Original Portfolio. To calculate the month-end value of these cash inflows, we used the 30-day Treasury bill rate. The column labelled "Value of Cumulative Cash Outflows" reflects the month-end values of any cash outflows that would have occurred between December 1, 1994 and the date shown as a result of reverse repurchase agreements. In calculating these cash outflows, we "rolled-over" reverse repurchase agreements for any security that remained in the portfolio until the underlying security

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<sup>17.</sup> As noted previously, the County ultimately reported a realized loss of \$1.63 billion. Second Amended Disclosure Statement, at 34.

<sup>18.</sup> Orange County Register, April 19, 1994, at 81.

matured or was redeemed.<sup>19</sup> As with cash inflows, we used the rate-of-return on 30-day Treasury bills to calculate the value of cash outflows at month-end.

The difference between the value of cumulative cash inflows and outflows is shown in the column labelled "Value of Cumulative Net Cash Flows." This number is positive at all times, indicating that the portfolio would have continued to generate cash. "Value of Securities Held" is the value of Original Portfolio securities outstanding as of any date, including accrued interest.<sup>20</sup> The table also reports the value of remaining reverse repurchase obligations including accrued costs at any date under the heading "Value of Reverse Repurchases." The sum of the "Value of Cumulative Net Cash Flows", the "Value of Securities Held," and the "Value of Reverse Repurchases" is the "Original Portfolio Value" shown. Table 4 shows that the Original Portfolio Value would have increased by about \$1.8 billion between December 1, 1994 and March 29, 1996, <u>an amount that exceeds the losses the County realized in</u> liquidating OCIP.

Our estimates of the future values of the Original Portfolio (and its profitability) are, if anything, understated for two reasons. First, because we roll-over existing reverse repurchase agreements only until the underlying security matures or is redeemed, the degree of leverage of our Original Portfolio decreases over time. Second, we are calculating the future values resulting from reinvestment of cash generated by the portfolio at the 30-day Treasury bill rate, whereas intermediate-term instruments like those held in the Original Portfolio would generally have had higher rates of return than those of 30-day Treasury bills. In fact, our simulation can be thought of as substituting for the policy of immediate liquidation, a policy of

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<sup>19.</sup> When rolling-over reverse repurchase agreements, we used the relation between the reverse repurchase rate and 30-day LIBOR when an agreement was initiated and actual 30-day LIBOR on rollover dates to estimate the reverse repurchase rate on rollover dates. The offsetting cash inflows and outflows resulting from roll-overs are not included in the cumulative cash flow figures in Table 4.

<sup>20.</sup> The estimated values of the securities on these dates also were obtained from Gifford Fong Associates.

<u>slow</u> liquidation and de-leveraging of the Original Portfolio. A more dynamic portfolio management strategy that sought to maintain the leverage and structure of the Original Portfolio would have resulted in higher values.<sup>21</sup>

Table 4 also reports the "Money Market Portfolio Value," which is our estimate of the value the proceeds from the liquidation would have had if they had been invested in 30-day Treasury bills, a proxy for the short-term money market securities in which the County now invests. The change in both the "Original Portfolio Value" and the "Money Market Portfolio Value" are shown in Figure 1. Table 5 also reports the difference between the "Original Portfolio Value" and the "Money Market Portfolio Value" and the "Money Market Portfolio Value". This difference represents the opportunity cost to Orange County of its December 1994 decision to change its investment strategy. By June 1995, this decision had cost the citizens of Orange County more than \$1.4 billion. This opportunity cost has fluctuated thereafter: it peaked at more than \$1.76 billion in January 1996 and, as of March 1996, was approximately \$1.57 billion.

#### IV. CONCLUSION

By filing bankruptcy petitions and liquidating OCIP, Orange County officials changed the fund's investment strategy. Rather than availing itself of the normally upward-sloping term structure of interest rates by using leverage and by investing in intermediate-term high-yield, but interest-rate sensitive securities, it switched instead to a strategy of investing in low-yield, cash-equivalent securities. Our analysis shows that the financial condition of OCIP did not compel this dramatic change in the investment strategy that had greatly benefitted the County

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<sup>21.</sup> Our calculations also reflect a conservative treatment of two minor data problems. First, in some cases, the County's records reflect sales of a greater par value of a particular security than the County's records show OCIP to have held; when this occurred, we assumed the holdings data were accurate and reduced the sale amount accordingly. Second, we were unable to determine the call price for some of the securities that would have been called from the Original Portfolio (if OCIP had held these securities instead of selling them); when this occurred we assumed that the call price was the lesser of the par value or the market value of the security on the call date.

for many years. Our analysis also shows that Orange County's decision to change its investment strategy turned out to have been a costly one for the County.

#### Table 1

#### Orange County Investment Pool December 1, 1994

Туре	Number	Book Value	Market Value	Accrued Interest / Cost	Adjusted Market Value
Cash		646.504.684	646.504.684		646,504,684
Fixed Income	116	11,857,330,590	11,032,143,453	189,779.064	11.221,922,517
Collateralized Mortgage Obligations	8	228,536,168	222,431,070	400,442	222,831,511
Structured Notes					
Floating Rate Notes	7	588.000,000	556,643,093	4.026.784	560,669,877
Inverse Floating Rate Notes	62	5,369,249,869	4,755,266.517	67,822,252	4,823,088,769
Index Amortizing Notes	11	1,699,030,670	1,549,044,496	13,273,918	1,562,318,414
Dual Index Notes	2	150.000.000	134,919,100	2,530,665	137,449,765
Total Assets	206	20,538,651,981	18,896,952,413	277,833,123	19,174,785,536
Reverse Repurchase Agreements	198	12,988,113,929	12,988,113,929	-67,134,664	-13,055,248,594
Net Value		7.550,538.051	5,908,838,483	210,698,459	6,119,536,942

Note: "Cash" is overnight repurchase agreements and money market accounts. "Fixed Income" securities are investments with interest payments that are fixed or vary according to a pre-determined schedule. This category includes U.S. Treasury securities, U.S. Government securities, various high-grade corporate debt securities and term repurchase agreements. "Structured Notes" are investments with interest payments that depend upon future events such as the level of six-month LIBOR. This category contains securities issued by both U.S. Government Sponsored Entities and various highly-rated corporations. "Accrued Interest / Cost" reflects accrued interest earnings for securities and accrued costs for reverse repurchases. The "Adjusted Market Value" is the "Market Value" plus "Accrued Interest / Cost".

Portfolio composition data was obtained from Orange County records. Descriptive information regarding the securities held was obtained from Bloomberg, prospectuses and Merrill Lynch. Market value data were obtained from Gifford Fong Associates. The "Market Value" for reverse repurchase agreements is the book value as reported in Orange County records.

# Table 2

#### Orange County Investment Pool Monthly Interest Income And Reverse Repurchase Costs December 1, 1994

Type of Security	Interest Earned	Reverse Repurchase Costs	Net
Cash	2,729,998	0	2,729,998
Fixed Income	53,452,992	-40,840,657	12,612,335
Collateralized Mortgage Obligations	1,122,176	-1,762,961	-640,785
Structured Notes	36,536,896	-19,527,924	17,008,972
Total	93,842,063	-62,131,543	31,710,520

Note: "Interest Earnings" is the monthly interest OCIP would earn at the current accrual rate as of December 1, 1994. "Reverse Repurchase Costs" are the monthly costs that OCIP would incur by virtue of outstanding reverse repurchase agreements at the current accrual rate. The figures are not adjusted for maturities or redemptions. "Cash" is overnight repurchase agreements and money market accounts. "Fixed Income" securities are investments with interest payments that are fixed or vary according to a pre-determined schedule. This category contains U.S. Treasury securities, U.S. Government Agency securities, various high-grade corporate debt securities, and term repurchase agreements. "Structured Notes" are investments with interest payments that depend upon future events such as the level of six-month LIBOR. This category contains securities issued by both U.S. Government Sponsored Entities and various highly-rated corporations.

Portfolio composition data were obtained from Orange County records. Descriptive information regarding the securities held was obtained from Bloomberg, prospectuses and Merrill Lynch.

#### Table 3

### Comparison of Book Value and Market Value Of Assets In The Orange County Investment Pool

Date	Book Value of Assets	Market Value of Assets	Unrealized Gain / Loss
12/01/94	20,538,651,980	18,896,952,413	-1.641,699,568
12/30/94	19,891,529,033	18,201,002,484	-1.690.526.549
01/27/95	19,366,667,050	17,980,060,802	-1,386,606,247
02/24/95	19,353,528,549	18,235,219,327	-1,118,309,221
03/31/95	18,728,149,050	17,693,323,245	-1,034,825,805
04/28/95	18,121,108.838	17,255,160,135	-865,948,702
05/26/95	18.041.816.287	17,550,243,574	-491,572,714
06/30/95	18.041,311.691	17,673,413,754	-367,897,937
07/28/95	17.654,735.654	17,193,727,877	-461,007,777
08/25/95	17,049,472,734	16,658,102,392	-391,370,343
09/29/95	16,754,346,276	16,451,153,892	-303,192,384
10/27/95	16,591,651,942	16,288,340,752	-303,311,189
11/24/95	16,456,117,557	16,280,879,316	-175,238,242
12/29/95	15,930,570,588	15,872,592,278	-57,978,310
01/26/96	15,054,833,150	15,025,017,337	-29,815,813
02/23/96	14.804.487.227	14.757.965.923	-46.521.304
03/29/96	14,003,213,915	13,759,593,296	-243,620,619

Note: "Book Value" is the book value of assets outstanding as of the date shown, as recorded by the County on December 1, 1994. "Market value" is the estimated value of these assets on the reported date, excluding accrued interest.

Portfolio composition data were obtained from Orange County records. Descriptive information regarding the securities held was obtained from Bloomberg, prospectuses and Merrill Lynch. Market value data were obtained from Gifford Fong Associates.

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# Table 4 Comparison of OCIP Original Portfolio with Money Market Portfolio

	Original Portfolio							
Date	Value of Cumulative Cash Inflows	Value of Cumulative Cash Outflows	Value of Cumulative Net Cash Flows	Value of Securities Held	Value of Reverse Repurchases	Original Portfolio Value	Money Market Portfolio	Difference Between Original and Money Market Portfolios
1201/94				19 174,785 536	13 055 248 594	6 119 536 942	6 119 536 942	0
1230-94	754.239 258	51,962,224	702.277 034	18 458 646 522	13.059 498 223	6 101 425 333	5 991 709 821	109 715 512
D1.27.95	1.378 301 975	-233.754.650	1.144 547.325	18 218 263 060	-12 934 816 981	6 427 993 405	5 973 749 812	454 243 593
62/24/85	1.478.751 932	-295.964.967	1,182 786.965	18 466 107 270	12.932 605 957	6 716 288 278	5 997 546 823	718 741 455
0301/95	2,252.387.922	-948.115.782	1 304,272 140	17 885,303,208	-12.355 983.215	6 833 592 133	6 026 705 956	806 886 177
042835	2,896.401.801	1.171.842.024	1.724.559 777	17 475 788.026	12 193 931 749	7 006 416.054	6.053 551.871	952 864 183
05/26/35	3.031.872.989	-1.261.555 672	1,770,317 317	17 798.605.411	12,166,045 974	7 402.876 754	6.079 804 457	1 323 072 297
000095	3.158.809 670	1.337.072.645	1.821.737.025	17.899.158.103	-12,167 813 796	7.553 081 332	6,112 822,161	1 440 259 172
07/28-95	3.643.921.703	1 757 668 953	1.886.252 750	17.400.303.431	11,808.624 062	7 477 932.119	6 137 844 573	1 340 087 546
0025/35	4.372 554 317	2 327 806 122	2 044 748 195	16.843.093.987	11,299 403 298	7.588 438.883	6 163 595 538	1 424 843 345
0829/95	4,746.812 758	-2.672.118.363	2 074 694 395	16 635 386,328	11.030.207 603	7 679 873,119	6 194 831 109	1 485 042 010
10/27/95	4.973 695 106	2 831.520 999	2 142.174 106	16 495.600.752	10,931 418 207	7 706 356 652	6 220 383 646	1 485 973 006
112445	5.167.716.748	2 977 505 583	2.190.211.165	16 515 218 460	10 845,788,761	7.859.640 864	6 245 260 740	1 614 380 125
122995	5.814.323 082	3.585.601 966	2.228 721.115	16.098,580.773	10,315,397,449	8.011 904 439	6 279 299 558	1 732 604 881
01/26-96	6,797.819.355	4 439 869 374	2.357.949.980	15.223 382.638	9.517.660.605	8 063 672 014	6 296 344 959	1 767 327 054
02255	7.143.932.480	-4.700.553 400	2.443.379.080	14.947.700.255	9,316.020 734	8 075 058 601	6 319 155 973	1 755 902 628
02395	8,081,516.166	-5.196.216 712	2.885.299 455	13.923.652.696	-8.891.134.758	7,917.817 392	6,346 534 967	1 571 282 425

Note:

This table compares our estimate of the value the Original Portfolio would have obtained with the value of the Money Market Portfolio.

To estimate the value of the Original Portfolio on any date, we assume that portfolio securities are held to maturity or redemption. We also assume that the book value of any reverse repurchase agreement is rolled over until maturity or redemption of any related security. We estimate reverse repurchase rates by adding the spread between reverse repurchase rates and 30-day LIBOR at the time the reverse was initiated to 30-day LIBOR. The "Value of Cumulative Cash Inflows" reflects the value on any date of cash inflows to date if invested in 30-day U.S. Treasury bills. Cash inflows include coupon payments, and the proceeds from any maturity or redemption of securities. The "Value of Cumulative Cash Outflows" reflects the value on any date of cash inflows reflect costs and maturation of reverse repurchase agreements. The "Value of Cumulative Cash Pows" reflects the value on any date of cash outflows reflect costs and maturation of reverse repurchase agreements. The "Value of Cumulative Cash Flows" is the difference between "Value of Cumulative Cash Inflows" and the "Value of Cumulative Cash Inflows" and the "Value of Cumulative Cash Pows". "Par Value of Cumulative Net Cash Flows" is the difference between "Value of Cumulative Cash Inflows" and the "Value of Cumulative Cash **Cuffous.**" "Par Value of all Original Portfolio securities outstanding as of the date shown. The "Value of Securities Held" is the total value of outstanding reverse repurchase agreements on outstanding Original Portfolio securities, including accrued costs. The "Original Portfolio Value" is the sum of the "Value of Securities Held", the "Value of Reverse Repurchases", and the "Value of Cumulative **Cash Flows"**.

To estimate the "Value of the Money Market Portfolio", we calculate the value of the proceeds from liquidation if invested in 30-day U.S. Treasury bills. For securities that were not liquidated as of January 27, 1995, we assume liquidation on that date using the January 27, 1995 security values.

Porticip composition data and liquidation data were obtained from Orange County records. Descriptive information regarding the securities held was obtained from Bloomberg, prospectuses and Merrill Lynch. Market value data were obtained from Gifford Fong Associates.

Figure 1 Comparison of Orange County Investment Pool Original Portfolio With Money Market Portfolio



Source. Table 4.