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## ADDITIONAL INTEREST EARNINGS OF OASDI TRUST FUNDS RESULTING FROM CHANGED INTEREST RATE PROVIDED IN 1960 AMENDMENTS

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This is the fourth in a series of notes that analyze the interest earnings of the OASI and DI Trust Funds with regard to the effect of statutory changes in the basis of determining the interest rate for special issues. *In summary, the change made by the 1960 Amendments has benefited the trust funds by \$336 million in fiscal years 1961-68.*

The 1960 Amendments provide that the rate for special issues is to be based on the average market-yield rate, computed as of the end of the preceding month, for all marketable interest-bearing obligations of the Federal Government not due or callable for at least 4 years. Comparison is made in this note with the interest rate provided by the 1956 Amendments, which was based on the average coupon rate of such securities issued for at least 5 years, and with the interest rate provided by the 1939 Amendments, which was based on the average coupon rate of all such interest-bearing obligations. Table 1 shows the three interest rates, by months, from the effective date of the 1960 Amendments to December 1968.

Special investments issued for the trust funds all have a maturity date of June 30, and consist of certificates (of 1 year or less), 1-year to 7-year notes, and bonds with maturities up to 15 years. Certificates maturing on June 30 next are issued throughout the fiscal year as appropriations are currently made to the trust funds; these are liquidated on the last day of each month to the extent required to provide funds for current benefit payments. Also 1-year certificates are issued on June 30, and are available for redemption in the ensuing fiscal year. Investments in notes and bonds are

made only at the end of the fiscal year, on June 30, and are redeemed in advance of maturity only if sufficient funds cannot be obtained from redemption of certificates. Redemption is in order of maturity date, with the lower-interest-rate issues redeemed first.

Because the longer-term investments are made on June 30, the interest rate for that month has the greatest effect on interest earnings of the trust funds. The June rate on each of the three bases described is shown in Table 2. The effective rate for June has ranged from about  $\frac{1}{2}\%$  to 2% higher than the rate under the 1956 Amendments, and from about  $\frac{1}{2}\%$  to  $1\frac{1}{4}\%$  higher than the rate under the 1939 Amendments.

The pattern of investments in, and redemptions of, special issues has been studied for the period October 1960 through June 1968. Because receipts are higher in the last 6 months of the fiscal year than in the first 6 months, funds are usually available for investment on June 30, although some redemption may be required in the next few months. Since both trust funds were decreasing over much of this period, substantial redemption of notes and bonds was necessary. At the beginning of the period, all special issues held bore interest rates of  $2\frac{1}{2}\%$  and  $2\frac{5}{8}\%$ , with maturities ranging up to 15 years. By the end of the period, over half of these lower-interest-rate issues had been redeemed. Table 3 summarizes the redemptions and acquisitions during the period. Redemptions of lower-interest-rate holdings with maturities up to 1974 totalled \$10 billion for the OASI Trust Fund and \$2 billion for the DI Trust Fund, while investments in higher-

interest-rate issues, with maturities to 1980 and still held by the trust funds, totalled \$13 billion for OASI and \$2 billion for DI. In addition, over \$5 billion was invested for the two funds combined in higher-interest-rate issues that were redeemed within a year or two after issue. This pattern of redemption during the fiscal year of lower-interest-rate issues and investment at the end of the year in higher-interest-rate issues resulted in substantial gains in interest earnings.

Table 4 summarizes the holdings of each of the trust funds as of October 31, 1960, and at the end of each of the fiscal years 1961-68, by type of issue and by interest rate. All of the 2½% and 2⅝% notes held at the beginning of the period were redeemed by the end of fiscal year 1964, while all of the 2½% bonds and much of the 2⅝% bonds had been redeemed by June 30, 1966. At present, the two trust funds hold \$6 billion in 2⅝% bonds and a like amount in bonds at interest rates ranging from 3¾% to 4⅛%. The investment of \$8½ billion in notes bearing interest rates of 4¾% to 5⅝% is of particular interest, representing a dramatic increase from the \$2 billion in 2½% and 2⅝% notes held at the beginning of the period. The reason for this large investment in notes is that issuance of bonds is authorized under the Second Liberty Bond Act, which limits the interest rate to a maximum of 4¼%, lower than the rate prescribed by the Social Security Act (as amended in 1960) for investments for the trust funds beginning in June 1966. Therefore, in 1966, long-term investments could be made only in notes with a maximum maturity of 5 years (extended to 7 years thereafter).

In determining additional interest earnings with respect to special certificates issued during a fiscal year and maturing on June 30 next, interest earnings are included in this study only for certificates held at least one full month; that is, interest on certificates issued and liquidated in the same month is excluded. Thus, the estimates of the added interest earnings on these certificates are understated, and the amount of

gain shown represents a minimum. As to longer-term issues in notes and bonds, interest earnings are based on the actual period that the securities were held, with liquidation assumed to occur on the last day of the month.

Table 5 shows the effect of the 1960 change on interest earnings, by fiscal year and by type of special issue. In the first fiscal year, additional interest earnings were realized only on certificates. Investments in long-term bonds on June 30 of each of the years 1961-65 resulted in substantial gains in interest earnings in fiscal years 1962-66. Beginning in fiscal year 1967, the increase in fiscal earnings was limited primarily to notes. Because some of the higher-interest-rate notes issued in 1966-68 carry an earlier maturity date than the 2⅝% bonds issued before enactment of the 1960 Amendments and still held, part of these notes have already been liquidated. Had it been possible to invest in 15-year bonds, liquidations would have been entirely in the lower-rate issues.

Nonetheless, the gain from the change made by the 1960 Amendments in the method of determining the interest rate has been impressive. As shown in Table 5, the additional interest earnings during the 8 fiscal years since the change was made have aggregated \$336 million, with the amount for fiscal year 1968 being \$115 million.

Table 6 makes a similar comparison using the interest rates under the 1939 Amendments. A slightly smaller gain (\$303 million) is shown, due to the fact that the 1939 rate has equaled or exceeded the 1956 rate during all of the period except the 5 months, April-August 1963.

Table 7 compares the additional interest earnings during the 8 fiscal years with total interest income to the trust funds. As the effective interest rate has increased, the additional interest income has become a larger percentage of the total interest income. For fiscal year 1968, this additional interest over what would have been earned under the basis of the 1956 Amendments was 12% of the total interest to both trust funds.

Table 1

**EFFECTIVE INTEREST RATES COMPARED WITH RATES UNDER PROVISIONS  
OF 1956 AMENDMENTS AND 1939 AMENDMENTS**

<u>Period</u>	<u>Effective Rate</u>	<u>1956 Rate</u>	<u>1939 Rate</u>	<u>Period</u>	<u>Effective Rate</u>	<u>1956 Rate</u>	<u>1939 Rate</u>
1960 Oct.	3.625%	2.625%	3.125%	1965 Jan.	4.125%	3.500%	3.500%
Nov.	3.750	2.750	3.125	Feb.-Aug.	4.125	3.625	3.625
Dec.	4.000	2.750	3.125	Sep.	4.250	3.625	3.625
				Oct.-Dec.	4.375	3.625	3.625
1961 Jan.	3.625	2.750	3.125	1966 Jan.	4.625	3.625	3.750
Feb.	3.750	2.750	3.000	Feb.	4.750	3.625	3.750
Mar.	3.625	2.750	3.000	Mar.	5.000	3.625	3.750
Apr.	3.750	2.875	3.000	Apr.-May	4.750	3.625	3.875
May	3.625	2.875	3.000	June	4.875	3.625	3.875
June	3.750	2.875	3.000	July	5.000	3.625	3.875
July-Aug.	3.875	2.875	3.000	Aug.	5.125	3.625	3.875
Sep.	4.000	2.875	3.000	Sep.	5.375	3.625	4.000
Oct.-Nov.	3.875	2.875	3.000	Oct.	5.125	3.625	4.125
Dec.	4.000	3.000	3.000	Nov.-Dec.	5.000	3.625	4.125
1962 Jan.-Feb.	4.000	3.000	3.125	1967 Jan.	4.625	3.625	4.125
Mar.	3.875	3.000	3.125	Feb.	4.500	3.625	4.125
Apr.	3.750	3.000	3.125	Mar.	4.750	3.625	4.125
May-June	3.750	3.125	3.125	Apr.	4.375	3.625	4.125
July	3.875	3.125	3.125	May-June	4.750	3.625	4.000
Aug.	4.000	3.125	3.125	July	5.125	3.625	4.000
Sep.	4.000	3.125	3.250	Aug.	5.000	3.625	4.000
Oct.	3.875	3.125	3.250	Sep.	5.125	3.625	4.000
Nov.	3.750	3.125	3.250	Oct.	5.250	3.625	4.125
Dec.	3.750	3.250	3.250	Nov.	5.625	3.625	4.125
				Dec.	5.625	3.750	4.250
1963 Jan.-Feb.	3.750	3.250	3.250	1968 Jan.	5.625	3.750	4.250
Mar.	3.875	3.250	3.250	Feb.	5.375	3.750	4.250
Apr.-Aug.	3.875	3.375	3.250	Mar.	5.375	3.625	4.250
Sep.-Oct.	4.000	3.375	3.375	Apr.	5.625	3.625	4.250
Nov.	4.125	3.375	3.375	May-June	5.625	3.625	4.375
Dec.	4.000	3.375	3.375	July	5.500	3.625	4.375
1964 Jan.	4.125	3.375	3.375	Aug.	5.250	3.625	4.500
Feb.-Mar.	4.125	3.500	3.500	Sep.-Oct.	5.375	3.625	4.500
Apr.	4.250	3.500	3.500	Nov.	5.500	3.625	4.500
May-Dec.	4.125	3.500	3.500	Dec.	5.625	3.750	4.500

**Table 2**

**EFFECTIVE INTEREST RATES FOR JUNE COMPARED WITH RATES  
UNDER THE 1956 AMENDMENTS AND  
UNDER THE 1939 AMENDMENTS**

<u>As of June 30</u>	<u>Effective Rate</u>	<u>1956 Rate</u>	<u>1939 Rate</u>
1961	3.750%	2.875%	3.000%
1962	3.750	3.125	3.125
1963	3.875	3.375	3.250
1964	4.125	3.500	3.500
1965	4.125	3.625	3.625
1966	4.875	3.625	3.875
1967	4.750	3.625	4.000
1968	5.625	3.625	4.375

Table 3

**CHANGES IN INVESTMENTS IN SPECIAL ISSUES**  
(amounts in millions)

<u>Fiscal Year</u>	<u>Redemption During Year of Issues at 2½% and 2⅝%</u>			<u>Acquisition at End of Year of Issues at Higher Interest Rates</u>			
	<u>Maturity</u>	<u>Amount</u>	<u>Interest Rate</u>	<u>Issues Redeemed <sup>a</sup></u>		<u>Issues Held <sup>b</sup></u>	
				<u>Maturity</u>	<u>Amount</u>	<u>Maturity</u>	<u>Amount</u>
<i>OASI Trust Fund</i>							
1961	1961-62	\$1,258	3¾%	1962	\$441	1975-76	\$1,240
1962	1962-64	1,854	3¾	1963-64	1,169	-----	-----
1963	1964-65	1,422	3⅞	-----	-----	1977-78	1,739
1964	1965-66	1,522	4⅛	1966	598	1978-79	1,502
1965	1966-67	1,193	4⅛	1966-67	1,173	1980	1,080
1966	1967-70	2,505	4⅞	1968	363	1969-71	2,457
1967	-----	-----	4¾	1968	940	1974	2,720
1968	-----	-----	5⅝	-----	-----	1975	2,461
1961-68	-----	9,754	-----	-----	4,684	-----	13,198
<i>DI Trust Fund</i>							
1961	1961	\$157	3¾%	1961-73	\$247	1974-76	\$191
1962	1962	133	3¾	1963-73	14	1974-77	158
1963	1963-64	266	3⅞	1964	6	1978	154
1964	1965-67	340	4⅛	-----	-----	1979	133
1965	1967-70	424	4⅛	-----	-----	1979-80	146
1966	1970-74	488	4⅞	1971	151	1971	7
1967	-----	-----	4¾	-----	-----	1974	309
1968	-----	-----	5⅝	-----	-----	1975	584
1961-68	-----	1,808	-----	-----	418	-----	1,682

<sup>a</sup> Issues subsequently redeemed, for the most part prior to maturity.

<sup>b</sup> Issues held as of June 30, 1968.

Table 4  
**INVESTMENTS IN SPECIAL ISSUES HELD ON VARIOUS DATES**  
 (in millions)

Type of Investment	June 30								
	Oct. 31 1960	1961	1962	1963	1964	1965	1966	1967	1968
Total	\$15,816	\$16,200	\$15,074	\$14,221	\$14,799	\$15,261	\$14,403	\$17,840	\$19,221
Certificates	167	441	1,080			141		940	
Notes	1,934	1,387	257		598	1,032	2,820	5,316	7,638
2½%	1,430	883							
2⅝%	504	504	168						
3¾%			89						
4⅞%					598	1,032			
4¾%									
4⅞%									
5⅝%									
Bonds	13,715	14,372	13,737	14,221	14,201	14,088	11,584	11,584	11,584
2½%	4,825	4,560	3,925	2,671	1,324	412			
2⅝%	8,890	8,572	8,572	8,572	8,397	8,116	6,023	6,023	6,023
3¾%		1,240	1,240	1,240	1,240	1,240	1,240	1,240	1,240
3⅞%				1,738	1,738	1,738	1,738	1,738	1,738
4⅞%					1,502	2,582	2,582	2,582	2,582
Total	\$2,092	\$2,299	\$2,304	\$2,165	\$1,903	\$1,563	\$1,150	\$1,376	\$1,891
Certificates	232	34	1	6					
Notes	386	464	336	84	1		158	384	900
2½%	68	68	30						
2⅝%	319	319	223	32					
3¾%		78	88	52	1				
4¾%									
4⅞%									
5⅝%									
Bonds	1,474	1,801	1,967	2,076	1,901	1,563	992	992	992
2½%	188	188	188	142	30				
2⅝%	1,287	1,287	1,287	1,287	1,092	698	210	210	210
3¾%		327	493	493	493	432	349	349	349
3⅞%				154	154	154	154	154	154
4⅞%					133	279	279	279	279

DI Trust Fund

OASI Trust Fund

**Table 5**

**ADDITIONAL INTEREST EARNINGS, EFFECTIVE RATE OVER  
RATE PROVIDED BY 1956 AMENDMENTS**

(in thousands)

<u>Fiscal Year</u>	<u>Certificates</u>	<u>Notes</u>	<u>Bonds</u>	<u>Total</u>
<i>OASI Trust Fund</i>				
1961	\$1,227	-----	-----	\$1,227
1962	1,621	-----	\$10,851	12,472
1963	1,148	\$324	10,851	12,323
1964	1,090	-----	19,543	20,633
1965	939	311	28,928	30,178
1966	2,191	817	34,328	37,336
1967	6,203	33,968	34,328	74,499
1968	8,875	61,601	34,328	104,804
Total	23,294	97,021	173,157	293,472
<i>DI Trust Fund</i>				
1961	\$1,447	-----	-----	\$1,447
1962	585	\$679	\$2,859	4,123
1963	229	570	3,895	4,694
1964	51	193	4,663	4,907
1965	50	3	5,188	5,241
1966	148	-----	5,255	5,403
1967	354	1,397	4,987	6,738
1968	984	4,060	4,987	10,031
Total	3,848	6,902	31,834	42,584

Table 6

**ADDITIONAL INTEREST EARNINGS, EFFECTIVE RATE OVER  
RATE PROVIDED BY 1939 AMENDMENTS  
(in thousands)**

<u>Fiscal Year</u>	<u>Certificates</u>	<u>Notes</u>	<u>Bonds</u>	<u>Total</u>
	<i>OASI Trust Fund</i>			
1961	\$1,032	-----	-----	\$1,032
1962	1,502	-----	\$9,301	10,803
1963	1,329	\$324	9,301	10,954
1964	1,090	-----	20,166	21,256
1965	939	311	29,551	30,801
1966	1,704	817	34,951	37,472
1967	4,293	27,175	34,951	66,419
1968	6,097	45,200	34,951	86,248
Total	17,986	73,827	173,172	264,985
	<i>DI Trust Fund</i>			
1961	\$1,016	-----	-----	\$1,016
1962	521	\$582	\$2,451	3,554
1963	240	494	3,487	4,221
1964	51	168	4,447	4,666
1965	50	3	5,016	5,069
1966	115	-----	5,172	5,287
1967	227	1,118	4,940	6,285
1968	639	2,785	4,940	8,364
Total	2,859	5,150	30,453	38,462



Table 7

COMPARISON OF ADDITIONAL INTEREST EARNINGS WITH  
TOTAL INTEREST INCOME, FISCAL YEARS 1961-68  
(amounts in thousands)

<u>Fiscal Year</u>	<u>Total Interest Income</u>	<u>Additional Interest Earnings</u>			
		<u>over 1956 rate</u>		<u>over 1939 rate</u>	
		<u>Amount</u>	<u>Amount as % of Total</u>	<u>Amount</u>	<u>Amount as % of Total</u>
<i>OASI Trust Fund</i>					
1961	\$531,103	\$1,227	.2%	\$1,032	.2%
1962	541,254	12,472	2.3	10,803	2.0
1963	514,822	12,323	2.4	10,954	2.1
1964	541,552	20,633	3.8	21,256	3.9
1965	586,237	30,178	5.1	30,801	5.3
1966	594,758	37,336	6.3	37,472	6.3
1967	725,901	74,499	10.3	66,419	9.1
1968	899,397	104,804	11.7	86,248	9.6
Total, 1961-68	4,935,024	293,472	5.9	264,985	5.4
<i>DI Trust Fund</i>					
1961	\$60,610	\$1,447	2.4%	\$1,016	1.7%
1962	67,752	4,123	6.1	3,554	5.2
1963	67,221	4,694	7.0	4,221	6.3
1964	65,152	4,907	7.5	4,666	7.2
1965	62,135	5,241	8.4	5,069	8.2
1966	53,877	5,403	10.0	5,287	9.8
1967	66,840	6,738	10.1	6,285	9.4
1968	84,913	10,031	11.8	8,364	9.9
Total, 1961-68	528,500	42,584	8.1	38,462	7.3