L. TAX-EXEMPT ADVANCE REFUNDING BONDS -- SOME BASICS

by
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1. Introduction

The arbitrage article in the 1996 CPE Book presented a practical application of the arbitrage restrictions to an issue of tax-exempt bonds that financed the construction of a governmental facility (the "1996 Article"). Frequently, however, tax-exempt bonds are issued to refinance facilities. These refinancing bonds, commonly referred to as "refunding bonds," are issued for a variety of reasons, such as the realization of savings in the payment of debt service or the release of the issuer from covenants in the original financing documents. This article will show the reader how to analyze one type of refinancing transaction, an advance refunding.

Like the 1996 Article, this article shows how the rules apply to a specific example. The example presents two simplified issues of advance refunding bonds. Each refunding issue wholly refunds, rather than partially refunds, an outstanding issue of bonds, and the outstanding issue of bonds finances a single purpose, rather than two or more purposes. Although more complex refinancing structures are common, the example raises most of the same questions presented by these complex structures.

Part 2 of this article sets forth the facts of the example. To clearly demonstrate the effects of transferred proceeds, the facts begin with an issue of bonds in 1985, continue with an issue of advance refunding bonds in 1990, and end with another issue of advance refunding bonds in 1993. Some facts have been simplified to make the example more instructional.

Part 3 of this article, which sets forth the analysis under the Internal Revenue Code and Income Tax Regulations, focuses on the arbitrage yield restriction rules in § 148(a) and the special advance refunding rules in § 149(d). Although arbitrage rebate is mentioned, the computations for rebate are not included here because no rebatable arbitrage is earned under the facts of the example. The computations for rebate were explained in the 1996 Article.

Before moving to the example itself, a few warnings are in order. First, this article assumes the reader is familiar with the concepts discussed in the introductory guide to arbitrage presented in the 1994 CPE Book and in the 1996 Article. For example, both the concept and computation of yield were described in the previous articles and are not explained here. An understanding of that concept and computation is necessary for an understanding of the concepts in this article. THE READER IS STRONGLY ENCOURAGED TO REVIEW THE 1996 ARTICLE BEFORE READING THIS ARTICLE.

Second, this article is a tool for understanding advance refundings. Although it shows how to analyze one specific example, it is not an attempt to set forth audit guidelines. If an agent follows only the steps in this article during an actual examination, the agent may miss issues in the examination.

Third, the example assumes that all the bond documents, such as the official statement, accurately reflect the underlying facts. Therefore, this article does not explore the circumstances requiring an agent to look beyond the bond documents.

Fourth, the example does not illustrate an abusive transaction. During an actual examination, an agent should be mindful of the anti-abuse rules of the regulations, which can modify the application of other rules in the regulations.

Fifth, this article emphasizes the current statute and the 1993 regulations. Because an issue of refunding bonds refinances another issue of bonds issued at a different time, it is likely that different sets of regulations will apply to the different issues of bonds. Also, an agent must be aware of the transition rules in §§ 1312 through 1318 of the Tax Reform Act of 1986 (the "1986 Act"), which can affect application of the current rules to the various issues of bonds.

Finally, this article only discusses the requirements found in §§ 148 and 149(d). Other requirements are contained in §§ 103 and 141 through 150 and are not addressed here.

2. Facts of the Example

A. Overview

The State of Z ("State") issues an original or "new money" issue of bonds in 1985 (the "1985 Bonds") to finance the construction of several new classroom buildings at University of Z ("University"). The classroom buildings will be used only by students and teachers at University. The 1985 Bonds have 10-year call protection to make the issue more marketable to investors.[1]

Over the next few years, interest rates decline. State wishes to refinance the 1985 Bonds to lock in lower interest rates and lower its debt service payments. Consequently, State issues a second issue of bonds in 1990 (the "1990 Bonds") and deposits a portion of the proceeds into an escrow account (the "1990 Escrow"). The 1990 Escrow will pay

[1] "Ten-year call protection" means that State is contractually unable to redeem the 1985 Bonds within the first 10 years after the 1985 Bonds are issued.

the debt service on the 1985 Bonds until all of the 1985 Bonds can be redeemed. Like the 1985 Bonds, the 1990 Bonds have 10-year call protection to make the issue more marketable to investors.

Interest rates continue to decline, and State wishes to refinance the 1990 Bonds to lock in lower interest rates and lower its debt service payments further. Therefore, State issues a third issue of bonds in 1993 (the "1993 Bonds") and deposits a portion of the proceeds into an escrow account (the "1993 Escrow"). The 1993 Escrow will pay the debt service on the 1990 Bonds until all of the 1990 Bonds can be redeemed.

This article focuses generally on the application of the arbitrage restrictions under § 148 and the advance refunding limitations under § 149(d) to the 1993 Bonds. Remember that the Internal Revenue Code of 1954 and §§ 1.103-13, 1.103-14, and 1.103-15 of the 1979 regulations apply to the 1985 Bonds; the 1986 Code, some of the 1979 regulations, some of the 1989 temporary regulations under § 148, and some of the 1992 regulations under § 148 apply to the 1990 Bonds[2]; and the 1986 Code and the 1993 regulations under § 148 apply to the 1993 Bonds.[3] Also, remember that §§ 1312 through 1318 of the 1986 Act set forth a series of transition rules that apply to post-1986 Act refinancings of pre-1986 Act issues of bonds. Therefore, a complete analysis of the 1993 Bonds requires an understanding of the application of some of the former rules to the 1985 Bonds and the 1990 Bonds. These former rules are discussed where necessary.

B. The 1985 Bonds

On December 15, 1985, State issues the 1985 Bonds[4] to finance the construction of several new classroom buildings at University. University is a state institution that is part of State. It is not a separate corporation and is not an organization described in § 501(c)(3). The classroom buildings will be used only by students and teachers at University.

As shown on the cover page of the official statement, attached as Appendix A, the 1985 Bonds are limited obligations of State payable solely from University's revenues, such as tuition and dormitory fees. The 1985 Bonds have an aggregate stated principal amount of $50,000,000. Each bond in the issue pays a fixed, stated rate of interest semiannually on April 1 and October 1 of each year. Interest is computed using the 30/360 day count convention.

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[2] Section 1.148-0(b) of the 1992 regulations contains the effective dates for the 1992 regulations.

[3] Section 1.148-11 of the 1993 regulations contains the effective dates for the 1993 regulations.

[4] All of the bonds that make up the 1985 Bonds are part of the same "issue" within the meaning of § 1.150-1T(c).

The 1985 Bonds are comprised of 10 serial bonds ($15,530,000 total) and one term bond ($34,470,000). The serial bonds mature annually between 1987 and 1996 in the amounts shown in Appendix A. The term bond matures on April 1, 2006, but is subject to mandatory annual sinking fund redemptions. Table 1 shows the mandatory sinking fund redemption schedule:

TABLE 1
1985 Bonds
Term Bond Mandatory Redemption Schedule

Maturity (April 1)	Principal Amount
1997	$ 2,270,000.00
1998	2,475,000.00
1999	2,695,000.00
2000	2,940,000.00
2001	3,205,000.00
2002	3,490,000.00
2003	3,805,000.00
2004	4,145,000.00
2005	4,520,000.00
2006	4,925,000.00
	$34,470,000.00

The term bond also is subject to optional redemption before maturity on April 1, 1996, or on any later date. This call protection makes the term bond more marketable to investors. In order to call the term bond, State must pay all interest accrued to the applicable redemption date plus the applicable redemption price, expressed as a percentage of the outstanding principal amount redeemed, as follows:

Redemption Period (Dates Inclusive)	Redemption Price
April 1, 1996 through March 31, 1997	102%
April 1, 1997 through March 31, 1998	101
April 1, 1998 and thereafter	100

State uses the proceeds of the 1985 Bonds to pay the costs of constructing the new classroom buildings and the costs of issuing the 1985 Bonds. The costs of issuing the 1985 Bonds include (1) underwriters' discount, (2) a premium for bond insurance,

(3) a premium for a surety bond to fund the debt service reserve fund[5], and (4) legal and other fees. Construction of the classroom buildings is completed as expected on December 1, 1988, the date on which the last of the proceeds from the 1985 Bonds are spent.

C. The 1990 Bonds

Between 1985 and 1990, interest rates decline. State decides to refinance the 1985 Bonds to lock in lower interest rates and lower its debt service payments. On October 15, 1990, State issues the 1990 Bonds[6] to refinance the 1985 Bonds and deposits most of the proceeds of the 1990 Bonds into the 1990 Escrow. The 1990 Escrow is structured to pay the debt service on the 1985 Bonds until all of the 1985 Bonds are redeemed. Because the 1990 Escrow will pay the debt service on the 1985 Bonds, the University revenues formerly pledged for the same purpose are defeased and available to be used for other purposes, such as payment of the 1990 Bonds.[7] This defeasance is permitted by the documents for the 1985 Bonds.

As shown on the cover page of the official statement, attached as Appendix B, the 1990 Bonds are limited obligations of State payable solely from University's revenues. The 1990 Bonds have an aggregate stated principal amount of $50,085,000. Each bond in the issue pays a fixed, stated rate of interest semiannually on April 1 and October 1 of each year. Interest is computed using the 30/360 day count convention. The yield on the 1990 Bonds is 7.111415%.

The 1990 Bonds are comprised of 15 serial bonds ($27,945,000 total) and one term bond ($22,140,000). The serial bonds mature annually between 1991 and 2005 in the amounts shown in Appendix B. The term bond matures on April 1, 2011, but is subject to mandatory annual sinking fund redemptions. Table 2 shows the mandatory sinking fund redemption schedule:

[5] The surety bond is an insurance policy that pays if State is ever required to draw from the debt service reserve fund. Because State purchases a surety bond for this purpose, no cash is deposited into the debt service reserve fund.

[6] All of the bonds that make up the 1990 Bonds are part of the same "issue" within the meaning of § 1.150-1T(c).

[7] Under a defeasance, the lien on the pledged revenues or other properties is released, and the revenues or properties no longer secure the bond issue.

TABLE 2
1990 Bonds
Term Bond Mandatory Redemption Schedule

Maturity (April 1)	Principal Amount
2006	$ 3,090,000.00
2007	3,310,000.00
2008	3,545,000.00
2009	3,790,000.00
2010	4,060,000.00
2011	4,345,000.00
	$22,140,000.00

The serial bonds maturing in the years 2002 through 2005 and the term bond also are subject to optional redemption before maturity on April 1, 2001, or on any later date. Like the 1985 Bonds, the 1990 Bonds have 10-year call protection to make them more marketable to investors. In order to call these serial bonds or the term bond, State must pay all interest accrued to the applicable redemption date plus the applicable redemption price, expressed as a percentage of the outstanding principal amount redeemed, as follows:

Redemption Period (Dates Inclusive)	Redemption Price
April 1, 2001 through March 31, 2002	102%
April 1, 2002 through March 31, 2003	101
April 1, 2003 and thereafter	100

State uses a portion of the proceeds of the 1990 Bonds to pay the costs of issuing the 1990 Bonds. These costs include (1) underwriters' discount, (2) a premium for bond insurance, (3) a premium for a surety bond to fund the debt service reserve fund, and (4) legal and other fees.

State uses $48,751,100 of the proceeds of the 1990 Bonds to purchase, at par, certain United States Treasury securities-State and Local Government Series ("SLGS") on October 15, 1990. State deposits these SLGS into the 1990 Escrow. State also deposits $80.78 of cash from the proceeds of the 1990 Bonds into the 1990 Escrow. This cash deposit is required because the total receipts from the SLGS are $80.78 less than the total debt service on the 1985 Bonds that will be paid by the 1990 Escrow. The 1990 Escrow is irrevocably pledged to the payment of debt service on the 1985 Bonds.

Over time, the SLGS will earn investment income and then mature. These receipts by the 1990 Escrow, together with the initial cash deposit, will be sufficient to pay the principal of, and interest and premium on, the 1985 Bonds up to and including the first

optional redemption date of the 1985 Bonds on April 1, 1996. The yield on the SLGS in the 1990 Escrow for arbitrage purposes is 7.110979%.[8]

The following tables describe the SLGS State deposits into the 1990 Escrow, the cash flow from the SLGS in the 1990 Escrow, and the debt service on the 1985 Bonds that will be paid from the cash and the SLGS in the 1990 Escrow:

TABLE 3
Description of SLGS in 1990 Escrow

Type of SLGS[9]	Maturity Date	First Interest Payment Date	Par Amount	Interest Rate
Certificate	04/01/1991	04/01/1991	$ 1,882,800.00	0%
Certificate	10/01/1991	10/01/1991	243,400.00	0%
Note	04/01/1992	04/01/1991	1,808,300.00	6.484%
Note	10/01/1992	04/01/1991	244,900.00	6.665%
Note	04/01/1993	04/01/1991	1,933,000.00	6.785%
Note	10/01/1993	04/01/1991	255,600.00	6.871%
Note	04/01/1994	04/01/1991	2,069,400.00	6.958%
Note	10/01/1994	04/01/1991	266,900.00	7.026%
Note	04/01/1995	04/01/1991	2,221,200.00	7.087%
Note	10/01/1995	04/01/1991	278,200.00	7.130%
Note	04/01/1996	04/01/1991	37,547,400.00	7.181%
			$48,751,100.00	

[8] Note that the yield on the 1990 Escrow is not exactly the same as the yield on the 1990 Bonds. In general, an issuer specifies the yield it will receive on SLGS purchased for a refunding escrow. However, SLGS must be purchased in multiples of $100, and debt service on the prior bonds is not always evenly divisible by $100. Consequently, the yield on the investments in a refunding escrow may not be identical to the yield on the refunding issue.

[9] The United States Department of the Treasury issues three types of SLGS. These types are (1) certificates of indebtedness, which have maturity periods from 30 days up to and including 1 year, (2) notes, which have maturity periods from 1 year and 1 day up to and including 10 years, and (3) bonds, which have maturity periods from 10 years and 1 day up to and including 30 years.

TABLE 4
1990 Escrow Cash Flow

Date	Principal at Redemption	Total Interest	Net Escrow Receipts
04/01/1991	$ 1,882,800.00	$ 1,531,643.64	$ 3,414,443.64
10/01/1991	243,400.00	1,659,280.63	1,902,680.63
04/01/1992	1,808,300.00	1,659,280.63	3,467,580.63
10/01/1992	244,900.00	1,600,655.54	1,845,555.54
04/01/1993	1,933,000.00	1,592,494.25	3,525,494.25
10/01/1993	255,600.00	1,526,917.22	1,782,517.22
04/01/1994	2,069,400.00	1,518,136.08	3,587,536.08
10/01/1994	266,900.00	1,446,141.65	1,713,041.65
04/01/1995	2,221,200.00	1,436,765.45	3,657,965.45
10/01/1995	278,200.00	1,358,057.23	1,636,257.23
04/01/1996	37,547,400.00	1,348,139.40	38,895,539.40
	$48,751,100.00	$16,677,511.72	$65,428,611.72[10]

TABLE 5
1985 Bond Debt Service Paid With
Proceeds of SLGS and Cash in 1990 Escrow

Date	Maturing Principal	Interest	Principal Redeemed	Redemption Premium	Total
04/01/1991	$ 1,460,000.00	$ 1,954,472.50	$ ---	$ ---	$ 3,414,472.50
10/01/1991	---	1,902,642.50	---	---	1,902,642.50
04/01/1992	1,565,000.00	1,902,642.50	---	---	3,467,642.50
10/01/1992	---	1,845,520.00	---	---	1,845,520.00
04/01/1993	1,680,000.00	1,845,520.00	---	---	3,525,520.00
10/01/1993	---	1,782,520.00	---	---	1,782,520.00
04/01/1994	1,805,000.00	1,782,520.00	---	---	3,587,520.00
10/01/1994	---	1,713,027.50	---	---	1,713,027.50
04/01/1995	1,945,000.00	1,713,027.50	---	---	3,658,027.50
10/01/1995	---	1,636,200.00	---	---	1,636,200.00
04/01/1996	2,100,000.00	1,636,200.00	34,470,000.00	689,400.00	38,895,600.00
	$10,555,000.00	$19,714,292.50	$34,470,000.00	$689,400.00	$65,428,692.50

The proceeds from the 1990 Bonds that are in the 1990 Escrow are used to pay principal of, and interest and redemption premium on, the 1985 Bonds between April 1, 1991, and April 1, 1996.

[10] This amount plus the $80.78 State deposits in the 1990 Escrow equals the $65,428,692.50 total debt service on the 1985 Bonds shown in Table 5.

D. The 1993 Bonds

Interest rates continue to decline, and State decides to refinance the 1990 Bonds to lock in lower interest rates and lower its debt service payments further. On July 1, 1993, State issues the 1993 Bonds[11] to refinance the 1990 Bonds and deposits most of the proceeds of the 1993 Bonds into the 1993 Escrow. The 1993 Escrow is structured to pay the debt service on the 1990 Bonds until all of the 1990 Bonds are redeemed. Because the 1993 Escrow will pay the debt service on the 1990 Bonds, the University revenues formerly pledged for the same purpose are defeased and available to be used for other purposes, such as payment of the 1993 Bonds. This defeasance is permitted by the documents for the 1990 Bonds.

As shown on the cover page of the official statement, attached as Appendix C, the 1993 Bonds are limited obligations of State payable solely from University's revenues. The 1993 Bonds have an aggregate stated principal amount of $54,950,000. Each bond in the issue pays a fixed, stated rate of interest semiannually on April 1 and October 1 of each year. Interest is computed using the 30/360 day count convention.

The 1993 Bonds are comprised of 14 serial bonds ($30,510,000 total) and one term bond ($24,440,000). The serial bonds mature annually between 1994 and 2007 in the amounts shown in Appendix C. The term bond matures on April 1, 2014, but is subject to mandatory annual sinking fund redemptions. Table 6 shows the mandatory sinking fund redemption schedule:

TABLE 6
1993 Bonds
Term Bond Mandatory Redemption Schedule

Maturity (April 1)	Principal Amount
2008	$ 3,000,000.00
2009	3,150,000.00
2010	3,310,000.00
2011	3,475,000.00
2012	3,650,000.00
2013	3,830,000.00
2014	4,025,000.00
	$24,440,000.00

[11] All of the bonds that make up the 1993 Bonds are part of the same "issue" within the meaning of § 1.150-1T(c).

State receives $54,582,453.45 from the sale of the 1993 Bonds to the public. The price for each bond is as follows:

TABLE 7
1993 Bond Price Schedule

Maturity (April 1)	Principal Amount	Interest Rate	Yield	Price
1994	$ 1,300,000.00	2.70%	2.70%	$ 1,300,000.00
1995	1,770,000.00	3.15	3.15	1,770,000.00
1996	1,825,000.00	3.45	3.45	1,825,000.00
1997	1,885,000.00	3.70	3.70	1,885,000.00
1998	1,955,000.00	3.95	3.95	1,955,000.00
1999	2,035,000.00	4.05	4.05	2,035,000.00
2000	2,115,000.00	4.15	4.15	2,115,000.00
2001	2,205,000.00	4.25	4.25	2,205,000.00
2002	2,300,000.00	4.35	4.35	2,300,000.00
2003	2,400,000.00	4.40	4.40	2,400,000.00
2004	2,505,000.00	4.50	4.50	2,505,000.00
2005	2,615,000.00	4.60	4.60	2,615,000.00
2006	2,735,000.00	4.70	4.80	2,708,935.45
2007	2,865,000.00	4.80	4.90	2,836,350.00
2014	24,440,000.00	5.00	5.10	24,127,168.00
	$54,950,000.00			$54,582,453.45[12]

State uses a portion of the proceeds of the 1993 Bonds to pay the costs of issuing the 1993 Bonds. These costs include (1) underwriters' discount, (2) a premium for bond insurance, (3) a premium for a surety bond to fund the debt service reserve fund, and (4) legal and other fees. Both the bond insurance and the surety bond are qualified guarantees within the meaning of § 1.148-4(f).

State also uses a portion of the proceeds of the 1993 Bonds to purchase, at par, certain SLGS on July 1, 1993. State deposits these SLGS into the 1993 Escrow. State also deposits $58.09 of cash from the proceeds of the 1993 Bonds into the 1993 Escrow. This cash deposit is required because the total receipts from the SLGS are $58.09 less than the total debt service on the 1990 Bonds that will be paid by the 1993 Escrow. The 1993 Escrow is irrevocably pledged to the payment of debt service on the 1990 Bonds.

[12] This amount is equal to the par amount of the 1993 Bonds ($54,950,000) minus the discount resulting from the differences between the stated interest rates of, and the yields on, the bonds maturing in 2006, 2007, and 2014 ($367,546.55).

The following table shows the sources and uses of the funds State raises from the sale of the 1993 Bonds:

TABLE 8
1993 Bonds
Sources and Uses

Sources of Funds:	
Par Amount	$54,950,000.00
Less Discount	367,546.55
Total Sources	$54,582,453.45
Uses of Funds:	
1993 Escrow Deposits:	
Cash	$ 58.09
SLGS	53,619,700.00
	53,619,758.09
Costs of Issuance:	
Underwriters' Discount	522,025.00
Bond Insurance Premium	262,972.10
Surety Bond Premium	126,801.90
Legal and Other Fees	50,896.36
	962,695.36
Total Uses	$54,582,453.45

Over time, the SLGS will earn investment income and then mature. These receipts by the 1993 Escrow, together with the initial cash deposit, will be sufficient to pay the principal of, and interest and premium on, the 1990 Bonds up to and including the first optional redemption date of the 1990 Bonds on April 1, 2001.

The following tables describe the SLGS State deposits into the 1993 Escrow, the cash flow from the SLGS in the 1993 Escrow, and the debt service on the 1990 Bonds that will be paid from the cash and the SLGS in the 1993 Escrow:

TABLE 9
Description of SLGS in 1993 Escrow

Type of SLGS	Maturity Date	First Interest Payment Date	Par Amount	Interest Rate
Certificate	10/01/1993	10/01/1993	$ 1,002,700.00	0%
Certificate	04/01/1994	04/01/1994	1,815,800.00	0%
Note	10/01/1994	10/01/1993	351,000.00	3.198%
Note	04/01/1995	10/01/1993	1,866,700.00	3.483%
Note	10/01/1995	10/01/1993	340,800.00	3.686%
Note	04/01/1996	10/01/1993	1,952,100.00	3.852%
Note	10/01/1996	10/01/1993	332,600.00	4.009%
Note	04/01/1997	10/01/1993	2,049,200.00	4.165%
Note	10/01/1997	10/01/1993	325,500.00	4.322%
Note	04/01/1998	10/01/1993	2,157,500.00	4.470%
Note	10/01/1998	10/01/1993	320,000.00	4.608%
Note	04/01/1999	10/01/1993	2,272,400.00	4.718%
Note	10/01/1999	10/01/1993	315,900.00	4.801%
Note	04/01/2000	10/01/1993	2,398,400.00	4.884%
Note	10/01/2000	10/01/1993	312,000.00	4.958%
Note	04/01/2001	10/01/1993	35,807,100.00	5.022%
			$53,619,700.00	

TABLE 10
1993 Escrow Cash Flow

Date	Principal at Redemption	Total Interest	Net Escrow Receipts
10/01/1993	$ 1,002,700.00	$ 613,623.29	$ 1,616,323.29
04/01/1994	1,815,800.00	1,220,576.80	3,036,376.80
10/01/1994	351,000.00	1,220,576.80	1,571,576.80
04/01/1995	1,866,700.00	1,214,964.31	3,081,664.31
10/01/1995	340,800.00	1,182,455.71	1,523,255.73
04/01/1996	1,952,100.00	1,176,174.79	3,128,274.79
10/01/1996	332,600.00	1,138,577.34	1,471,177.34
04/01/1997	2,049,200.00	1,131,910.37	3,181,110.37
10/01/1997	325,500.00	1,089,235.78	1,414,735.78
04/01/1998	2,157,500.00	1,082,201.72	3,239,701.72
10/01/1998	320,000.00	1,033,981.59	1,353,981.59
04/01/1999	2,272,400.00	1,026,608.79	3,299,008.79
10/01/1999	315,900.00	973,002.87	1,288,902.87
04/01/2000	2,398,400.00	965,419.69	3,363,819.69
10/01/2000	312,000.00	906,850.76	1,218,850.76
04/01/2001	35,807,100.00	899,116.28	36,706,216.28
	$53,619,700.00	$16,875,276.91	$70,494,976.91[13]

[13] This amount plus the $58.09 State deposits in the 1993 Escrow equals the $70,495,035 total debt service on the 1990 Bonds shown in Table 11.

TABLE 11
1990 Bond Debt Service Paid With
Proceeds of SLGS and Cash in 1993 Escrow

Date	Maturing Principal	Interest	Principal Redeemed	Redemption Premium	Total
10/01/1993	$ ---	$ 1,616,346.25	$ ---	$ ---	$ 1,616,346.25
04/01/1994	1,420,000.00	1,616,346.25	---	---	3,036,346.25
10/01/1994	---	1,571,616.25	---	---	1,571,616.25
04/01/1995	1,510,000.00	1,571,616.25	---	---	3,081,616.25
10/01/1995	---	1,523,296.25	---	---	1,523,296.25
04/01/1996	1,605,000.00	1,523,296.25	---	---	3,128,296.25
10/01/1996	---	1,471,133.75	---	---	1,471,133.75
04/01/1997	1,710,000.00	1,471,133.75	---	---	3,181,133.75
10/01/1997	---	1,414,703.75	---	---	1,414,703.75
04/01/1998	1,825,000.00	1,414,703.75	---	---	3,239,703.75
10/01/1998	---	1,354,022.50	---	---	1,354,022.50
04/01/1999	1,945,000.00	1,354,022.50	---	---	3,299,022.50
10/01/1999	---	1,288,865.00	---	---	1,288,865.00
04/01/2000	2,075,000.00	1,288,865.00	---	---	3,363,865.00
10/01/2000	---	1,218,833.75	---	---	1,218,833.75
04/01/2001	2,215,000.00	1,218,833.75	32,620,000.00	652,400.00	36,706,233.75
	$14,305,000.00	$22,917,635.00	$32,620,000.00	$652,400.00	$70,495,035.00

The proceeds from the 1993 Bonds that are in the 1993 Escrow are used to pay principal of, and interest and redemption premium on, the 1990 Bonds between October 1, 1993, and April 1, 2001.

Because State purchases a surety bond to fund the debt service reserve fund for the 1993 Bonds, no proceeds of the 1993 Bonds are deposited into this fund.

On the issue date of the 1993 Bonds, State makes an election under § 1.148-9(g) to waive its right to invest the proceeds of the 1993 Bonds in higher yielding investments during the temporary period applicable to those proceeds.

Under the documents for the 1993 Bonds, State establishes a debt service fund into which it makes monthly deposits from University's revenues equal to one-sixth of the next semiannual interest payment plus one-twelfth of the next annual principal payment. Under the documents for the 1993 Bonds, State must deplete this fund at least once each bond year, except for a reasonable carryover amount not to exceed the greater of (1) the earnings on the fund for the immediately preceding bond year or (2) one-twelfth of the principal of, and interest payments on, the 1993 Bonds for the immediately preceding bond year. This debt service fund is a bona fide debt service fund within the meaning of § 1.148-1(b). The amounts in this fund are invested in short-term investments permitted

under documents for the 1993 Bonds until the amounts are needed to pay the next debt service payment on the 1993 Bonds.

3. Analysis of Code and Regulations

A. General

Section 103(a) provides that interest on any state or local bond is excluded from gross income. However, this interest exclusion is limited by § 103(b), which makes § 103(a) inapplicable to any arbitrage bond under § 148 or any bond that does not comply with the applicable requirements of § 149.

Section 148 generally provides that a state or local bond will be an arbitrage bond if either (1) the issuer invests the proceeds of the bonds at a yield that is materially higher than the yield on the bonds ("yield restriction rules") or (2) the issuer fails to rebate the excess earnings on those bond proceeds ("rebate rules"). These arbitrage restrictions apply to all state and local bonds unless the bonds meet one or more of the enumerated exceptions to the yield restriction rules (e.g., temporary period exceptions) or the rebate rules (e.g., 6-month spending exception or small issuer exception).

Section 149 contains other requirements that must be met for a state or local bond to qualify for the interest exclusion under § 103(a). Among the requirements are those found in § 149(d) for "advance refundings."

B. Definition of "Refunding"

In general, a "refunding" is a refinancing of another debt obligation. The precise definition of a "refunding issue" can be found in § 1.150-1(d)(1). Under this definition, a "refunding issue" is an issue of debt obligations the proceeds of which are used to pay principal of, or interest or redemption price on, another issue of bonds. The bonds of a refunding issue are often called the "refunding bonds." The definition also provides that the proceeds of the refunding issue may be used for issuance costs, accrued interest, capitalized interest on the refunding issue, a reserve or replacement fund, or any similar costs that are properly allocable to that refunding issue.

The "other issue" that has amounts paid by the proceeds of a refunding issue is called the "prior issue" under § 1.150-1(d)(5). The prior issue also is commonly called the "refunded issue," and the bonds of the prior issue that are refinanced are often called the "refunded bonds." Although the regulations use the term "prior issue," § 1.150-1(d)(5) states that a prior issue may be issued before, at the same time as, or after, a refunding issue. Thus, the determination of whether a particular bond issue is a refunding issue

depends on the use of its proceeds rather than the relative issue dates of the refunding and refunded issues.

In addition to the general requirement that the proceeds of the refunding issue must be used to pay the principal of, or interest or redemption price on, the prior issue, § 1.150-1(d)(2)(ii) states that an issue is not a refunding issue to the extent that the obligor of one issue is neither the obligor of the other issue nor a related party with respect to the obligor of the other issue. In general, the "obligor" of an issue is the actual issuer of the bonds.

State is the actual issuer of the 1985 Bonds, the 1990 Bonds, and the 1993 Bonds. Thus, State is the obligor of each of these issues, even though the debt service on each issue is payable, at some point, solely from University's revenues.

State uses the proceeds of the 1993 Bonds to purchase the SLGS in the 1993 Escrow, and the principal and investment income from these SLGS plus the initial cash deposit in the 1993 Escrow will be used to pay the principal of, and interest and call premium on, the 1990 Bonds. Therefore, the 1993 Bonds are a refunding issue of the 1990 Bonds, and the 1990 Bonds are a prior issue of the 1993 Bonds. Similarly, State uses the proceeds of the 1990 Bonds to purchase the SLGS in the 1990 Escrow, and the principal and investment income from these SLGS plus the initial cash deposit in the 1990 Escrow will be used to pay the principal of, and interest and call premium on, the 1985 Bonds. Therefore, the 1990 Bonds are a refunding issue of the 1985 Bonds, and the 1985 Bonds are a prior issue of the 1990 Bonds. Note that the 1990 Bonds are both a refunding issue and a prior issue.

C. "Current" and "Advance" Refunding Issues

Every refunding issue is classified as either a current refunding issue or an advance refunding issue. This classification is important because the limitations in § 149(d) discussed below only apply to advance refunding issues. In general, the classification is based on the number of days between the issue date of the refunding issue and the last date the proceeds of the refunding issue will be used to pay debt service on the prior issue.

Under § 149(d)(5) and § 1.150-1(d)(3), a refunding issue issued after 1985 is an "advance refunding issue" if any proceeds of the refunding issue are used more than 90 days after the issue date to pay debt service on the prior issue. For bonds issued before 1986, the time period is 180 days. A current refunding issue is an issue of refunding bonds that is not an advance refunding issue.

State issues the 1990 Bonds on October 15, 1990. State uses a portion of the proceeds of the 1990 Bonds to purchase the SLGS in the 1990 Escrow. These SLGS, together with the initial cash deposit in the 1990 Escrow, will be used to pay debt service on the 1985 Bonds until they are called on April 1, 1996. Because April 1, 1996, is more than 90 days from October 15, 1990, the 1990 Bonds are an advance refunding issue. Under a similar analysis, the 1993 Bonds are also an advance refunding issue.

D. Advance Refunding Limitations Under § 149(d)

i. General

Section 149(d)(1) provides that three types of advance refunding issues are not entitled to the interest exclusion for state and local bonds under § 103(a). These types are (1) advance refunding issues that refund private activity bonds other than qualified 501(c)(3) bonds, (2) advance refunding issues that are abusive transactions, and (3) advance refunding issues that do not meet certain specified requirements. Each type of advance refunding issue is discussed below.

ii. Tax-exempt Advance Refunding of Private Activity Bonds (Other than Qualified 501(c)(3) Bonds)

Section 149(d)(2) states that only governmental bonds and qualified 501(c)(3) bonds may be advance refunded. A private activity bond is any bond within an issue of bonds if that issue meets both of the private business tests in § 141(b) or meets the private loan financing test in § 141(c). The main focus of these tests is on the use of bond proceeds in the trade or business of an entity that is not a state or local governmental unit.

State issues the 1985 Bonds to finance the construction of classroom buildings at University. The classroom buildings will be used only by University, which is a state institution. Because there is no private business use of the classroom buildings and no private loan of proceeds, the 1985 Bonds are not private activity bonds under § 141. Therefore, the 1985 Bonds may be advance refunded by the 1990 Bonds.

Under § 1.103-7(d)(1), the proceeds of a refunding issue are considered to be used for the same purpose as the proceeds of the prior issue. Therefore, the 1990 Bonds are treated as if they were used to finance the classroom buildings, even though the proceeds of the 1990 Bonds actually are used to purchase the SLGS in the 1990 Escrow. Consequently, the 1990 Bonds are not private activity bonds, and they may be advance refunded by the 1993 Bonds.

iii. Abusive Advance Refunding Transactions

Section 149(d)(4) provides that the interest on an advance refunding issue will not be excluded from gross income under § 103(a) if a device is employed in connection with the issuance of the advance refunding issue to obtain a material financial advantage. The material financial advantage is based on arbitrage concepts under § 148 and does not include savings attributable to lower interest rates. Section 1.149(d)-1(b) provides that an advance refunding issue violates § 149(d)(4) if (1) the issue violates any of the anti-abuse rules under § 1.148-10, (2) the issue fails to meet the rebate requirements under § 1.148-3, or (3) the proceeds of the issue are invested in a certain type of escrow that contains both nonpurpose investments and tax-exempt obligations.

The 1990 Bonds and the 1993 Bonds are issued to take advantage of savings from lower interest rates. In addition, neither the 1990 Escrow nor the 1993 Escrow contain tax-exempt obligations. Assuming that the anti-abuse rules under § 1.148-10 are not violated and that State satisfies the rebate requirements, the 1993 Bonds do not violate the limitation under § 149(d)(4).

iv. Other Requirements for Advance Refunding Issues

Section 149(d)(3) generally provides that the interest exclusion under § 103(a) will not apply to any advance refunding issue unless the issue also meets the requirements discussed below.

Number of Advance Refunding Issues Permitted --

Section 149(d)(3)(A)(i) limits the number of times an issuer may advance refund an original bond issue. If the original bond issue was issued before 1986, two advance refundings are permitted. If the original bond issue was issued after 1985, only one advance refunding is permitted. In addition, § 149(d)(6)(B) treats an original bond issue issued before 1986 as having been advance refunded no more than once before March 15, 1986. For example, if an original bond issue issued in 1975 were advance refunded three times in 1978, 1981, and 1985, the three advance refundings would be counted as only one advance refunding. Under § 149(d)(3)(A)(i), therefore, the 1975 original bond issue would be eligible to be advance refunded one more time, even though the total number of advance refunding issues actually would be four.[14]

[14] In addition, § 1.149(d)-1(d) generally provides that the multipurpose rules under § 1.148-9(h) apply to determine the number of times the issuer has advance refunded an original bond of an issue. A complete analysis of the multipurpose rules is beyond the scope of this article. However, § 1.148-9(h) generally provides that the bonds of a multipurpose issue allocated to any separate purpose (e.g., refunding a separate prior issue or financing any clearly discrete governmental purpose) are treated as a separate issue for all purposes of § 148 except computing arbitrage

The 1985 Bonds are issued before 1986. Therefore, two advance refundings of the 1985 Bonds are permitted. The 1990 Bonds are the first, and the 1993 Bonds are the second, advance refunding issue of the 1985 Bonds. Consequently, the 1993 Bonds meet this requirement.

Date by Which the Refunded Issue Must be Redeemed --

Sections 149(d)(3)(A)(ii) and (iii) require that the refunded bonds of the prior issue be redeemed on or before a specific date.[15] If the prior issue was issued before 1986, the refunded bonds must be redeemed as soon as they may be redeemed at a premium of 3% or less. If the prior issue was issued after 1985, the refunded bonds must be redeemed as soon as they may be redeemed at any price. An exception to these rules is set forth in § 149(d)(3)(B), which provides that the issuer is not required to redeem the refunded bonds unless it will realize a debt service savings from the refunding issue on a present value basis. Also, the issuer need not redeem the refunded bonds within 90 days after the issue date of the refunding issue.[16]

The first date on which any of the 1990 Bonds may be optionally redeemed before maturity is April 1, 2001. State may only redeem the 1990 Bonds on this date if it pays principal, accrued interest, and a redemption premium equal to 2% of the outstanding principal. In addition, State will achieve a present value debt service savings by using the proceeds of the 1993 Bonds to advance refund the 1990 Bonds and redeem the 1990 Bonds on their first call date.

The 1993 Escrow is irrevocably pledged to pay debt service on the 1990 Bonds. Table 10 shows the anticipated receipts from the SLGS in the 1993 Escrow. These receipts plus the initial cash deposit in the 1993 Escrow are sufficient to provide for the debt service requirements of the 1990 Bonds shown in Table 11. This includes redemption of the remaining 1990 Bonds and payment of a 2% redemption premium on

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yield, rebate amount, the minor portion amount, and the reasonably required reserve or replacement fund amount of the bond issue. A multipurpose issue is a bond issue that is used to finance two or more separate purposes. For example, if original bonds issued in 1988 were used to finance Project 1 and Project 2 and the issuer subsequently issued tax-exempt bonds to advance refund only those original bonds allocable to Project 1, the original bonds allocable to Project 2 would still be eligible to be advance refunded with tax-exempt bonds. The 1985 Bonds, the 1990 Bonds, and the 1993 Bonds are not multipurpose issues.

[15] Remember that an issuer may refinance all or a part of the prior issue. If the issuer refunds part of the prior issue (a "partial refunding"), this requirement only applies to the bonds of the prior issue that are being refunded.

[16] If the first call date of the refunded bonds was within 90 days from the issue date of the refunding issue, requiring redemption of the refunded bonds on the first call date would cause the refunding issue to be a current refunding issue, which is not subject to these requirements.

April 1, 2001. Thus, the proceeds of the 1993 Bonds will be used to redeem the 1990 Bonds on the first date on which the 1990 Bonds may be redeemed. Consequently, the 1993 Bonds meet these requirements.

Initial Temporary Periods Under § 148(c) --

Section 149(d)(3)(A)(iv) sets forth limitations on the temporary period in the regulations under § 148(c) for both the refunding issue and the prior issue. Under § 149(d)(3)(A)(iv), the temporary period for the refunding issue is no later than 30 days after it is issued, and the temporary period for the prior issue is no later than the issue date of the refunding issue (i.e., an advance refunding issue cuts off the temporary period of the proceeds of the prior issue). Section 1.148-9(d)(2) of the 1993 regulations, which applies to the 1993 Bonds, also provides a 30-day temporary period for advance refunding issues.

The temporary period for the 1990 Bonds under the 1979 regulations ends on October 14, 1992, 2 years after issue date of the 1990 Bonds.[17] This is not later than July 1, 1993, the issue date of the 1993 Bonds. Consequently, the 1993 Bonds meet this requirement.

Refunded Issue not Subject to § 148(e) --

Section 148(e) permits an issuer to invest a minor portion of the proceeds of an issue in materially higher yielding investments. The minor portion is the lesser of 5% of the proceeds or $100,000. If § 148(e) did not apply to the prior issue, § 149(d)(3)(A)(v) restricts the amount of proceeds of the prior issue that can be invested at a materially higher yield.

Section 148(e) applies to the 1990 Bonds because they are issued on October 15, 1990. Therefore, this requirement does not apply to the 1993 Bonds.[18]

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[17] See § 1.103-14(e)(3) of the 1979 regulations.

[18] The 1985 Bonds are not subject to § 148(e). Consequently, the 1990 Bonds must meet this requirement. Because the debt service reserve fund for the 1985 Bonds is funded with a surety bond instead of cash and because all bond proceeds are expended on or before December 1, 1988, no proceeds of the 1985 Bonds are invested in higher yielding investments after the issue date of the 1990 Bonds. Thus, the 1990 Bonds meet this requirement.

v. Conclusion

The 1993 Bonds do not advance refund a private activity bond, are not an abusive advance refunding transaction, and meet all of the requirements under § 149(d)(3). Therefore, the 1993 Bonds are not any of the three prohibited types of advance refunding issues described in § 149(d)(1).

E. Yield Restriction Rules Under § 148(a)

i. General

Section 148(a) generally provides that a bond is an arbitrage bond if, on the issue date, the issuer reasonably expects to use the proceeds of the issue of which the bond is a part directly or indirectly (1) to acquire higher yielding investments or (2) to replace funds used directly or indirectly to acquire higher yielding investments. Section 148(a) also provides that a bond is an arbitrage bond if the issuer intentionally uses any portion of the proceeds of the issue of which the bond is a part (1) to acquire higher yielding investments or (2) to replace funds used directly or indirectly to acquire higher yielding investments. Section 148(b)(1) defines "higher yielding investments" as any investment property that produces a yield over the term of the issue that is materially higher than the yield on the bond issue.

As explained in the 1996 Article, the analysis of whether a bond issue complies with the yield restriction rules can be broken down into the following steps:

Step one: Determine whether the bonds are part of the same issue;

Step two: Review the issuer's expectations concerning the use of bond proceeds and determine whether those expectations are reasonable;

Step three: Determine the amount of gross proceeds;

Step four: Determine the allocation of gross proceeds to investments and expenditures;

Step five: Determine whether any exceptions to the yield restriction rules apply; and

Step six: If no exceptions to the yield restriction rules apply, determine the permitted spread allowed to be earned on investments over the bond yield.

These steps can be used to determine compliance with the yield restriction rules regardless of whether the bond issue being analyzed is a new money issue or a refunding issue. As stated above, the 1993 Bonds are part of the same issue, and State's expectations regarding use of the proceeds of the 1993 Bonds are presumed to be reasonable. Therefore, the next step in the analysis is to determine the amount of gross proceeds of the 1993 Bonds.

ii. Determine the Amount of Gross Proceeds

Section 1.148-1(b) defines "gross proceeds" as any proceeds and replacement proceeds of an issue. "Proceeds" is further defined as any sale proceeds, investment proceeds, and transferred proceeds of an issue. In order to determine the amount of gross proceeds of the 1993 Bonds, therefore, the amount of sale proceeds, investment proceeds, transferred proceeds, and replacement proceeds of the 1993 Bonds must be determined.

Sale Proceeds --

Section 1.148-1(b) defines "sale proceeds" as any amounts actually or constructively received from the sale of the issue, including amounts used to pay underwriters' discount and accrued interest other than pre-issuance accrued interest.

As shown in Table 7, State receives $54,582,453.45 from the sale of the 1993 Bonds. This amount is equal to the par amount of the 1993 Bonds ($54,950,000) minus the discount resulting from the differences between the stated interest rates of, and the yields on, the bonds maturing in 2006, 2007, and 2014 ($367,546.55). Table 8 shows that the sale proceeds of the 1993 Bonds are divided among (1) the cash and the SLGS in the 1993 Escrow, (2) the underwriters' discount, (3) the premium for bond insurance, (4) the premium for the surety bond to fund the debt service reserve fund, and (5) the legal and other fees.

Investment Proceeds --

Section 1.148-1(b) defines "investment proceeds" as any amounts actually or constructively received from investing proceeds of an issue. As stated above, proceeds includes the sale proceeds, investment proceeds, and transferred proceeds of an issue. Therefore, investment proceeds are all amounts received from investing the sale proceeds, transferred proceeds, and investment proceeds (i.e., earnings on earnings) of an issue.

Of the various uses among which the sale proceeds of the 1993 Bonds are allocated, the deposit of the SLGS into the 1993 Escrow is the only use that generates investment income. As explained below, the 1993 Bonds also have transferred proceeds from the

1990 Escrow that generate investment income. Therefore, the investment proceeds of the 1993 Bonds include (1) the earnings received from the SLGS in the 1993 Escrow, (2) the earnings received from the transferred proceeds described below, and (3) the earnings on those earnings.

Transferred Proceeds --

In general, transferred proceeds are any proceeds of a prior issue that become proceeds of a refunding issue. Section 1.148-9(b)(1) provides that when proceeds of the refunding issue discharge any of the outstanding principal amount of the prior issue, proceeds of the prior issue become transferred proceeds of the refunding issue and cease to be proceeds of the prior issue.[19]

The purpose of the transferred proceeds rule is to reflect which borrowing is supporting the investments originally made with the proceeds of the prior issue. Remember that generally the arbitrage restrictions (both yield restriction and rebate) compare the earnings on unspent gross proceeds of an issue with the yield on that issue. When a refunding issue discharges a prior issue whose proceeds have not been completely spent, the issue to which the comparison was being made (the prior issue) is no longer outstanding. After discharge of the prior issue, the issuer has an issue of obligations outstanding (the refunding issue) and unspent proceeds. This puts the issuer in the same position as it was before the refunding occurred. The issuer was required to comply with the arbitrage restrictions before the refunding and should not be able to avoid those restrictions merely by refunding the prior issue. Therefore, the transferred proceeds rule causes the unspent proceeds of the prior issue to become proceeds of the refunding issue. Consequently, the issuer must take into account the earnings on those proceeds for purposes of demonstrating that the refunding issue complies with the arbitrage restrictions.

The SLGS in the 1993 Escrow (proceeds of the refunding issue) shown in Table 10 will be used to pay the outstanding principal of the 1990 Bonds (prior issue) shown in Table 11. The 1990 Escrow contains unspent proceeds of the 1990 Bonds until April 1, 1996, the redemption date of the 1985 Bonds. This can be seen in Table 4 and Table 5. Therefore, when the SLGS in the 1993 Escrow are used to pay the principal of the 1990 Bonds on April 1, 1994, a portion of the proceeds of the 1990 Bonds becomes transferred proceeds of the 1993 Bonds. Similarly, when the SLGS in the 1993 Escrow are used to

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[19] Section 1.103-14(e)(2)(ii) of the 1979 regulations and § 1.148-11(d)(1) of the 1992 regulations set forth a similar "principal to principal" transferred proceeds rule, which provides for a transfer of proceeds to the refunding issue only upon a discharge of "principal" of the prior issue. However, § 1.148-4T(e)(2)(i) of the 1989 temporary regulations sets forth a "dollar for dollar" transferred proceeds rule, which provides for a transfer of proceeds to the refunding issue upon a discharge of principal of, or interest or retirement price on, the prior issue.

pay the principal of the 1990 Bonds on April 1, 1995, more of the proceeds of the 1990 Bonds becomes transferred proceeds of the 1993 Bonds.

Section 1.148-9(b)(1) provides further that the amount of proceeds of the prior issue that becomes transferred proceeds of the refunding issue is an amount equal to the proceeds of the prior issue on the date of that discharge multiplied by the following fraction:

the principal amount of the prior issue
discharged with proceeds of the refunding
issue on the date of that discharge

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the total outstanding principal amount
of the prior issue on the date immediately
before the date of that discharge.

This fraction is sometimes referred to as the "transfer factor."[20]

The total amount of proceeds of the 1990 Bonds on any particular date is equal to the present value of the remaining receipts from the SLGS in the 1990 Escrow on that date using a discount rate equal to the yield on the 1990 Escrow.[21] The following table shows the present value of the remaining proceeds of the 1990 Bonds on April 1, 1994, and April 1, 1995:

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[20] If the transfer of proceeds from the prior issue to the refunding issue results in an allocation of proceeds that exceeds the overall limitation on the amount of gross proceeds allocable to the refunding issue, the universal cap rules under § 1.148-6(b)(2) will cause the proceeds to transfer back to the prior issue or to some other issue as replacement proceeds. The universal cap rules do not apply here.

[21] Even though some of the SLGS have already matured, THE DISCOUNT RATE IS THE COMBINED YIELD ON ALL SLGS IN THE 1990 ESCROW because § 1.148-5(b)(2)(i) provides that the yield on each investment within a class of investments is blended with the yield on other investments within the class, whether or not the investments are held concurrently. Under § 1.148-5(b)(2)(ii), yield restricted nonpurpose investments, such as the SLGS in the 1990 Escrow, are a separate class of investments. In addition, § 1.148-5T(b)(2)(iii) permits an issuer to treat all yield restricted nonpurpose investments in a refunding escrow as a single investment having a single yield. Finally, § 1.148-5(d)(2) requires an issuer to value yield restricted investments at their present value.

TABLE 12
Present Value of Remaining 1990 Bond Proceeds in 1990 Escrow on Transfer Dates

Date	Net Escrow Receipts Subject to Transfer on 04/01/94[22]	PV of Remaining Receipts at 1990 Escrow Yield of of 7.110979% to 04/01/94	PV of Remaining Receipts at 1990 Escrow Yield of 7.110979% to 04/01/95
10/01/94	$ 1,713,041.65	$ 1,654,225.82	$ ---
04/01/95	3,657,965.45	3,411,091.32	---
10/01/95	1,636,257.23	1,473,439.13	1,580,077.73
04/01/96	38,895,539.40	33,822,623.69	36,270,500.30
	$45,902,803.73	$40,361,379.96	$37,850,578.03

After payment of principal of, and interest on, the 1985 Bonds on April 1, 1994, the amount of proceeds of the 1990 Bonds remaining in the 1990 Escrow is $40,361,379.96. As shown in Table 11, the principal amount of the 1990 Bonds discharged with proceeds of the 1993 Bonds on April 1, 1994, is $1,420,000, and the total outstanding principal amount of the 1990 Bonds immediately before the discharge on April 1, 1994, is $46,925,000 ($14,305,000 total maturing principal plus $32,620,000 principal to be redeemed). Therefore, the transfer factor on April 1, 1994, is computed as follows:

$$\text{Transfer Factor} = \frac{1{,}420{,}000.00}{46{,}925{,}000.00} = 3.026105\%.$$

The amount of proceeds of the 1990 Bonds that becomes transferred proceeds of the 1993 Bonds on April 1, 1994, is computed as follows:

Transferred Proceeds = $40,361,379.96 x 3.026105% = $1,221,377.74.

Similarly, after payment of principal of, and interest on, the 1985 Bonds on April 1, 1995, the amount of proceeds of the 1990 Bonds remaining in the 1990 Escrow is $37,850,578.03. However, 3.026105% of the proceeds in the 1990 Escrow transfers to the 1993 Bonds on April 1, 1994. Therefore, only 96.973895% (100% minus 3.026105%) of these proceeds ($36,705,179.61) remains subject to transfer on April 1, 1995. As shown in Table 11, the principal amount of the 1990 Bonds to be discharged with proceeds of the 1993 Bonds on April 1, 1995, is $1,510,000, and the total outstanding principal amount of the 1990 Bonds immediately before the discharge on April 1, 1995,

[22] These amounts are from Table 4.

is $45,505,000 ($46,925,000 minus $1,420,000 to be discharged on April 1, 1994). Therefore, the transfer factor on April 1, 1995, is computed as follows:

$$\text{Transfer Factor} = \frac{1{,}510{,}000.00}{45{,}505{,}000.00} = 3.318317\%.$$

The amount of proceeds of the 1990 Bonds that becomes transferred proceeds of the 1993 Bonds on April 1, 1995, is computed as follows:

Transferred Proceeds = $36,705,179.61 x 3.318317% = $1,217,994.21.

As shown in Table 4 and Table 5, all proceeds of the 1990 Bonds remaining in the 1990 Escrow will be used to redeem the 1985 Bonds on April 1, 1996. Consequently, no more proceeds of the 1990 Bonds transfers to the 1993 Bonds from this date on, even though proceeds of the 1993 Bonds continue to pay principal of the 1990 Bonds through and including April 1, 2001.

Replacement Proceeds --

Section 1.148-1(c) defines "replacement proceeds" of an issue as amounts that have a sufficiently direct nexus to the issue or to the governmental purpose of the issue to conclude that the amounts would have been used for that governmental purpose if the proceeds of the issue were not actually used or expected to be used for that governmental purpose. Governmental purpose includes the expected use of amounts for the payment of debt service on a particular date.

The University revenues that State deposits into the debt service fund for the 1993 Bonds and the earnings on these revenues will be used by State to pay the principal of, and interest on, the 1993 Bonds each April 1 and October 1. Therefore, these amounts are replacement proceeds of the 1993 Bonds.

Total Amount of Gross Proceeds --

Thus, the amount of gross proceeds of the 1993 Bonds includes:

(1) the sale proceeds allocated to --
- (a) the cash and the SLGS in the 1993 Escrow,
- (b) the underwriters' discount,
- (c) the premium for bond insurance,
- (d) the premium for the surety bond in the debt service reserve fund, and
- (e) the legal and other fees;

(2) the investment proceeds from the SLGS in the 1993 Escrow;
(3) the investment proceeds from the transferred proceeds from the 1990 Escrow;
(4) the transferred proceeds from the 1990 Escrow; and
(5) the replacement proceeds in the debt service fund for the 1993 Bonds.

iii. Determine the Allocation of Gross Proceeds to Investments and Expenditures

As stated above, the arbitrage restrictions generally compare the earnings on unspent gross proceeds of an issue with the yield on that issue. In order to make this comparison, the issuer must allocate the gross proceeds of the issue to investments and expenditures.

The general allocation and accounting rules are set forth in § 1.148-6. In addition, some special allocation rules for refunding issues, such as the multipurpose rules and transferred proceeds allocation rules discussed above, are set forth in § 1.148-9.

Expenditures --

Section 1.148-6(b)(1) provides that amounts cease to be allocated to an issue as proceeds only when those amounts are allocated to an expenditure for a governmental purpose. Under the rules in § 1.148-6(d), gross proceeds of an issue may be allocated to expenditures using any of a number of reasonable, consistently applied accounting methods. Regardless of which method is applied, the issuer may not allocate gross proceeds to an expenditure unless the issuer has made a current outlay of cash.

State allocates a portion of the gross proceeds of the 1993 Bonds to the expenditures shown in Table 8, which are (1) the underwriters' discount, (2) the premium for bond insurance, (3) the premium for the surety bond to fund the debt service reserve fund, and (4) the legal and other fees relating to issuance of the 1993 Bonds. Each of these items involves a current outlay of cash, and each qualifies as an expenditure for a governmental purpose of the 1993 Bonds.

The remaining gross proceeds of the 1993 Bonds (i.e., the proceeds in the 1993 Escrow, the transferred proceeds from the 1990 Escrow, and the replacement proceeds in the debt service fund) must be allocated to specific investments.

Investments --

Section 1.148-9(c)(1)(i) provides that investments purchased with sale proceeds or investment proceeds of a refunding issue must be allocated to those proceeds (i.e., a specific tracing method of accounting must be used). The proceeds of the 1993 Bonds

in the 1993 Escrow are invested in the SLGS described in Table 9. Therefore, the proceeds in the 1993 Escrow are allocated to these SLGS.

Section 1.148-9(c)(1)(ii) sets forth the allocation rules for transferred proceeds. This section provides that when proceeds of a prior issue become transferred proceeds of a refunding issue, investments (and the related payments and receipts) of proceeds of the prior issue that are held in a refunding escrow for another issue are allocated to the transferred proceeds under the ratable allocation method. Under the ratable allocation method, which is described in § 1.148-9(c)(1)(iii), a ratable portion of each investment of proceeds of the prior issue is allocated to transferred proceeds of the refunding issue.

The proceeds of the 1990 Bonds that will become transferred proceeds of the 1993 Bonds are held in the 1990 Escrow (a refunding escrow) for payment of debt service on the 1985 Bonds (another issue). Therefore, State must use the ratable allocation method to allocate the SLGS in the 1990 Escrow (and related payments and receipts) to the transferred proceeds of the 1993 Bonds. This means that on April 1, 1994, State must allocate 3.026105% of the payments for, and receipts of, the four SLGS remaining in the 1990 Escrow on that date to the 1993 Bonds. Similarly, on April 1, 1995, State must allocate 3.318317% of the payments for, and receipts of, the untransferred portion of the two SLGS remaining in the 1990 Escrow on that date to the 1993 Bonds.[23]

The allocation of a ratable portion of the receipts from the SLGS in the 1990 Escrow requires multiplication of each remaining receipt (or, in the case of the transfers on April 1, 1995, the untransferred portion of each remaining receipt) by the appropriate transfer factor. Remember that an allocation of gross proceeds to investments is necessary for determining the yield on those investments. The yield on investments is the discount rate that results in the present value of the receipts equalling the purchase price of the investments. Therefore, a determination of the ratable portion of the payments for each of the SLGS (or purchase price) is also required.

The SLGS in the 1990 Escrow are actually purchased on October 15, 1990. For purposes of the transfer to the 1993 Bonds, however, they will be treated as purchased on the transfer dates at their then present values. Because the SLGS in the 1993 Escrow and the transferred portion of the SLGS in the 1990 Escrow are yield restricted nonpurpose investments, they will be treated as a single investment with a single yield. The computations required to take into account that these investments are purchased on different dates (the SLGS in the 1993 Escrow on July 1, 1993, and the transferred portion of the SLGS in the 1990 Escrow on each transfer date) involve a series of complex computations. However, there is another method of computing the yield on the yield

[23] See Table 12.

restricted nonpurpose investments (the SLGS in the 1993 Escrow and the transferred portion of the SLGS in the 1990 Escrow). This method requires computation of what is known as the "transferred proceeds penalty" and leads to the same answer as performing the series of complex computations. The transferred proceeds penalty computation is explained in paragraph v. below.

The University revenues that State deposits into the debt service fund for the 1993 Bonds are invested in short-term investments permitted under the documents for the 1993 Bonds. Under a specific tracing method of accounting, the replacement proceeds of the 1993 Bonds are allocated to these investments.

iv. Determine Whether any Temporary Period Exceptions Apply

Under § 148(c)(1), an issuer may invest bond proceeds in higher yielding investments for a "reasonable temporary period" until the proceeds are needed for the purpose for which the issue was issued.

The temporary period rules for refunding issues are contained in § 1.148-9(d). In general, the proceeds of a refunding issue (other than transferred proceeds) may be invested in higher yielding investments for a temporary period of 30 days from the issue date of the refunding issue.[24] Section 1.148-9(g) permits an issuer to waive the right to invest proceeds of a refunding issue in higher yielding investments during the permitted temporary period if the waiver occurs on or before the issue date of the refunding issue. On the issue date of the 1993 Bonds, State waives its right to invest the proceeds of the 1993 Bonds in higher yielding investments during the temporary period.[25] Therefore, no temporary period exception applies to the proceeds of the 1993 Bonds in the 1993 Escrow.

Section 1.148-9(d)(2)(iii) sets forth the temporary period for transferred proceeds. In general, the temporary period for transferred proceeds begins on the date of the transfer and ends on the date that, without regard to the discharge of the prior issue, the available temporary period for those proceeds would have ended had those proceeds remained proceeds of the prior issue. For example, if the proceeds of the prior issue were in a construction fund and were entitled to a 3-year temporary period and those proceeds transferred to a refunding issue during the 3-year temporary period, the transferred proceeds from the construction fund would be entitled to a temporary period equal to the remainder of the initial 3-year temporary period. Under § 1.103-14(e)(3) of the 1979

[24] Under § 1.148-9(d)(2)(ii), the temporary period for current refunding issues is 90 days.

[25] State makes this waiver to avoid having two classes of investments in the 1993 Escrow (e.g., "yield restricted nonpurpose investments" and "all other nonpurpose investments"). If there were two classes of investments in the 1993 Escrow, the yield on those two classes could not be blended. See § 1.148-5(b)(2).

regulations, the temporary period for the proceeds of the 1990 Bonds in the 1990 Escrow is 2 years and ends on October 14, 1992, which is before either of the two transfer dates. Therefore, no temporary period exception applies to the transferred proceeds from the 1990 Escrow.

Section 1.148-2(e)(5)(ii) provides that replacement proceeds in a bona fide debt service fund qualify for a temporary period of 13 months. As stated above, the debt service fund for the 1993 Bonds is a bona fide debt service fund. Therefore, the replacement proceeds in this fund are entitled to a 13-month temporary period.

v. If no Temporary Period Exceptions Apply, Determine Whether the Yield on the Investments is Materially Higher than the Yield on the Bonds

If any gross proceeds of an issue are not entitled to a temporary period exception from the yield restriction rules, the next step in the analysis is to determine whether the investments allocable to those proceeds are invested in higher yielding investments. Under § 1.148-2(d)(2)(i), "materially higher" is generally one-eighth of one percentage point (.125%). However, § 1.148-2(d)(2)(ii) provides that for investments in a refunding escrow and for replacement proceeds of an issue, "materially higher" is one-thousandth of one percentage point (.001%). This means that if the yield on the investments in a refunding escrow allocable to the gross proceeds of a refunding issue is more than .001% higher than the yield on the issue, then the issue violates the yield restriction rules of § 148(a), and the interest on the issue is not excluded from gross income under § 103(a).

The replacement proceeds in the debt service fund for the 1993 Bonds are entitled to the 13-month temporary period for bona fide debt service funds. Therefore, only the yield on the investments allocable to the proceeds in the 1993 Escrow and the transferred proceeds from the 1990 Escrow must be compared to the yield on the 1993 Bonds to determine whether the 1993 Bonds have met the yield restriction rules.

The yield on the 1993 Bonds is 4.912498%. In general, § 1.148-4(b)(1) provides that the yield on a fixed yield issue is the discount rate that, when used to compute the present value as of the issue date of all unconditionally payable payments of principal, interest, and fees for qualified guarantees on the issue, produces an amount equal to the aggregate issue price of the bonds of the issue. Both the bond insurance for the 1993 Bonds and the surety bond to fund the debt service reserve fund for the 1993 Bonds are qualified guarantees. Therefore, the premiums for these items must be taken into account to

compute the yield on the 1993 Bonds. The debt service schedule for the 1993 Bonds and the computation of yield on the 1993 Bonds are attached as Appendix D.[26]

Next, the yield on the SLGS in the 1993 Escrow and the portion of the SLGS in the 1990 Escrow that will become transferred proceeds of the 1993 Bonds must be computed. As stated above, § 1.148-5(b)(2) provides that yield restricted nonpurpose investments are treated as a single investment having a single yield, whether or not held concurrently. This means that the yield on the SLGS in the 1993 Escrow must be blended with the yield on the transferred portion of the SLGS in the 1990 Escrow.

Remember that the yield on the SLGS in the 1990 Escrow is 7.110979%, which is much higher than the yield on the 1993 Bonds. If these SLGS were sold and the proceeds reinvested in lower yielding SLGS, the lower yielding SLGS would not generate enough receipts to pay the debt service on the 1985 Bonds. Therefore, the SLGS in the 1990 Escrow cannot be sold, and the 1993 Escrow must contain enough "negative arbitrage" to compensate for the transfer of a portion of the SLGS yielding 7.110979%. Stated another way, the actual yield on the SLGS in the 1993 Escrow must be sufficiently lower than the yield on the 1993 Bonds so that the blended yield on the SLGS, including the transferred portion of the SLGS in the 1990 Escrow, is not materially higher than the yield on the 1993 Bonds. This blending is accomplished by computing what is known as the "transferred proceeds penalty."[27]

The amount of negative arbitrage that the 1993 Escrow must contain is determined by isolating the difference between the amount that the transferred portion of the SLGS in the 1990 Escrow actually earns (7.110979%) and the amount that the transferred portion of the SLGS in the 1990 Escrow would earn if the SLGS in the 1990 Escrow had a yield equal to the yield on the 1993 Bonds (4.912498%) during the period of time the transferred portion of the SLGS in the 1990 Escrow are allocated to the 1993 Bonds. One way to determine this amount is to:

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[26] See also, Appendix C of the 1996 Article, which describes how to compute the yield on a fixed yield issue, such as the 1993 Bonds.

[27] If an issuer had done a low-to-high refunding, which does not lower debt service payments but does permit release of the covenants of the prior bond documents, the reverse would also be true. For example, if the transferred investments had a yield of 5% and the refunding issue had a yield of 8%, the actual investments in the refunding issue would be permitted to earn more than 8% in order to blend up the combined yield on the yield restricted nonpurpose investments. The total amount of positive arbitrage permitted is known as the "transferred proceeds benefit."

(1) compute the present value on each transfer date of the remaining receipts from the SLGS in the 1990 Escrow using the yield on the 1990 Escrow as the discount rate;

(2) compute the present value on each transfer date of the remaining receipts from the SLGS in the 1990 Escrow using the yield on the 1993 Bonds as the discount rate;

(3) subtract the results for each transfer date computed in step (2) from the results computed in step (1);

(4) multiply the difference computed in step (3) by the percentage of the 1990 Escrow that should transfer on each transfer date;

(5) compute the present value of each of the results computed in step (4) to the issue date of the 1993 Bonds using the yield on the 1993 Bonds as the discount rate; and

(6) add the results computed in step (5).

These computations are set forth in the following table:

TABLE 13
Computation of Transferred Proceeds Penalty for the 1993 Escrow

Date	Net Escrow Receipts Subject to Transfer	PV of Receipts at 1990 Escrow Yield of 7.110979% to Transfer Date	PV of Receipts at 1993 Bond Yield of 4.912498% to Transfer Date	Difference	Percentage of Escrow to Transfer	Adjusted Difference	PV of Adj. Difference at 1993 Bond Yield of 4.912498% to 7/01/93
04/01/94	$ ---	$40,361,379.96	$41,975,693.05	$-1,614,313.09	3.026105%	$-48,850.82	$-47,104.69
10/01/94	1,713,041.65	---	---				
04/01/95	3,657,965.45	37,850,578.03	38,649,989.08	-799,411.05	3.217901%[28]	-25,724.26	-23,629.70
10/01/95	1,636,257.23	---	---				
04/01/96	38,895,539.40	---	---				
	$45,902,803.73						$-70,734.39

[28] On April 1, 1995, the SLGS in the 1993 Escrow will have paid a total of $2,930,000 of outstanding principal of the 1990 Bonds ($1,420,000 plus $1,510,000), which is 6.244006% of the $46,925,000 in outstanding principal to be paid. However, 3.026105% of the SLGS remaining in the 1990 Escrow will transfer on April 1, 1994. Therefore, only 3.217901% (6.244006% minus 3.026105%) of the SLGS in the 1990 Escrow should transfer on April 1, 1995.

Thus, the transferred proceeds penalty is $70,734.39. This amount may either be included as a receipt on July 1, 1993, in the 1993 Escrow or may be subtracted from the purchase price of the SLGS in the 1993 Escrow to compute the blended yield. The following table shows the computation of yield on the SLGS in the 1993 Escrow (including the transferred portion of the SLGS in the 1990 Escrow):

TABLE 14
Computation of Yield on SLGS in 1993 Escrow

Purchase Price = $53,548,965.61[29] Yield = 4.9120175%

Date	SLGS Receipts[30]	Present Value to 7/01/93 at 4.9120175%	Days (30/360)
10/01/93	$ 1,616,323.29	$ 1,596,833.05	90
04/01/94	3,036,376.80	2,927,854.66	270
10/01/94	1,571,576.80	1,479,081.23	450
04/01/95	3,081,664.31	2,830,768.22	630
10/01/95	1,523,255.73	1,365,697.04	810
04/01/96	3,128,274.79	2,737,467.74	990
10/01/96	1,471,177.34	1,256,526.66	1170
04/01/97	3,181,110.37	2,651,844.08	1350
10/01/97	1,414,735.78	1,151,084.35	1530
04/01/98	3,239,701.72	2,572,760.78	1710
10/01/98	1,353,981.59	1,049,469.22	1890
04/01/99	3,299,008.79	2,495,760.95	2070
10/01/99	1,288,902.87	951,704.82	2250
04/01/00	3,363,819.69	2,424,249.72	2430
10/01/00	1,218,850.76	857,349.19	2610
04/01/01	36,706,216.28	25,200,513.90	2790
	$70,494,976.91	$53,548,965.61	

Thus, the blended yield on the SLGS in the 1993 Escrow and the transferred portion of the SLGS in the 1990 Escrow is 4.9120175%. This yield is not higher than 4.9124980%, which is the yield on the 1993 Bonds computed in Table D-2 in Appendix D.

[29] This amount is equal to the purchase price of the SLGS in the 1993 Escrow from Table 9 ($53,619,700) minus the transferred proceeds penalty ($70,734.39).

[30] These amounts are the net escrow receipts from Table 10.

vi. Conclusion

All unspent proceeds of the 1993 Bonds either qualify for a temporary period exception to the yield restriction rules or are not invested at a materially higher yield than the yield on the 1993 Bonds. Therefore, the 1993 Bonds meet the yield restriction rules under § 148(a).

F. Rebate Rules Under § 148(f)

The rebate rules under § 148(f) require an issuer to pay to the United States any excess earnings from the investment of bond proceeds in nonpurpose investments over the amount those proceeds would have earned if they had been invested at the yield on the issue of bonds. Section 148(f) provides exceptions to this requirement. The unspent proceeds of the 1993 Bonds are in the debt service fund for the 1993 Bonds and in the 1993 Escrow.

Under § 148(f)(4)(A), amounts in a bona fide debt service fund are not taken into account for rebate if (1) no bond in the issue is a private activity bond, (2) the average maturity of the issue is at least 5 years, and (3) the issue is a fixed yield issue. Because the 1993 Bonds meet each of these requirements, the bona fide debt service fund meets this exception to rebate.

The unspent proceeds in the 1993 Escrow, including the transferred proceeds, are invested at a yield lower than the yield on the 1993 Bonds. Accordingly, there are no excess earnings from the investment of these unspent proceeds, and a rebate computation is unnecessary.

Therefore, the 1993 Bonds meet the rebate rules under § 148(f).

FOR INSTRUCTIONAL PURPOSES ONLY APPENDIX A

NEW ISSUE--BOOK ENTRY ONLY

In the opinion of X, Bond Counsel, under existing law, and assuming continuing compliance with certain covenants as described under "TAX EXEMPTION" herein, interest on the 1985 Bonds is not included in gross income of the owners thereof for federal and state income tax purposes and will not be treated as an item of tax preference in computing federal alternative minimum tax of individuals or corporations, but will be taken into account in computing the federal corporate alternative minimum tax, as more fully discussed under the heading "TAX EXEMPTION."

$50,000,000
STATE OF Z
UNIVERSITY REVENUE BONDS
(CLASSROOM BUILDINGS PROJECT),
SERIES 1985

Dated: December 1, 1985 **Due: April 1, as shown below**

The 1985 Bonds are being issued by State of Z ("State") to provide funds to finance the costs of constructing classroom buildings at University of Z ("University") and to pay costs of issuance of the 1985 Bonds, as more fully described herein. See "THE IMPROVEMENTS" herein.

Interest on the 1985 Bonds is payable on April 1, 1986, and semiannually thereafter on October 1 and April 1 of each year. Principal is payable on the dates set forth below. The 1985 Bonds are being issued in fully registered form and will be registered in the name of A Nominee, as nominee of B Trust Company, New York, New York ("B"). B will act as securities depository of the 1985 Bonds. Individual purchases of interests in the 1985 Bonds will be made in book-entry form only, in the principal amount of $5,000 or any integral multiple thereof. Purchasers of such interests will not receive certificates representing their interests in the 1985 Bonds. Principal of and interest on the 1985 Bonds are payable directly by C, as trustee (the "Trustee"), to B, which is obligated in turn to remit such principal and interest to B Participants for subsequent disbursement to the Beneficial Owners of the 1985 Bonds, as described herein. See "BOOK-ENTRY SYSTEM" herein.

The 1985 Bonds are subject to optional and mandatory redemption prior to their stated maturity, as more fully described herein.

Payment of the principal of and the interest on the 1985 Bonds when due will be guaranteed by a municipal bond insurance policy to be issued simultaneously with the delivery of the 1985 Bonds by D (the "Insurer").

The 1985 Bonds are special obligations of State, payable solely from Revenues of University and are secured by a pledge of Revenues; provided, however, that out of Revenues first there shall be applied all sums required for the payment of Maintenance and Operation Costs. The 1985 Bonds are issued on a parity with State's Parity Debt, heretofore or hereafter issued, as more fully described herein. See "SOURCES OF PAYMENT AND SECURITY" herein.

NEITHER THE FAITH AND CREDIT OF UNIVERSITY OR STATE NOR THE TAXING POWER OF STATE IS PLEDGED TO THE 1985 BONDS. THE 1985 BONDS DO NOT CONSTITUTE A DEBT OF UNIVERSITY OR STATE WITHIN THE MEANING OF ANY CONSTITUTIONAL OR STATUTORY DEBT LIMITATION OR RESTRICTION. UNIVERSITY HAS NO TAXING POWER.

Maturity Schedule
$15,530,000 Serial Bonds

Maturity (April 1)	Principal Amounts	Interest Rates	Yields	Maturity (April 1)	Principal Amounts	Interest Rates	Yields
1987	$1,125,000	6.600%	6.600%	1992	$1,565,000	7.300%	7.300%
1988	1,200,000	6.700	6.700	1993	1,680,000	7.500	7.500
1989	1,280,000	6.800	6.800	1994	1,805,000	7.700	7.700
1990	1,370,000	6.900	6.900	1995	1,945,000	7.900	7.974
1991	1,460,000	7.100	7.100	1996	2,100,000	8.100	8.243

$34,470,000, 9.00% Term Bonds, Due April 1, 2006, Price: 100%

(Accrued interest to be added)

This cover page contains only a brief description of the 1985 Bonds and the security therefor. It is not a summary of material information with respect to the 1985 Bonds. Investors should read the entire Official Statement to obtain information necessary to make an informed investment decision.

The 1985 Bonds will be offered when, as and if issued and received by the Underwriters, subject to the approval of validity by X, Bond Counsel. Certain legal matters will be passed on for State by Law Firm 1. Certain legal matters will be passed upon for the Underwriters by their counsel, Law Firm 2. It is anticipated that the 1985 Bonds, in book-entry form, will be available for delivery to B in New York, New York on or about December 15, 1985.

Underwriting Firm

Dated: December 5, 1985

FOR INSTRUCTIONAL PURPOSES ONLY APPENDIX B

NEW ISSUE--BOOK ENTRY ONLY

In the opinion of X, Bond Counsel, under existing law, and assuming continuing compliance with certain covenants as described under "TAX EXEMPTION" herein, interest on the 1990 Bonds is not included in gross income of the owners thereof for federal and state income tax purposes and will not be treated as an item of tax preference in computing federal alternative minimum tax of individuals or corporations, but will be taken into account in computing the federal corporate alternative minimum tax, as more fully discussed under the heading "TAX EXEMPTION."

$50,085,000
STATE OF Z
UNIVERSITY REVENUE REFUNDING BONDS, SERIES 1990

Dated: October 1, 1990 **Due: April 1, as shown below**

The 1990 Bonds are being issued by State of Z ("State") to provide funds (i) to refund in advance of maturity all of the outstanding University Revenue Bonds (Classroom Buildings Project), Series 1985 (the "Bonds Being Refunded") and (ii) to pay costs relating to the issuance of the 1990 Bonds, as more fully described herein. See "PLAN OF ADVANCE REFUNDING" herein.

Interest on the 1990 Bonds is payable on April 1, 1991, and semiannually thereafter on October 1 and April 1 of each year. Principal is payable on the dates set forth below. The 1990 Bonds are being issued in fully registered form and will be registered in the name of A Nominee, as nominee of B Trust Company, New York, New York ("B"). B will act as securities depository of the 1990 Bonds. Individual purchases of interests in the 1990 Bonds will be made in book-entry form only, in the principal amount of $5,000 or any integral multiple thereof. Purchasers of such interests will not receive certificates representing their interests in the 1990 Bonds. Principal of and interest on the 1990 Bonds are payable directly by C, as trustee (the "Trustee"), to B, which is obligated in turn to remit such principal and interest to B Participants for subsequent disbursement to the Beneficial Owners of the 1990 Bonds, as described herein. See "BOOK-ENTRY SYSTEM" herein.

The 1990 Bonds are subject to optional and mandatory redemption prior to their stated maturity, as more fully described herein.

Payment of the principal of and the interest on the 1990 Bonds when due will be guaranteed by a municipal bond insurance policy to be issued simultaneously with the delivery of the 1990 Bonds by D (the "Insurer").

The 1990 Bonds are special obligations of State, payable solely from Revenues of University of Z ("University") and are secured by a pledge of Revenues; provided, however, that out of Revenues first there shall be applied all sums required for the payment of Maintenance and Operation Costs. The 1990 Bonds are issued on a parity with State's Parity Debt, heretofore or hereafter issued, as more fully described herein. See "SOURCES OF PAYMENT AND SECURITY" herein.

NEITHER THE FAITH AND CREDIT OF UNIVERSITY OR STATE NOR THE TAXING POWER OF STATE IS PLEDGED TO THE 1990 BONDS. THE 1990 BONDS DO NOT CONSTITUTE A DEBT OF UNIVERSITY OR STATE WITHIN THE MEANING OF ANY CONSTITUTIONAL OR STATUTORY DEBT LIMITATION OR RESTRICTION. UNIVERSITY HAS NO TAXING POWER.

Maturity Schedule
$27,945,000 Serial Bonds

Maturity (April 1)	Principal Amounts	Interest Rates	Yields	Maturity (April 1)	Principal Amounts	Interest Rates	Yields
1991	$ 565,000	6.00%	6.00%	1999	$1,945,000	6.70%	6.70%
1992	1,260,000	6.10	6.10	2000	2,075,000	6.75	6.75
1993	1,335,000	6.20	6.20	2001	2,215,000	6.80	6.80
1994	1,420,000	6.30	6.30	2002	2,365,000	6.85	6.90
1995	1,510,000	6.40	6.40	2003	2,525,000	6.90	6.95
1996	1,605,000	6.50	6.50	2004	2,700,000	6.95	7.00
1997	1,710,000	6.60	6.60	2005	2,890,000	7.00	7.05
1998	1,825,000	6.65	6.65				

$22,140,000, 7.05% Term Bonds, Due April 1, 2011, Price: 98.929%

(Accrued interest to be added)

This cover page contains only a brief description of the 1990 Bonds and the security therefor. It is not a summary of material information with respect to the 1990 Bonds. Investors should read the entire Official Statement to obtain information necessary to make an informed investment decision.

The 1990 Bonds will be offered when, as and if issued and received by the Underwriters, subject to the approval of validity by X, Bond Counsel. Certain legal matters will be passed on for State by Law Firm 1. Certain legal matters will be passed upon for the Underwriters by their counsel, Law Firm 2. It is anticipated that the 1990 Bonds, in book-entry form, will be available for delivery to B in New York, New York on or about October 15, 1990.

Underwriting Firm

Dated: October 5, 1990

FOR INSTRUCTIONAL PURPOSES ONLY — APPENDIX C

NEW ISSUE--BOOK ENTRY ONLY

In the opinion of X, Bond Counsel, under existing law, and assuming continuing compliance with certain covenants as described under "TAX EXEMPTION" herein, interest on the 1993 Bonds is not included in gross income of the owners thereof for federal and state income tax purposes and will not be treated as an item of tax preference in computing federal alternative minimum tax of individuals or corporations, but will be taken into account in computing the federal corporate alternative minimum tax, as more fully discussed under the heading "TAX EXEMPTION."

$54,950,000
STATE OF Z
UNIVERSITY REVENUE REFUNDING BONDS, SERIES 1993

Dated: July 1, 1993 **Due: April 1, as shown below**

The 1993 Bonds are being issued by State of Z ("State") to provide funds (i) to refund in advance of maturity all of the outstanding University Revenue Refunding Bonds, Series 1990 (the "Bonds Being Refunded") and (ii) to pay costs relating to the issuance of the 1993 Bonds, as more fully described herein. See "PLAN OF ADVANCE REFUNDING" herein.

Interest on the 1993 Bonds is payable on April 1, 1994, and semiannually thereafter on October 1 and April 1 of each year. Principal is payable on the dates set forth below. The 1993 Bonds are being issued in fully registered form and will be registered in the name of A Nominee, as nominee of B Trust Company, New York, New York ("B"). B will act as securities depository of the 1993 Bonds. Individual purchases of interests in the 1993 Bonds will be made in book-entry form only, in the principal amount of $5,000 or any integral multiple thereof. Purchasers of such interests will not receive certificates representing their interests in the 1993 Bonds. Principal of and interest on the 1993 Bonds are payable directly by C, as trustee (the "Trustee"), to B, which is obligated in turn to remit such principal and interest to B Participants for subsequent disbursement to the Beneficial Owners of the 1993 Bonds, as described herein. See "BOOK-ENTRY SYSTEM" herein.

The 1993 Bonds are subject to optional and mandatory redemption prior to their stated maturity, as more fully described herein.

Payment of the principal of and the interest on the 1993 Bonds when due will be guaranteed by a municipal bond insurance policy to be issued simultaneously with the delivery of the 1993 Bonds by D (the "Insurer").

The 1993 Bonds are special obligations of State, payable solely from Revenues of University of Z ("University") and are secured by a pledge of Revenues; provided, however, that out of Revenues first there shall be applied all sums required for the payment of Maintenance and Operation Costs. The 1993 Bonds are issued on a parity with State's Parity Debt, heretofore or hereafter issued, as more fully described herein. See "SOURCES OF PAYMENT AND SECURITY" herein.

NEITHER THE FAITH AND CREDIT OF UNIVERSITY OR STATE NOR THE TAXING POWER OF STATE IS PLEDGED TO THE 1993 BONDS. THE 1993 BONDS DO NOT CONSTITUTE A DEBT OF UNIVERSITY OR STATE WITHIN THE MEANING OF ANY CONSTITUTIONAL OR STATUTORY DEBT LIMITATION OR RESTRICTION. UNIVERSITY HAS NO TAXING POWER.

Maturity Schedule
$30,510,000 Serial Bonds

Maturity (April 1)	Principal Amounts	Interest Rates	Yields	Maturity (April 1)	Principal Amounts	Interest Rates	Yields
1994	$1,300,000	2.70%	2.70%	2001	$2,205,000	4.25%	4.25%
1995	1,770,000	3.15	3.15	2002	2,300,000	4.35	4.35
1996	1,825,000	3.45	3.45	2003	2,400,000	4.40	4.40
1997	1,885,000	3.70	3.70	2004	2,505,000	4.50	4.50
1998	1,955,000	3.95	3.95	2005	2,615,000	4.60	4.60
1999	2,035,000	4.05	4.05	2006	2,735,000	4.70	4.80
2000	2,115,000	4.15	4.15	2007	2,865,000	4.80	4.90

$24,440,000, 5.00% Term Bonds, Due April 1, 2014, Price: 98.720%

This cover page contains only a brief description of the 1993 Bonds and the security therefor. It is not a summary of material information with respect to the 1993 Bonds. Investors should read the entire Official Statement to obtain information necessary to make an informed investment decision.

The 1993 Bonds will be offered when, as and if issued and received by the Underwriters, subject to the approval of validity by X, Bond Counsel. Certain legal matters will be passed on for State by Law Firm 1. Certain legal matters will be passed upon for the Underwriters by their counsel, Law Firm 2. It is anticipated that the 1993 Bonds, in book-entry form, will be available for delivery to B in New York, New York on or about July 1, 1993.

Underwriting Firm

Dated: June 21, 1993

APPENDIX D

Computing the yield on the 1993 Bonds

The following table shows the debt service schedule for the 1993 Bonds:

TABLE D-1
1993 Bonds
Debt Service Schedule

Date	Principal	Interest	Debt Service	Annual Debt Service
04/01/94	$ 1,300,000.00	$ 1,868,563.13	$ 3,168,563.13	$3,168,563.13
10/01/94	---	1,228,158.75	1,228,158.75	---
04/01/95	1,770,000.00	1,228,158.75	2,998,158.75	4,226,317.50
10/01/95	---	1,200,281.25	1,200,281.25	---
04/01/96	1,825,000.00	1,200,281.25	3,025,281.25	4,225,562.50
10/01/96	---	1,168,800.00	1,168,800.00	---
04/01/97	1,885,000.00	1,168,800.00	3,053,800.00	4,222,600.00
10/01/97	---	1,133,927.50	1,133,927.50	---
04/01/98	1,955,000.00	1,133,927.50	3,088,927.50	4,222,855.00
10/01/98	---	1,095,316.25	1,095,316.25	---
04/01/99	2,035,000.00	1,095,316.25	3,130,316.25	4,225,632.50
10/01/99	---	1,054,107.50	1,054,107.50	---
04/01/00	2,115,000.00	1,054,107.50	3,169,107.50	4,223,215.00
10/01/00	---	1,010,221.25	1,010,221.25	---
04/01/01	2,205,000.00	1,010,221.25	3,215,221.25	4,225,442.50
10/01/01	---	963,365.00	963,365.00	---
04/01/02	2,300,000.00	963,365.00	3,263,365.00	4,226,730.00
10/01/02	---	913,340.00	913,340.00	---
04/01/03	2,400,000.00	913,340.00	3,313,340.00	4,226,680.00
10/01/03	---	860,540.00	860,540.00	---
04/01/04	2,505,000.00	860,540.00	3,365,540.00	4,226,080.00
10/01/04	---	804,177.50	804,177.50	---
04/01/05	2,615,000.00	804,177.50	3,419,177.50	4,223,355.00
10/01/05	---	744,032.50	744,032.50	---
04/01/06	2,735,000.00	744,032.50	3,479,032.50	4,223,065.00
10/01/06	---	679,760.00	679,760.00	---
04/01/07	2,865,000.00	679,760.00	3,544,760.00	4,224,520.00
10/01/07	---	611,000.00	611,000.00	---
04/01/08	3,000,000.00	611,000.00	3,611,000.00	4,222,000.00
10/01/08	---	536,000.00	536,000.00	---
04/01/09	3,150,000.00	536,000.00	3,686,000.00	4,222,000.00
10/01/09	---	457,250.00	457,250.00	---
04/01/10	3,310,000.00	457,250.00	3,767,250.00	4,224,500.00
10/01/10	---	374,500.00	374,500.00	---
04/01/11	3,475,000.00	374,500.00	3,849,500.00	4,224,000.00
10/01/11	---	287,625.00	287,625.00	---
04/01/12	3,650,000.00	287,625.00	3,937,625.00	4,225,250.00
10/01/12	---	196,375.00	196,375.00	---
04/01/13	3,830,000.00	196,375.00	4,026,375.00	4,222,750.00
10/01/13	---	100,625.00	100,625.00	---
04/01/14	4,025,000.00	100,625.00	4,125,625.00	4,226,250.00
	$54,950,000.00	$32,707,368.13	$87,657,368.13	$87,657,368.13

The following table shows the computation of yield on the 1993 Bonds:

TABLE D-2
Computation of Yield on 1993 Bonds

Issue Price = $54,582,453.45[1] Yield = 4.9124980%

Date	Issue Payments	Present Value to 7/01/93 at 4.9124980%	Days (30/360)
07/01/93	$ 126,801.90[2]	$ 126,801.90	0
07/01/93	262,972.10[3]	262,972.10	0
04/01/94	3,168,563.13	3,055,305.81	270
10/01/94	1,228,158.75	1,155,868.36	450
04/01/95	2,998,158.75	2,754,038.72	630
10/01/95	1,200,281.25	1,076,118.23	810
04/01/96	3,025,281.25	2,647,306.77	990
10/01/96	1,168,800.00	998,252.17	1170
04/01/97	3,053,800.00	2,545,670.56	1350
10/01/97	1,133,927.50	922,589.37	1530
04/01/98	3,088,927.50	2,452,971.04	1710
10/01/98	1,095,316.25	848,957.18	1890
04/01/99	3,130,316.25	2,368,078.08	2070
10/01/99	1,054,107.50	778,312.94	2250
04/01/00	3,169,107.50	2,283,851.54	2430
10/01/00	1,010,221.25	710,573.40	2610
04/01/01	3,215,221.25	2,207,317.76	2790
10/01/01	963,365.00	645,515.10	2970
04/01/02	3,263,365.00	2,134,237.47	3150
10/01/02	913,340.00	583,003.44	3330
04/01/03	3,313,340.00	2,064,268.52	3510
10/01/03	860,540.00	523,278.38	3690
04/01/04	3,365,540.00	1,997,459.75	3870
10/01/04	804,177.50	465,839.97	4050
04/01/05	3,419,177.50	1,933,160.99	4230
10/01/05	744,032.50	410,581.93	4410
04/01/06	3,479,032.50	1,873,820.38	4590
10/01/06	679,760.00	357,344.11	4770
04/01/07	3,544,760.00	1,818,776.80	4950
10/01/07	611,000.00	305,981.61	5130
04/01/08	3,611,000.00	1,764,993.67	5310
10/01/08	536,000.00	255,706.64	5490
04/01/09	3,686,000.00	1,716,303.51	5670
10/01/09	457,250.00	207,804.06	5850
04/01/10	3,767,250.00	1,671,037.89	6030
10/01/10	374,500.00	162,134.42	6210
04/01/11	3,849,500.00	1,626,631.87	6390
10/01/11	287,625.00	118,624.16	6570
04/01/12	3,937,625.00	1,585,047.94	6750
10/01/12	196,375.00	77,153.53	6930
04/01/13	4,026,375.00	1,543,993.14	7110
10/01/13	100,625.00	37,661.58	7290
04/01/14	4,125,625.00	1,507,106.66	7470
	$88,047,142.13	$54,582,453.45	

[1] This amount is from Table 7.

[2] This amount is the premium paid for the surety bond, as shown in Table 8.

[3] This amount is the premium paid for the bond insurance, as shown in Table 8.