Appendix A: Tax-Equivalency Worksheet

This work sheet can be used to replicate the Uniform Bank Performance Report tax-equivalency adjustment.

General Information

This Tax-Equivalency Worksheet is divided into four parts. Part I determines the amount of tax-exempt income that is available for tax benefit by comparing it to taxable income. Part II estimates the tax benefit for this amount of available tax-exempt income by determining the bank's marginal tax rate and multiplying by a percentage based on that tax rate. Part III describes the usage of this estimated tax benefit in the UBPR, in earning ratios, dollar amounts, and asset yield ratios. The "Definition of Preliminary Calculations" section Describes the calculation of items for Part I using Report of Income items.

PART I: Determine the Amount of Tax-Exempt Income Available for Tax Benefit

Preliminary Calculations

Calculate the following items according to the instructions in the last section of the Appendix:

I.	tax-exempt income (write the amount here and at "Final Part I Calculation, "line b:	______________ ;
ii.	pretax *taxable income:*	______________ ;
iii.	total pretax income, *including* tax-exempt income:	______________ ;
iv.	*total* applicable income taxes:	______________ ;
v.	100% non-deductible interest expense:	______________ .

Alternatives for Part I—(Only *one* alternative is possible for any bank.)

Alternative 1

If the bank does not have any tax-exempt income, the tax-equivalent adjustment equals zero (0) and no further calculations are necessary. Otherwise, proceed to the next alternative. ______________

Alternative 2

If pretax taxable income (preliminary calculation ii) *exceeds* tax-exempt income, or if pretax taxable income is greater than or equal to zero, write the amount of tax-exempt income here and at "Final Part I Calculation," line a, and proceed from there; otherwise, proceed to the next alternative. ______________

Alternative 3

If pretax taxable income (preliminary calculation ii) is less than zero *and* total pretax income (preliminary calculation iii) exceeds zero *and* total applicable income taxes (preliminary calculation iv) is less than zero (e.g., the bank reports tax credits), perform the following calculation; otherwise, proceed to the next alternative.

Multiply the total applicable income taxes (preliminary calculation iv) by -1.67. Add the result to total pretax income (preliminary calculation iii). Write the amount here and at "Final Part I Calculation," line a, and proceed from there. ______________

Alternative 4

If total pretax income (preliminary calculation iii) is less than or equal to zero and total applicable income taxes (preliminary calculation iv) is less than zero, then perform the following calculation; otherwise, proceed to the next alternative.

Multiply the total applicable income taxes (preliminary calculation iv) by negative 1.67 (-1.67) for periods beginning in 1987, and by negative 2 (-2) for prior periods. Write the result here and at "Final Part I Calculation," line a, and proceed from there. ______________

Alternative 5

If total pretax income (preliminary calculation iii) is less than or equal to zero and total applicable income taxes (preliminary calculation iv) are greater than or equal to zero, then perform the following calculations; otherwise, proceed to the next alternative. ______________

Final Part I Calculation

a. Amount calculated using one of the six above alternatives: ______________

b. Amount of tax-exempt income (preliminary calculation I): ______________

Write the *lesser* of a. or b. here: ______________

Subtract the amount of non-deductible interest expense (preliminary calculation vi): – ______________

____

If the result is zero or less, there is no tax-exempt income available for tax benefit. If the result is greater than zero, proceed with Part II using that amount.

PART II: Estimate the Tax Benefit for Available Tax-Exempt Income from Part I.

The tax benefit for the amount of tax-exempt income available for such benefit is estimated by: Calculating the annualized amount of net taxable income plus available tax-exempt income; determining the marginal income tax rate for this adjusted income figure; calculating the tax benefit based on the marginal tax rate.

A. Calculating Annualized Taxable Income Plus Available Tax-Exempt Income

In order to estimate the tax benefit of tax-exempt income, it is first necessary to calculate what the annalized taxable income would be if available tax-exempt income were included. Up to this point, all figures have been on a year-to-date basis. Perform the following calculation to determine annualized taxable income for tax-equivalency purposes:

1. Add: pretax taxable income (preliminary calculation ii): ______________

   Plus: available tax-exempt income from Part I: + ______________

   Equals: year-to-date adjusted income: ______________

2. Multiply the above result by the appropriate annualization factor:

Reporting Period Ending	Annualization Factor
March 31, 198x	4
June 30, 198x	2
September 30, 198x	1.333
December 31, 198x	1

x ______________

Equals: annualized amount of taxable income plus available tax-exempt income ______________

B. Calculating Estimated Tax Benefit:

1. Find the appropriate tax benefit factor in the table below, based on the annualized income calculated above.

	1986 or earlier		1987		1988 or later	
Annualized Income from Part II A	Marginal Tax Rate (Percent)	Tax Benefit Factor	Marginal Tax Rate (Percent)	Tax Benefit Factor	Marginal Tax Rate (Percent)	Tax Benefit Factor
up to 25	15	.18	15	.18	15	.18
25–50	18	.22	16.5	.20	15	.18
50–75	30	.43	27.5	.38	25	.33
75–100	40	.67	37.0	.59	34	.52
over 100	46	.85	40.0	.67	34	.52

2. Enter the available tax-exempt income from Part I here: ______________

   Multiply by the tax benefit factor from the above table: x ______________

   Estimated Tax Benefit (year-to-date): ______________

PART III: Using the Estimated Tax Benefit in the UBPR

The estimated tax benefit calculated in Part II, which is based on total tax-exempt income, is allocated back to tax-exempt loan & lease income and tax-exempt securities income.

The tax benefit is then added to pre-tax income and used in earnings presentations and yield ratios in the UBPR.

A. Allocating Tax Benefit to Loans & Leases and Securities:

Assign the estimated tax benefit from Part II back to the two sources of tax-exempt income as follows:

1. Calculate the ratio of tax-exempt loan & lease income to total tax-exempt income:

   Tax-exempt loan & lease income (see "definitions of Preliminary Calculations, Paragraph i): ______________

   Divided by total tax-exempt income (preliminary calculation I): ÷ ______________

   Equals: ratio of tax-exempt loan & lease income: ______________

2. Multiply the estimated tax benefit: ______________

   By the ratio calculated in 1.: x ______________

   Equals estimated tax benefit for tax-exempt loan & lease income: ______________

3. From the total estimated tax benefit: ______________

   Subtract: loan & lease tax benefit from 2.: ______________

   Equals: estimated tax benefit for tax-exempt securities income: ______________

Note: The 100% non-deductible interest expanse incurred to carry tax-exempt obligations, reported beginning with the March, 1987 reporting period, is reported in total for all types of tax-exempt obligations. This allocation of tax benefit back to loan & lease income and securities income may be disproportionate if the reported non-deductible interest expense is disproportionate between these two types of tax-exempt obligations.

B. Using and Presenting Tax Benefits in the UBPR

1. The tax benefits is allocated in A. above, are presented in the income dollar amounts on UBPR Page 02. For other than December reporting periods, these figures must be de-annualized by dividing by the annualization factor in Part II. They are carried through the pre-tax income and expense trail, and are subtracted back out when applicable income taxes are netted out.
2. The tax-equivalent earning amounts, annualized, are used in the earnings ratios that appear on UBPR Page 01.
3. The book and tax-equivalent income figures for loans & leases and securities are used in the yield ratios that appear on UBPR Page 03.

Definitions of Preliminary Calculations

I. Tax-exempt income:

Add:

Tax-exempt loan & lease income: __________
(Interest and fee income on loan obligations of states and political subdivisions in the United States, plus tax-exempt lease income; using the Report of Income:

	3/84-12/86	After 12/86
Form 031:	1a(1)(h)+M2	1a(1)(h)(2)+1b(2)
Form 032:	1a(6)+M2	1a(6)(b)+1b(2)
Form 033:	M7+M2	M5+1b(2)
Form 034:	M3	M3

Tax-exempt securities income:
(Interest and dividends on tax-exempt obligations issued by states and political subdivisions in the United States; using the Report of Income: + __________

	3/84–12/86	After 12/86
Forms 031, 032, 033:	1d(2)	1d(2)(b)
Forms 034:	M2 or 1d(1)	1d(1)(b)

Equals: Total tax exempt income: __________

These figures are presented on UBPR Page 02.

ii. Pretax Taxable Income
Income (loss) before income taxes, extraordinary items and other adjustments (Report of Income item 8): __________

Plus: Extraordinary items and other adjustments, gross of income taxed (Report of Income item 11a): __________

Plus: Interest expense incurred to carry tax-exempt obligations acquired after August 7, 1986, that is not deductible for federal income tax purposes (Report of Income item M1 beginning 3/87; prior to 3/87, use zero): __________

Less: Tax-exempt income (preliminary calculation I.): – __________

Equals: total pretax taxable income: ______________

iii. Total Pretax Income

Tax-exempt income (preliminary calculation I.): ______________

Plus: Pretax taxable income (preliminary calculation ii.): ______________

Equals: Total pretax income: ______________

iv. Total Applicable Income Taxes:
Applicable income taxes (Report of Income item 9): ______________

Plus: Applicable income taxes on extraodinary items and other adjustment (Report of Income item 11a): ______________

Equals: Total applicable income taxes: ______________

v. 100% Nondeductible Interest Expense:

Interest expense incurred to carry tax-exempt securities, loans, and leases acquired after August 7, 1986, that is not deductible for federal income tax purposes (report of Income item M1 beginning 3/87; prior to 3/87, use zero); ______________