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Office of the President

PRESIDENT'S ADVISORY
PANEL
ON FEDERAL TAX REFORM

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The President's Advisory Panel on Tax Reform
1440 New York Avenue NW
Suite 2100
Washington, D.C. 20220

Dear Advisory Panel Members:

On behalf of the American Forest & Paper Association, I am submitting comments on proposals to improve the U.S. tax system.

The submission and attached studies describe the significant tax disadvantage faced by U.S. companies in paper manufacturing and timber production relative to the tax systems of our major competing nations. Analysis is presented illustrating the extent to which the U.S. tax system must be reformed to merely make the U.S. tax system *moderately* competitive with the tax systems of our major competitors. Significant improvement of the U.S. tax system is necessary if American companies and American workers are to compete in the global marketplace.

I would be happy to provide any further information that may be helpful to you in your work and request the opportunity to testify at one of your upcoming public hearings in May in Washington, D.C.

Sincerely yours,

W. Henson Moore
President and Chief Executive Officer

Enclosures

**Submission by American Forest & Paper Association
Cover Page**

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April 29, 2005

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Organizations and Associations

Achieving Tax Competitiveness: Options for Tax Reform
Submission to the President's Advisory Panel on Federal Tax Reform

Submitted by the American Forest & Paper Association

Summary

U.S. manufacturing is at the heart of a vibrant economy that has produced the highest living standards in the world. But today, manufacturing faces serious domestic and international challenges which, if not overcome, will lead to reduced economic growth and ultimately a decline in living standards for future generations of Americans.

The U.S. forest products industry is no exception to the challenges facing U.S. manufacturing industries. Today, the forest products industry is facing serious threats to its continued viability. U.S. paper mills and wood products mills are permanently closing their doors, resulting in a loss of American jobs. At the same time, our foreign competitors, facing generally lower taxes, are expanding their capacity.

An April 2005 report by PricewaterhouseCoopers on behalf of the American Forest & Paper Association examined the effect of the U.S. income tax system—both the individual income tax and the corporate income tax—on the competitiveness of corporations in the U.S. paper manufacturing and timber producing sectors.

As described in this submission, the report found that U.S. income taxes are the second-least favorable of the major competing nations. U.S. tax rules consistently raise disadvantages for U.S. corporate investments relative to the tax rules in most of the competing nations. The overall effect is that U.S. companies cannot profitably undertake certain investments that foreign competitors can undertake because U.S. investors would be left with too little after paying tax whereas foreign investors would enjoy a sufficient return after paying tax. Because U.S. companies compete against foreign companies in capital and product markets both at home and abroad, the U.S. tax disadvantage ultimately limits the degree to which U.S. companies may successfully challenge foreign competitors.

Significant reform of the U.S. tax system is necessary in order for the U.S. tax system to not excessively hinder U.S. competitiveness. Options that should be considered for reform include significant rate reduction at both the corporate and individual levels and more advantageous rules for recovering the costs of business investment. The United States should also consider fully exempting from tax the foreign income of U.S.-headquartered multinational corporations, as is the practice of many of our trading partners with respect to the foreign income of multinational corporations headquartered within their countries.

A competitive, reformed tax system holds significant promise for the American forest products industry and can provide the best opportunity for American workers to attain ever higher living standards.

Achieving Tax Competitiveness: Options for Tax Reform

U S manufacturing is at the heart of a vibrant economy that has produced the highest living standards in the world. But today, manufacturing faces serious domestic and international challenges which, if not overcome, will lead to reduced economic growth and ultimately a decline in living standards for future generations of Americans.

The U S. forest products industry is no exception to the challenges facing U.S. manufacturing industries. Today, the forest products industry is facing serious threats to its continued viability. Since 1998, 98 paper mills and 142 wood products mills have permanently closed their doors, resulting in the loss of nearly 140,000 jobs. At the same time, our foreign competitors, facing generally lower taxes, are expanding their capacity.

An April 2005 report by PricewaterhouseCoopers on behalf of the American Forest & Paper Association examined the effect of the U.S. income tax system—both the individual income tax and the corporate income tax—on the competitiveness of corporations in the U.S. paper manufacturing and timber producing sectors. The report, *Taxes in Competing Nations: Their Effects on Investments in Paper Manufacturing and Timber Production*, and a companion policy paper providing reform options, *Reducing Tax Disincentives for Corporate Investments in Paper Manufacturing and Timber Production*, are included in this submission. The report compared income taxes in the United States with income taxes in seven other competing countries in terms of facilitating or inhibiting investments in paper manufacturing and timber production. The seven foreign countries selected—Brazil, Canada, China, Finland, Germany, Indonesia,

and Russia—compete aggressively with U.S. companies in paper manufacturing and timber production.

The report found that U.S. income taxes are the second-least favorable of the major competing nations. U.S. tax rules consistently raise disadvantages for U.S. corporate investments relative to the tax rules in most of the competing nations. The overall effect is that U.S. companies cannot profitably undertake certain investments that foreign competitors can undertake because U.S. investors would be left with too little after paying tax whereas foreign investors would enjoy a sufficient return after paying tax. Because U.S. companies compete against foreign companies in capital and product markets both at home and abroad, the U.S. tax disadvantage ultimately limits the degree to which U.S. companies may successfully challenge foreign competitors.

Significant reform of the U.S. tax system is necessary in order for the U.S. tax system to not excessively hinder U.S. competitiveness. Options that should be considered for reform include significant tax rate reduction for businesses at both the corporate and individual levels. Also, restoring a differential in the tax paid by corporations on capital gains income relative to ordinary income would help the competitive position of U.S. timber companies. While capital gains income is insignificant for many manufacturers, most income from the sale of timber qualifies as capital gain income.

More advantageous rules should be implemented for recovering the costs of business investment, including expensing for business assets. Furthermore, the corporate

alternative minimum tax, an additional tax burden placed on corporations that mandates even slower depreciation allowances, should be repealed.

The United States should also consider exempting foreign income from the active conduct of a trade or business as is the practice of many of our trading partners. Further, U.S. companies may be currently disadvantaged with respect to their exports (and face heightened import competition) by the absence of border tax adjustments for U.S. income taxes, while border tax adjustments for value added taxes are made by our foreign competitors. A reformed system should be amenable to World Trade Organization rules permitting border tax adjustments.

The Competitiveness Rankings

The specific rankings of the competing nations are displayed in **Exhibits 1 and 2**. The rankings refer to income taxes levied on corporate income, first the tax paid by the corporation and second the tax paid by shareholders and lenders as a result of their financing the investments that generated the corporate income. The rankings are based on laws in effect for 2005, except for the United States where it was assumed the fully-phased in nine-percent deduction for qualified production activities applied.

In general, the United States and Canada have the least competitive income taxes, while Brazil, China, Indonesia, and Russia have the most competitive income taxes. Finland and Germany are closer to the least competitive pair.

As explained in more detail in the accompanying report, the rankings and conclusions are derived by computing effective tax rates in the competing countries. An effective tax rate is the percentage of income that is collected in income taxes over the

life of a particular investment project—namely, the project that just barely generates the minimum rate of return required by investors, measured after taxes and inflation

Other rankings included in the report show that U.S. multinational corporations in paper manufacturing operating abroad are similarly disadvantaged relative to multinational corporations headquartered in the competing nations.

As noted in the report, the analysis does not fully account for several features unique to the U.S. tax system that serve to further increase tax burdens on U.S. corporations. These include the corporate alternative minimum tax, which provides for slower recovery of the costs of business investments, rules requiring the capitalization of indirect costs in inventory, and rules which serve to reduce the crediting of foreign taxes.

Options for Reform

A number of options for reform are considered in the accompanying policy paper to reduce the U.S. effective tax rate to that of the median, or middle-ranked, of the competing nations. These reforms are indicative of the extent of change necessary to make the U.S. tax system simply *moderately* competitive with the tax systems of the competing nations in paper manufacturing and timber production.

For corporate paper manufacturing, as shown in **Exhibit 3**, these options include:

- A 40-percent reduction in all top rates (including rates on corporate income and individual income from interest, capital gains and dividends);
- Expensing for all equipment and structures;
- A 10-percent investment tax credit; and

- Various combinations of partial expensing or accelerated depreciation combined with rate reductions.

The reform options shown in Exhibit 3 would also make U.S. income taxes more favorable for U.S. investors who want to build a papermaking facility abroad—provided, of course, that the options were also fully applicable to foreign investments. In the past, the United States has not allowed investment tax credits or accelerated depreciation for equipment used outside the United States. The United States should also consider fully exempting from tax foreign income from the active conduct of a trade or business as is the practice of many of our major trading partners.

Exhibit 4 presents reform options to reduce the U.S. tax rate on corporate timber production income to that of the median of the competing nations. These reform options include:

- A 40-percent reduction in the corporate capital gain rate for timber gain;
- A more than 40-percent reduction in all top corporate and individual rates;
- Eliminating the individual-level tax on corporate dividends and capital gains; and
- Various combinations of rate reductions with expensing of reforestation expenditures or investment tax credits.

We urge the Advisory Panel to study these options and give great consideration to their adoption. It is important to understand the need for substantial reductions in the tax burdens on corporate income in order to provide a tax system that does not excessively

hinder the ability of U.S. corporations and U.S. workers to compete in the global marketplace

Exhibit 1

ISSUE: Where are the tax hurdles the highest for a corporation that would invest in papermaking in its own country?

DOMESTIC TAXATION OF DOMESTIC CORPORATE PAPER MANUFACTURING

Favorability	Country	2005 Total Effective Tax Rate
Least Taxed ↑ ↓ Most Taxed	Russia	21%
	Brazil	28%
	China	30%
	Indonesia	34%
	Finland	43%
	Germany	48%
	Canada	63%

USA 51%

CONCLUSION: The U.S. tax system raises very high hurdles compared to other countries. The effective tax rate of the United States is the second highest in the competing group and 17 percentage points higher than the median of the other countries.

Exhibit 2

ISSUE: Where are the tax hurdles the highest for a corporation that would invest in forestry and timber in its own country?

DOMESTIC TAXATION OF DOMESTIC CORPORATE FORESTRY PRODUCTION

Favorability	Country	2005 Total Effective Tax Rate
Least Taxed ↑ ↓ Most Taxed	Indonesia	8%
	Russia	9%
	China	17%
	Brazil	22%
	Germany	30%
	Finland	31%
	Canada	51%

USA 37%

CONCLUSION: The U.S. tax system raises very high hurdles compared to other countries. The effective tax rate of the United States is the second highest in the competing group and 16 percentage points higher than the median of the other countries.

Exhibit 3
Corporate Paper Manufacturing

WHAT IT TAKES TO BE COMPETITIVE

Current Status in 2005

U.S. effective tax rate	=	51%
Median effective tax rate for competing nations	=	34%

U.S. Alternatives for Change

1. Reduce the top individual and corporate income tax rates to 21 percent and to 9 percent for individual capital gains/dividends (a 40-percent reduction in all top rates)
 - Makes the U.S. tax system moderately competitive.
2. Allow expensing in lieu of depreciation for new equipment and structures.
 - Makes the U.S. tax system moderately competitive.
3. Adopt a 10-percent investment tax credit for new equipment.
 - Makes the U.S. tax system moderately competitive.
4. Eliminate the individual income tax on capital gains and dividends.
 - Falls short. Reduces U.S. effective tax rate to 39 percent.
5. Composite #1. Allow expensing in lieu of depreciation for new equipment (but not structures), and reduce the top individual and corporate rate to 30 percent and to 12.5 percent for individual capital gains/dividends (approximately a 15-percent reduction in all top rates).
 - Makes the U.S. tax system moderately competitive.
6. Composite #2. Allow 50-percent bonus depreciation for new equipment, and reduce the top individual and corporate rate to 25 percent and to 10 percent for individual capital gains/dividends (approximately a 30-percent reduction in all top rates).
 - Makes the U.S. tax system moderately competitive.
7. Composite #3. Reduce the depreciation period for new equipment from 7 years to 3 years (double declining balance) and for new structures from 39 years to 20 years (straight line); also, reduce the top individual and corporate rate to 27 percent and to 12 percent for individual capital gains/dividends (approximately a 20-percent reduction in all top rates).
 - Makes the U.S. tax system moderately competitive.

Exhibit 4

Corporate Timber Production

WHAT IT TAKES TO BE COMPETITIVE

Current Status in 2005

U.S. effective tax rate	=	37%
Median effective tax rate for competing nations	=	22%

U.S. Alternatives for Change

1. Allow 40 percent of long-term capital gain from the sale of timber to be excluded from taxable income (reducing the capital gain tax rate on corporate timber to 21 percent).
 - Makes the U.S. tax system moderately competitive
2. Reduce the top individual and corporate rate to 20 percent and to 8.5 percent for individual capital gains/dividends (a more than 40-percent reduction in all top rates).
 - Makes the U.S. tax system moderately competitive.
3. Eliminate the individual income tax on capital gains and dividends.
 - Makes the U.S. tax system moderately competitive.
4. Adopt a 10-percent investment tax credit (ITC) for all reforestation expenditures.
 - Falls short. Reduces U.S. effective tax rate to 35 percent.
5. Allow expensing for all reforestation expenditures in lieu of amortization
 - Falls short. Reduces U.S. effective tax rate to 35 percent.
6. Composite #1 Allow expensing for all reforestation expenditures and reduce the top individual and corporate rate to 25 percent and to 10 percent for individual capital gains/dividends (approximately a 30-percent reduction in all top rates).
 - Comes very close. Reduces U.S. effective tax rate to 24 percent.
7. Composite #2 10-percent ITC for all reforestation expenditures and exclude 30 percent of long-term capital gain on timber sales from taxable income (reducing the tax rate on capital gain of corporate timber to 24.5 percent).
 - Makes the U.S. tax system moderately competitive
8. Composite #3. Allow expensing for all reforestation costs and exclude 50 percent of long-term capital gain on timber sales from taxable income (reducing the tax rate on capital gain of corporate timber to 17.5 percent).
 - Makes the U.S. tax system moderately competitive.

**TAXES IN COMPETING NATIONS:
THEIR EFFECTS ON INVESTMENTS
IN PAPER MANUFACTURING AND
TIMBER PRODUCTION**

prepared for

American Forest and Paper Association

April 29, 2005

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**TAXES IN COMPETING NATIONS:
THEIR EFFECTS ON INVESTMENTS
IN PAPER MANUFACTURING AND
TIMBER PRODUCTION**

EXECUTIVE SUMMARY AND RESULTS

A. Background

Purpose of report

This report determines how income taxes in the United States compare with income taxes in other competing countries in terms of inhibiting investments in paper manufacturing and timber production. According to U.S. forest products industry executives, companies in the other countries--Brazil, Canada, China, Finland, Germany, Indonesia, and Russia--compete aggressively with U.S. companies

Manner of analysis

We measure tax barriers to investment by the effective tax rate. It is the percentage of income that is collected in income taxes over the life of a particular investment project--namely, the project that just generates the minimum rate of return required by investors, measured after taxes and inflation. The higher the effective tax rate, the less favorably the tax system treats investments. Investments that would be feasible in a low-tax country will not be feasible in a high-tax country because too little remains after taxes to compensate highly-taxed investors for the time value of their money and the risks they take

Income from investments made through a corporation is subject to tax at both the corporate and individual levels. In this report, we assume all investments are made by corporations and compute a comprehensive tax rate that includes taxes imposed at the corporate and individual levels. Where appropriate, we have included state and local taxes for a representative local jurisdiction.

Tax changes in competing nations

We have written a series of similar reports for the American Forest & Paper Association, most recently in January 2001. While following the same methodology as in past studies, this study is different in two ways:

1. Several countries have modified relevant tax laws since 2001. The United States, Brazil, Canada, Finland, and Germany have changed individual or corporate tax laws at either the national or state/local level. This report reflects tax provisions which, as determinable in April 2005, will be effective for 2005. In the case of the United States, we apply the fully phased-in nine percent deduction for qualified production activities rather than the transitional three percent deduction in effect for 2005.
2. China and Russia have been added to the list of the competing countries and Japan has been dropped

B. Conclusions

Summary

Income taxes in most competing nations are more favorable for investments in papermaking and timber production than are U.S. income taxes.

- In most cases, the tax systems in foreign countries are *very* much more favorable.
- The effective tax rate for the United States is *the second highest* of effective tax rates for the eight competing nations

The United States has enacted significant decreases in marginal tax rates over the last four years. However, other countries have also reduced taxes during this period. U.S. statutory rates (including state and local income taxes) are generally higher than tax rates in the competing nations

- The United States has the second highest income tax rate on corporations. Only Germany's rate of 38.2 percent is higher than the 36.3 percent U.S. rate. Germany has recently announced planned reforms that would lower its combined federal and local statutory rate by six percentage points, which would leave the U.S. corporate rate the highest among competing nations.
- Similarly, the United States has the second highest tax rate applying to corporate income from the sale and cutting of timber. Although such income is eligible for capital gains treatment in the United States, since 1986 corporate capital gains have been subject to tax at the same rate as other corporate income.
- The United States has the third-highest rate on individual capital gains. Canada and Finland have higher rates, at 23.2 percent and 22.4 percent respectively (compared to the U.S. rate of 19.6 percent)
- The United States has the third-highest individual income tax rate on interest. Canada (at 46.4 percent) and Germany (44.3 percent) both have statutory rates higher than the United States (39.6 percent)

Only the U.S. individual tax rate on dividends is below that of most other competing countries. In combination, the U.S. tax provisions result in the United States having the second highest effective tax rate among the eight competing nations for both paper manufacturing and timber production investments.

Corporate Paper Manufacturing Investments

U.S. income taxes are the most unfavorable of all the competing nations—or very close to it—for corporate investments in papermaking.

Papermaking at home.--In their treatment of corporate investments in papermaking facilities built at home, individual and corporate income taxes in the United States are *much less favorable* than in Russia, Brazil, China, Indonesia, and Finland. Thus, when Finnish investors consider an investment for Finland and U.S. investors weigh the same investment for the United States, the Finnish tax system makes it easier for the Finnish investors to proceed.

The U.S. effective tax rate is 51 percent, which is second only to Canada (63 percent) and 17 percentage points higher than the median of the competing nations (Indonesia is the country with the median tax rate of 34 percent). See **Exhibit 1**.

Papermaking abroad.--In their treatment of corporate investments in papermaking facilities built abroad, U.S. income taxes are the *second highest* of all competing nations, behind Canada. Thus, when investors from the United States and investors from any less heavily taxed competing nation consider the same investment opportunity in a third country, the U.S. investors are at a disadvantage in getting the project because of the U.S. tax system.

The U.S. effective tax rate is 56 percent, which is 19 percentage points higher than the median of the other competing nations (Brazil is the country with the median tax rate of 37 percent). See **Exhibit 2**.

Exhibit 1

ISSUE: Where are the tax hurdles the highest for a corporation that would invest in papermaking in its own country?

DOMESTIC TAXATION OF DOMESTIC CORPORATE PAPER MANUFACTURING

Favorability	Country	2005 Total Effective Tax Rate
Least Taxed ↑ ↓ Most Taxed	Russia	21%
	Brazil	28%
	China	30%
	Indonesia	34%
	Finland	43%
	Germany	48%
	Canada	63%

USA 51%

CONCLUSION: The U.S. tax system raises very high hurdles compared to other countries. The effective tax rate of the United States is the second highest in the competing group and 17 percentage points higher than the median of the other countries.

Exhibit 2

ISSUE: Where are the tax hurdles the highest for a corporation that would invest in papermaking in a foreign country?

DOMESTIC TAXATION OF FOREIGN CORPORATE PAPER MANUFACTURING

Favorability	Country	2005 Total Effective Tax Rate
Least Taxed ↑ ↓ Most Taxed	China	29%
	Indonesia	29%
	Russia	32%
	Brazil	37%
	Germany	48%
	Finland	48%
	Canada	62%

USA 56%

CONCLUSION: The U.S. tax system raises very high hurdles compared to other countries. The effective tax rate of the United States is the second highest in the competing group and 19 percentage points higher than the median of the other countries.

Corporate Timber Investments

U.S. income taxes are the most unfavorable of all the competing nations—or very close to it—for corporate investments in timber production.

Timber growing at home.—In their treatment of corporate investments in timber production, U.S. income taxes are the *second highest* of all competing nations. The U.S. effective tax rate is 37 percent, which is second to Canada (51 percent), and 16 percentage points above the median of the competing nations (Brazil has the median tax rate of 22 percent)¹. See **Exhibit 3**.

The basic interpretation is that investors in every competing nation except Canada have an advantage over U.S. investors in attracting capital for domestic investment because of the tax systems in their countries.

¹ The 16 percentage point differential and the median tax rate (22 percent) do not add to the U.S. rate (37 percent) due to rounding.

Exhibit 3

ISSUE: Where are the tax hurdles the highest for a corporation that would invest in forestry and timber in its own country?

DOMESTIC TAXATION OF DOMESTIC CORPORATE FORESTRY PRODUCTION

Favorability	Country	2005 Total Effective Tax Rate
Least Taxed  Most Taxed	Indonesia	8%
	Russia	9%
	China	17%
	Brazil	22%
	Germany	30%
	Finland	31%
	Canada	51%

USA	37%
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CONCLUSION: The U.S. tax system raises very high hurdles compared to other countries. The effective tax rate of the United States is the second highest in the competing group and 16 percentage points higher than the median of the other countries.

Discussion of U.S. paper manufacturing

Central point.--U.S. tax rules consistently raise disadvantages for U.S. paper manufacturers relative to the tax rules in most of the competing nations. The overall effect is that *U.S. companies cannot undertake certain investments that foreign competitors can undertake profitably* because U.S. investors would be left with too little after paying tax, whereas foreign investors would be left with a sufficient return after paying tax. Because U.S. companies compete against foreign companies in product markets both at home and abroad, the U.S. tax disadvantage ultimately limits the degree to which U.S. companies may successfully challenge foreign competitors

To illustrate, assume that investors require a minimum rate of return of 6 percent, measured after inflation and after taxes, to commit to any investment. Suppose that a potential project for manufacturing paper would yield an inflation-adjusted rate of return of 10 percent *before* tax. U.S. investors could not commit to the investment if the facility were built in the U.S. because their real rate of return, after giving up 51 percent in tax, would be an insufficient 4.9 percent (i.e., 10 percent minus tax equal to 51 percent of 10 percent). Brazilian investors, however, could commit to the investment if the facility were built in Brazil because their real rate of return, after giving up 28 percent in tax, would be a satisfactory 7.2 percent (i.e., 10 percent minus tax equal to 28 percent of 10 percent)

U.S. disadvantage understated.--In several ways this study understates the disadvantage faced by U.S. companies. For example, we assume that U.S. corporations and U.S. individuals pay the regular federal corporate income tax. In fact, U.S. taxpayers pay the greater of the regular tax and the alternative minimum tax ("AMT"). The AMT increases the total tax burden paid by U.S. companies, an additional burden not borne by companies based in the competing countries.²

As another example, in the treatment of inventory accounting for paper manufacturing we do not account for differences among countries in the required capitalization of indirect costs in inventory. U.S. rules require more indirect costs to be capitalized in inventory

² While the AMT serves to increase the total tax burden on a corporation, its impact on the marginal effective tax rate (the measure presented in this study) is less clear. The AMT has less accelerated depreciation allowances, which would increase the marginal effective tax rate. The AMT also has a lower top statutory rate (20 percent in the case of corporations compared to 35 percent under the regular tax). For equity-financed investments, the lower statutory tax rate would tend to lower the marginal effective tax rate, at least partially offsetting the impact of slower depreciation. For debt-financed investments, both the slower depreciation and the reduced statutory rate work to increase the marginal effective tax rate under the AMT.

(rather than deducted currently) than do other countries. These rules provide an additional disadvantage to U.S. companies relative to their foreign competitors, since other countries allow some of these indirect costs to be deducted currently.

Similarly, in our treatment of the U.S. taxation of projects undertaken abroad we do not completely account for rules unique to the United States that reduce the amount of foreign taxes that can be credited against U.S. tax liability. Rules by which interest expenses are allocated increase the effective rate of tax when a company operates abroad in high-tax jurisdictions. Other U.S. rules (such as recomputing foreign income based on "Earnings and Profits") reduce the crediting of foreign taxes when a company operates abroad in low-tax jurisdictions. By not fully accounting for these rules unique to the United States, we *understate* the disadvantage faced by U.S. companies

Finally, several other countries are considering further reducing taxes. The governments of Germany, Indonesia, and Russia recently have discussed lowering statutory income tax rates on incomes. All of these countries currently have marginal effective tax rates below that of the United States. Absent positive changes in U.S. tax law, this disparity would grow larger if foreign rates are lowered. This report considers only tax rules in effect in 2005 in the competing nations.

Discussion of U.S. timber growing

Corporate timber growing in the United States is also disadvantaged by U.S. tax law relative to tax rules in competing nations. U.S. timber companies face some of the same problems as U.S. paper manufacturing companies. Other tax disadvantages are unique to the industry.

Since the Tax Reform Act of 1986, there has been no differential in the rate of tax paid by corporations on income arising from capital gains relative to ordinary income. Prior to the 1986 Act, corporate capital gains were taxed at a rate approximately 40 percent less than ordinary income. While capital gains income is insignificant for many manufacturing companies, most income from the sale of timber qualifies as capital gain income. Restoration of a capital gains differential would reduce the rate of tax faced by U.S. timber companies, thus encouraging corporations to retain their timberland for production.

In a number of countries, costs incurred through reforestation may be deducted currently. In the United States, however, these costs must generally be recovered over a seven-year amortization period. The tax burden could be reduced by allowing reforestation costs to be fully or partially expensed, as is the practice in six of the seven competing nations.

Impact of Recent Changes in Tax Laws

Even after the favorable tax reductions of the past several years, the U.S. marginal effective tax rate in both the paper manufacturing sector and the corporate forestry sector remains among the highest of the competing countries. Tax reductions in other competing countries, like Germany and Brazil, and growth in competition from companies operating in lesser taxed countries, like China and Russia, have left U.S. companies in a tax-disadvantaged environment.

Table 1. Marginal Effective Tax Rates, 2001 – 2005

	United States ^a	Brazil	Canada ^b	China	Finland	Germany	Indonesia	Russia
Paper Manufacturing								
Pre-2001	62%	40%	64%	NA	43%	60%	34%	NA
2003	52%	38%	63%	NA	43%	57%	34%	NA
2005	51%	28%	63%	30%	43%	48%	34%	21%
Change (2001-05)	-11%	-12%	^c	NA	^c	-13%	0%	NA
Change (2003-05)	-1%	-10%	^c	NA	^c	-9%	0%	NA
Corporate Forestry								
Pre-2001	55%	22%	51%	NA	29%	45%	8%	NA
2003	43%	22%	51%	NA	29%	41%	8%	NA
2005	37%	22%	51%	17%	31%	30%	8%	9%
Change (2001-05)	-17%	^c	^c	NA	2%	-15%	0%	NA
Change (2003-05) ^d	-5%	^c	^c	NA	2%	-11%	0%	NA

^a Marginal effective tax rates for Pre-2001 in the United States assume tax rates prior to the enactment of the 2001 tax act (top federal individual tax rate of 39.6 percent applied); tax rates for 2003 are based on enactment of the Jobs and Growth Tax Relief Reconciliation Act, which reduced tax rates on dividends and capital gains to 15 percent and lowered the top marginal tax rate to 35 percent.

^b Tax applicable to investment in Ontario.

^c Less than 1 percentage point.

^d Change may not add up to totals because of rounding.

Source: PricewaterhouseCoopers, November 2000 report for AFPA and updated calculations.

Potential Reforms to Make the U.S. More Competitive

The reforms enacted in recent years to reduce U.S. tax rates have failed to match effective rates in the competing nations. A variety of reforms could be implemented to reduce the U.S. rate to a more competitive level. These reforms include reducing statutory rates (individual or corporate), full or partial integration of the corporate and individual income tax to eliminate the double taxation of income, and accelerating the write-off of input costs. Exhibits 4 and 5 present the impacts of these reforms on the corporate paper manufacturing and corporate timber production effective tax rates.

The success of each reform is measured by comparing the effective tax rate for the United States with the median country of the competitors (i.e., the country with the middle-ranked effective tax rate of the competing nations). For paper manufacturing, Indonesia represents the median country, with an effective tax rate of 34 percent. Therefore, to match the effective tax rate for the median country, the U.S. effective tax rate must fall by 17 percentage points. For corporate forestry, Brazil represents the median country, with a 22 percent rate. To match the median tax rate for timber, the U.S. rate must fall by 16 percentage points.

In terms of the reforms that are the most successful, the effective tax rates for both the paper and timber industries are quite sensitive to the level of integration between the individual and corporate tax systems. Because a significant share of the “marginal” investment is assumed to be funded with either retained earnings or new equity, reforms that lower the tax on dividends or capital gains will reduce the overall rate. If the typical investment is more likely to be funded with debt, the impact of integrating the individual and corporate tax systems would be smaller (the proceeds associated with a debt-financed investment are taxed only once in the United States so integration would not affect the tax rate).

* * * * *

The remainder of the text describes the information that we took into account and the methodology we followed in deriving these results.

Exhibit 4
Corporate Paper Manufacturing

WHAT IT TAKES TO BE COMPETITIVE

Current Status in 2005

U.S. effective tax rate	=	51%
Median effective tax rate for competing nations	=	34%

U.S. Alternatives for Change

1. Reduce the top individual and corporate income tax rates to 21 percent and to 9 percent for individual capital gains/dividends (a 40-percent reduction in all top rates)
 - Makes the U.S. tax system moderately competitive.
2. Allow expensing in lieu of depreciation for new equipment and structures
 - Makes the U.S. tax system moderately competitive.
3. Adopt a 10-percent investment tax credit for new equipment.
 - Makes the U.S. tax system moderately competitive.
4. Eliminate the individual income tax on capital gains and dividends.
 - Falls short. Reduces U.S. effective tax rate to 39 percent.
5. Composite #1. Allow expensing in lieu of depreciation for new equipment (but not structures), and reduce the top individual and corporate rate to 30 percent and to 12.5 percent for individual capital gains/dividends (approximately a 15-percent reduction in all top rates)
 - Makes the U.S. tax system moderately competitive.
6. Composite #2. Allow 50-percent bonus depreciation for new equipment, and reduce the top individual and corporate rate to 25 percent and to 10 percent for individual capital gains/dividends (approximately a 30-percent reduction in all top rates).
 - Makes the U.S. tax system moderately competitive.
7. Composite #3. Reduce the depreciation period for new equipment from 7 years to 3 years (double declining balance) and for new structures from 39 years to 20 years (straight line); also, reduce the top individual and corporate rate to 27 percent and to 12 percent for individual capital gains/dividends (approximately a 20-percent reduction in all top rates)
 - Makes the U.S. tax system moderately competitive.

Exhibit 5

Corporate Timber Production

WHAT IT TAKES TO BE COMPETITIVE

Current Status in 2005

U.S. effective tax rate	=	37%
Median effective tax rate for competing nations	=	22%

U.S. Alternatives for Change

1. Allow 40 percent of long-term capital gain from the sale of timber to be excluded from taxable income (reducing the capital gain tax rate on corporate timber to 21 percent)
 - Makes the U S tax system moderately competitive.
2. Reduce the top individual and corporate rate to 20 percent and to 8.5 percent for individual capital gains/dividends (a more than 40-percent reduction in all top rates).
 - Makes the U.S. tax system moderately competitive.
3. Adopt a 10-percent investment tax credit (ITC) for all reforestation expenditures
 - Falls short. Reduces U.S. effective tax rate to 35 percent.
4. Allow expensing for all reforestation expenditures in lieu of amortization.
 - Falls short. Reduces U.S. effective tax rate to 35 percent.
5. Composite #1. Allow expensing for all reforestation expenditures and reduce the top individual and corporate rate to 25 percent and to 10 percent for individual capital gains/dividends (approximately a 30-percent reduction in all top rates).
 - Comes very close. Reduces U.S. effective tax rate to 24 percent.
6. Composite #2. 10-percent ITC for all reforestation expenditures and exclude 30 percent of long-term capital gain on timber sales from taxable income (reducing the tax rate on capital gain of corporate timber to 24.5 percent).
 - Makes the U S. tax system moderately competitive.
7. Composite #3. Allow expensing for all reforestation costs and exclude 50 percent of long-term capital gain on timber sales from taxable income (reducing the tax rate on capital gain of corporate timber to 17.5 percent).
 - Makes the U.S. tax system moderately competitive.

I. INTRODUCTION

Purpose of Study

This study provides an international comparison of the effective tax burden on investments in paper manufacturing and timber production. The study compares the tax treatment of investors in the United States and seven of the more important nations that compete with the U.S. in the production of paper and timber--Brazil, Canada, China, Finland, Germany, Indonesia, and Russia

Our specific purposes are to estimate how great a disincentive to investment the U.S. income tax system presents and how great the disincentives to investment the tax systems of competing countries present with respect to--

- Corporate investments in paper manufacturing, both at home and abroad,
and
- Corporate investments in forestry and timber at home.

A study is needed because the statutory tax rates in a country do not always indicate the actual tax burden, which results from the operation and interaction of many other parts of a country's tax law. For example, a country might not allow certain business expenses to be deducted from taxable income when the expenses are actually paid, but rather postpone the deduction to a later time. Due to the time value of money, such a delay will increase the effective tax burden regardless of the level of the statutory tax rate.

Significance of Investment to the U.S. Economy

Investments at home.--The economic standard of living in the United States results from the output of its labor, capital goods, and natural resources. Investments in machinery, equipment, buildings, and inventories are additions to the stock of capital goods. They replace worn-out portions of the capital stock so that current production levels can be maintained, increase the capital stock so that output can be increased, and make labor more productive so that output can be increased even more. For instance, such investments have enabled productivity in American agriculture to increase so much that the 20th century, which began with under six nonfarming individuals for every farm worker, closed with nearly 80 nonfarming individuals for every farm worker.

Investments abroad.--U.S. enterprises and foreign-based companies are engaged more and more in business and investments outside their national borders. Any place in the world, foreign markets are bigger than the domestic market and many foreign markets are growing faster than domestic markets. To cite two consequences: U.S. companies are exporting more than twice the share of national output that they did 35 years ago; and U.S. corporations are generating approximately 20 percent of their profits from overseas investments--up from 7 percent 35 years ago.

The internationalization of business means that U.S. companies and foreign-based companies are engaged in an unprecedented economic contest, both at home and abroad.

Significance of Taxes to Investment

Investors act on the expectation of earning at least an adequate return on their investment, though they realize that a loss is possible. Investors regard taxes imposed on profits as a primary factor in deciding whether the expected profit is adequate and the investment worth making. To paraphrase a popular slogan, it matters what one keeps after taxes, not what one makes before taxes. Thus, a project which earns 12 percent before tax may be superior to one that earns 20 percent, if the former is tax-free and the latter bears a 50-percent tax.

It follows that a nation's income tax system is one determinant of the amount of investment that individuals and companies make. By imposing high taxes on investment income and low taxes on consumption, a tax system can lead its taxpayers to consume more and invest less. By imposing high taxes on some types of investment income and low taxes on other types of investment income, the tax system can steer investments to the tax-favored uses and away from the tax-disfavored uses. And by imposing high taxes on income earned abroad compared to the taxes imposed by other countries on income earned abroad, a country's tax system can handicap its individuals and companies in the international contest for business.

Plan of the Study

The study is presented in the following order:

Section II: Describe the components of an income tax system that can have a major effect on effective tax burdens of paper manufacturing and timber projects.

Section III: Describe the pertinent tax rules in the United States.

Section IV: Describe the pertinent tax rules in competing countries.

Section V: Describe the methodology for the study.

II. WHAT AN INCOME TAX SYSTEM CAN DO TO INFLUENCE INVESTMENT

Introduction

In this section we summarize the major components of an income tax system that determine whether more or less tax is collected on investments in paper manufacturing and timber production

As in the United States, a country's income tax system may consist of several different income taxes, each with its own tax base and tax rates. The tax base defines the extent to which different types of income are included or excluded from taxable income and when the income is taxable. The tax rates determine how much of the tax base is due as income tax.

The United States has two major, regular taxes on income, one on the income of individuals and another on the income of corporations. The United States also imposes minimum taxes on income that are payable to the extent they exceed the regular taxes. Most states of the United States impose income taxes on individuals and corporations as well.

Tax Rates

A high marginal tax rate--the tax rate that would apply to additional earnings--is likely to discourage efforts to earn more income, including income from investing. Only investments with high expected pre-tax rates of return look attractive on an after-tax basis when the marginal tax rate is high.

Lenders who help finance a paper manufacturing or timber project are concerned with the tax rate on interest income. Stockholders in corporations that undertake a project are concerned with the tax rate on dividend income. Stockholders are also concerned with the corporate income tax rate, because the corporate income tax reduces the pool of earnings that can be paid out as dividends. Finally, stockholders have an interest in the tax rate on capital gain--that is, the appreciation in stock value--that follows from the skillful investment of retained earnings.

In the past, the top marginal tax rates on investment income have been higher than rates in other countries. In the last several years, the United States has reduced its statutory tax rates so they are more in line with those in other countries. However, other countries have also changed their tax codes. Four of the five countries included in the original

reports have experienced changes in their tax law since 2001. Compared to the seven competing nations--Brazil, Canada, China, Germany, Finland, Indonesia, and Russia--the combined federal and local statutory tax rates in the United States are on the high end in three of four categories. Specifically:

- The United States has the second highest income tax rate on corporations. Only Germany's rate of 38.2 percent is higher than the 36.3 percent U.S. rate. Germany has recently announced planned reforms that would lower its combined federal and local statutory rate by six percentage points, which would leave the U.S. corporate rate the highest among competing nations.
- Similarly, the United States has the second highest tax rate applying to corporate income from the sale and cutting of timber. Although such income is eligible for capital gains treatment in the United States, since 1986 corporate capital gains have been subject to tax at the same rate as other corporate income.
- The United States has the third-highest rate on individual capital gains. Canada and Finland have higher rates, at 23.2 percent and 22.4 percent respectively (compared to the U.S. rate of 19.6 percent).
- The United States has the third-highest individual income tax rate on interest. Canada (at 46.4 percent) and Germany (44.3 percent) both have statutory rates higher than the United States (39.6 percent).

Only the U.S. individual tax rate on dividend income is below that of most competing nations, ranking second lowest (net of imputation credits, explained below). Brazil, which does not tax dividend income, has the lowest rate.

Table 2 below summarizes the statutory tax rates in the eight countries.

Table 2. Summary of Statutory Rates by Country, 2001 to 2005

	United States	Brazil ^a	Canada	China ^b	Finland ^c	Germany	Indonesia	Russia
<i>Top Federal and Local Statutory Income Tax Rates: 2001 (pre-2001 Tax Act for US)</i>								
Individual								
Interest	43.8%	20.0%	46.4%	NA	29.0%	51.2%	15.0%	NA
Dividends	43.8%	0.0%	25.6%	NA	0.0%	25.6%	35.0%	NA
Capital Gains	24.2%	15.0%	23.2%	NA	29.0%	0.0%	0.1%	NA
Corporate	39.2%	37.0%	34.1%	NA	29.0%	38.2%	30.0%	NA
<i>Top Federal and Local Statutory Income Tax Rates: 2003</i>								
Individual								
Interest	39.6%	20.0%	46.4%	NA	29.0%	49.6%	15.0%	NA
Dividends	19.6%	0.0%	23.3%	NA	0.0%	24.8%	35.0%	NA
Capital Gains	19.6%	15.0%	23.2%	NA	29.0%	0.0%	0.1%	NA
Corporate	39.2%	34.0%	33.1%	NA	29.0%	38.2%	30.0%	NA
<i>Top Federal and Local Statutory Income Tax Rates: 2005 (assumes fully phased-in 9% deduction for qualified production in US)</i>								
Individual								
Interest	39.6%	20.0%	46.4%	20.0%	28.0%	44.3%	15.0%	13.0%
Dividends	19.6%	0.0%	23.3%	20.0%	19.6%	22.2%	35.0%	9.0%
Capital Gains	19.6%	15.0%	23.2%	0.0%	28.0%	0.0%	0.1%	13.0%
Corporate	36.3%	34.0%	34.1%	33.0% or 0%	26.0%	38.2%	30.0%	24.0%
<i>Change in Top Federal and Local Statutory Income Tax Rates, 2001 to 2005</i>								
Individual								
Interest	-4.3%	0.0%	0.0%	NA	-1.0%	-6.9%	0.0%	NA
Dividends	-24.3%	0.0%	-2.4%	NA	19.6%	-3.4%	0.0%	NA
Capital Gains	-4.7%	0.0%	0.0%	NA	-1.0%	0.0%	0.0%	NA
Corporate	-2.9%	-3.0%	0.0%	NA	-3.0%	0.0%	0.0%	NA

^a Since 2003, Brazil has increased the depreciation rate for equipment

^b For China, since 2001 a zero corporate tax rate applies to timber income.

^c Before 2005, Finland allowed an imputation credit in the amount of the full tax on dividends, which eliminated the tax at the individual level. In 2005 and later, 30 percent of dividends are excluded from income, resulting in an effective statutory rate of 19.6 percent (28 percent * (1 - 30 percent) = 19.6 percent)

Note: Top rates reflect the deductibility of state and local income taxes where applicable. For example, for the United States in 2001 the top individual rate is based on the top federal rate of 39.6 percent and an assumed state and local rate of 7 percent: 43.8 percent = 39.6 percent + (1 - 39.6 percent) * 7 percent

Source: PricewaterhouseCoopers

Tax Base

Depreciation.--Paper manufacturing requires heavy expenditures on machinery, equipment, and buildings and other structures. Timber growing makes use of tangible assets as well, although to a lesser degree

Income tax laws typically do not allow a business to “expense” the cost of machinery, equipment and buildings--that is, a business cannot deduct its full cost from taxable income in the year that the property is put into use. Instead, a business “depreciates” the cost--that is, deducts portions of the cost every year during a depreciation period that lasts several years or more into the future

The effective tax burden on an investment involving depreciable property is reduced when depreciation deductions are accelerated so that a large percentage of the cost is deducted in the first few years after the property is put into use. Acceleration moves deductions from later to earlier years, reducing income tax in earlier years and increasing it in later years. This is a timing advantage for a business because it enjoys the time value of money until the tax is paid.

Tax laws in the competing group of countries generally allow companies to recover the costs of their overall investment in a manufacturing plant more quickly than in the United States. Deductions associated with equipment costs in the United States exhibit similar timing (in terms of the present value of the deductions) compared to other countries, but deductions for investment in structures are slower. Table 3 below summarizes the present value of depreciation deductions in the paper manufacturing sector for investment in equipment and structures.

Table 3. Degree of Acceleration in Cost Recovery of Investment in Equipment and Structures, Paper Manufacturing

	United States	Brazil	Canada	China	Finland	Germany	Indonesia	Russia
<i>Present Value of Depreciation Allowances as a Share of Cost</i>								
Overall	76.7%	81.9%	78.7%	73.0%	76.8%	81.9%	66.4%	77.5%
Equipment	87.3%	91.2%	89.3%	77.2%	83.9%	88.8%	69.2%	84.2%
Structures	42.8%	52.2%	44.9%	59.6%	54.2%	60.1%	57.6%	56.1%

Note: Under expensing, the present value relative to cost equals 100 percent; if no deduction were allowed, the ratio would be 0

Source: PricewaterhouseCoopers

Capitalization of other costs.--A pervasive issue for income tax systems is whether a business cost should be expensed or capitalized--that is, deducted in full when incurred or deducted later when the income to which it relates is realized. Expensing produces a lower effective tax burden over the duration of an investment project because deductions are taken sooner, providing the business with the benefits of the time value of money.

In timber production the issue of expensing or capitalization comes up in the treatment of silviculture costs and reforestation costs. In general, the United States allows silviculture costs to be expensed, which is the usual (though not universal) practice among the competing nations.

The United States requires reforestation costs in excess of \$10,000 to be amortized over seven years, meaning the costs are deducted equally over a seven-year period. Expensing of such costs is the typical and more favorable practice among the competing nations. Six of the seven competing countries provide for full expensing of these costs.³

Inventory accounting.--Part of the investment in paper manufacturing is investment in the inventory of finished but unsold products. While income tax rules allow a business to deduct the cost of the goods they manufacture, the deduction is activated when items are sold out of inventory. However, it is often impractical to account for every finished item and to know whether it is in inventory or has been sold.

One solution to the problem of determining what was sold during a year is to assume that the sold items were the last to have gone into inventory (hence the name "last-in-first-out" accounting or "LIFO") Another solution, the "first-in-first-out" or "FIFO" approach, is to assume that the sold items came from the oldest part of inventory.

LIFO produces a lower effective tax burden than FIFO when prices go up steadily from year to year and inventories remain relatively stable. The reason is that a business takes a bigger deduction for cost of goods sold, as it is deducting the higher costs of recent production rather than the smaller costs of earlier production.

The United States permits businesses to use the LIFO method of inventory accounting for computing income tax. Many countries in the competing group do not.

The United States requires both direct and indirect costs of property produced for sale by manufacturing companies to be capitalized in the cost of inventory. The U.S. rules require a greater amount of indirect costs to be capitalized (rather than deducted currently) than do other countries. The more extensive inclusion of indirect costs in inventory in the United States results in a higher effective rate of tax on inventory profit.

³ In the United States, the ratio of the present value of the amortization deductions to the reforestation costs equals 83.2 percent. In countries that permit these costs to be fully expensed, this ratio equals 100 percent.

Integration of Income Taxes

If a country that has both a corporate income tax and an individual income tax does not integrate the two taxes, then income generated by corporate investments will be exposed to two income taxes while income generated by noncorporate businesses bears just one income tax. In an unintegrated system, corporate shareholders will first pay the corporate income tax and then pay individual income tax on (i) dividends that the corporation pays out or (ii) capital gain on increased stock values due to the earnings that the company retains.

Countries use different methods to mitigate or eliminate double taxation of corporate earnings. For example, a shareholder might be allowed to deduct dividends received for the reason that that income has already been taxed under the corporate income tax. Under a more elaborate and theoretically precise approach (called the “imputation credit”), a shareholder may be given a credit to reduce individual income tax by the amount of corporate income tax imputed to his or her shares and then be taxed on the corresponding amount of the corporation’s earnings under the individual income tax.

The United States in 2003 reduced the extent of double taxation of corporate income by lowering the individual tax rate on dividend income and capital gains to a maximum rate of 15 percent in 2003. Most countries in the competing group also provide a significant degree of relief from double taxation either through integration or preferential rates applicable to dividends and capital gain income.

Income Earned Abroad

Many countries, including some in the competing group, follow the principle that income is taxed only in the territory in which it has been earned. Under this territorial principle, the “home” country imposes no tax on income earned from investments made outside its borders.

Other countries, including the United States, require its citizens and businesses to pay in total tax the greater of (i) the income tax imposed by the host country or (ii) the income tax that would have been collected if the investment were only subject to home country taxes. Compared to a territorial system, this “worldwide” approach increases the effective tax burden on income earned from investments made abroad when foreign taxes are not as high as taxes in the home country. Thus, U.S. businesses will frequently have to take into consideration higher tax costs than foreign-based businesses when competing for investment opportunities abroad.

III. INCOME TAX RULES IN THE UNITED STATES THAT AFFECT PAPER MANUFACTURING AND TIMBER PRODUCTION

Introduction

In this section we provide an overview of rates and rules in the United States that can have a significant influence on the taxation of paper manufacturing and forestry and timber production. Similar descriptions of rates and rules in competing countries are in the next section. Tables 2 and 3, above, provide a summary and comparison of the major provisions.

In general, the tax rates and tax rules that are summarized in sections III and IV reflect provisions which at the time of this writing are effective for 2005. Future changes are being considered in several countries, but the calculations in this report assume rates as currently enacted.

Individual Tax Provisions

Investment income that individuals receive in the form of interest is fully taxable under federal income tax rules at the same rate of tax applying to wage income. The top federal ordinary income tax rate is 35 percent. Together with a representative state income tax rate of 7 percent, the top combined rate of tax is 39.6 percent after accounting for the deductibility of state income taxes when computing federal income tax.⁴

Dividends and capital gains of individuals are eligible for a reduced tax rate. If the underlying asset is held for more than 12 months, a top federal rate of 15 percent applies to capital gains. State income tax systems generally tax capital gains at regular rates. As a result, using a representative state income tax rate of 7 percent, the top combined federal and state income tax rate on capital gains is 19.6 percent.

Business Tax Provisions

Income tax rates.--The top federal corporate statutory tax rate is 35 percent. Beginning in 2005, qualified domestic production activities are eligible for a deduction equal to 3 percent of income in 2005 and increasing to 9 percent by 2010. Both paper manufacturing and timber production are eligible for the deduction. For the purposes of this study, we assume the deduction is fully phased-in at the 2010 level. A representative

⁴ This is calculated as 39.6 percent = (35 percent) + (7 percent) * (1 - 35 percent)

state income tax rate on corporate income is 6.5 percent. Since the state income tax is deductible against federal income tax and assuming that states do not adopt the qualified production activities deduction, the combined corporate tax rate is 36.3 percent.⁵ The sale of timber is eligible for capital gain treatment. Prior to 1986, corporate capital gains were taxed at reduced rates. Since 1986, however, capital gain of a corporation is taxed at the same rate as other income.

The United States does not have a territorial tax system. The United States taxes corporations on their worldwide income with a credit for foreign taxes. With some exceptions, dividends paid by foreign subsidiaries to a U.S. parent company are taxable at the time dividends are remitted.

In most countries that tax foreign-source income, the foreign tax credit is a proportionate share of the foreign taxes actually paid, and the share is determined by the ratio of dividends paid to foreign income earned. However, the United States requires recomputation of foreign subsidiary income based on a measure of income referred to as "Earnings and Profits." This measure of income generally results in an acceleration of income tax. As a result of the recomputation, U.S. parent companies may be eligible to claim only a reduced percentage of foreign tax payments as a foreign tax credit relative to the credit permitted by other countries that tax foreign-source income.

U.S. companies with accumulated foreign earnings abroad are eligible for a temporary deduction on amounts that they repatriate over the coming year. Because of the temporary nature of this provision, the calculations in this report do not include any impact from this provision.

Depreciation.--Equipment used in paper manufacturing is predominantly depreciated over a 7-year useful life using the double declining balance method with a switch to straight-line at the time that optimizes the depreciation deduction. The United States requires use of a convention that newly acquired equipment is first put to use at midyear, which reduces the first year deduction by one-half. Equipment used in the cutting of timber is generally recovered over a 5-year useful life, and other forestry equipment is recovered over a 7-year useful life. Buildings used in paper manufacturing are recovered using the straight-line method over 39 years.

Under the Alternative Minimum Tax, equipment is depreciated over the same useful life as for regular tax purposes, but depreciation deductions are based on a declining balance rate of 150 percent with a switch to straight-line. Relative to the regular tax system, this method of depreciation defers depreciation deductions and accelerates tax.

⁵ This is calculated as $36.3 \text{ percent} = (1 - 9 \text{ percent}) * (35 \text{ percent}) + (6.5 \text{ percent}) * (1 - (1 - 9 \text{ percent}) * (35 \text{ percent}))$.

Inventory.--The United States permits inventories to be accounted for using the last-in, first-out method. The United States also requires all indirect costs to be capitalized in the inventory costs of manufactured property.

Forestry and timber costs.--In general, costs incurred in connection with reforestation must be amortized over a seven-year period (only the first \$10,000 of such costs may be deducted currently or "expensed"). Reforestation costs include costs of site preparation, seeds or seedlings, and depreciation of equipment, labor, and tools. Silviculture costs and ongoing expenses associated with timber management may be expensed. Property taxes on timber lands and the cost of insurance may be deducted currently.

Property taxes.--State and local governments may assess property tax on the value of timber lands and other business property. Rates vary widely across localities and are based on assessed valuations that are also determined according to disparate practices.

IV. INCOME TAX RULES IN COMPETING NATIONS THAT AFFECT PAPER MANUFACTURING AND TIMBER PRODUCTION

Introduction

In this section we provide an overview of income tax rates and rules in Brazil, Canada, China, Finland, Germany, Indonesia, and Russia. The summaries focus on the taxation of investment income and the taxation of business income in paper manufacturing and timber production. The cited tax rates are the maximum rates that apply to income from these sources.

A. Brazil

Individual Tax Provisions

Investment income earned in the form of interest on bank deposits or corporate bonds is taxed at a maximum national tax rate of 20 percent. Corporate dividends are not subject to individual taxation if paid out of profits earned after December 31, 1995. This exemption is a method of integrating corporate and personal taxes on corporate earnings. Capital gains on long-term holdings of stock are taxed at a 15-percent maximum national tax rate.

There are no significant local taxes on the income of individuals.

Business Tax Provisions

Income tax rates.--The top national corporate statutory tax rate applying to corporate income is 34 percent (including a 9-percent social contribution tax). Dividend and interest income from foreign subsidiaries of Brazilian corporations are subject to the same rates. A tax credit is provided for foreign taxes.

There are no significant local taxes on business income.

Depreciation.--Equipment used in paper manufacturing and timber growing is predominantly depreciated using the straight-line method over a 5-year useful life (the useful life was recently cut in half from 10 years). Buildings used in paper manufacturing are depreciated using the straight-line method over a 25-year useful life.

Inventory.--Inventory may not be accounted for under the last-in, first-out method.

Forestry and timber costs.--Most costs, including the cost of machinery, roads, seeds and seedlings, must be capitalized and recovered at the time timber is harvested. This is true whether these costs are incurred during reforestation or silviculture. Certain labor costs and inexpensive tools may be deducted currently.

Property taxes on timber lands may be deducted currently. The cost of insurance is amortized over the period of insurance.

Property taxes.--Rural land and buildings are subject to a national property tax (ITR) at rates that vary with the stage of development or productivity of land. Real estate taxes are assessed by local governments at rates that vary based on the assessed valuation of the real estate (IPTU).

B. Canada

Individual Tax Provisions

Investment income earned in the form of interest on bank deposits or corporate bonds is taxed at a maximum national tax rate of 29 percent. Local taxes vary by province and either are expressed as a percentage of federal income tax or are based on the federal tax base. Provincial taxes are not deductible from national tax. A representative combined rate of national and local income tax in 2001 on interest income is 46.4 percent.⁶

Corporate dividends are subject to individual taxation but dividend relief is provided through an imputation credit at the national and provincial levels. The effective rate of tax (combined national and representative provincial) after accounting for the dividend credit is 23.3 percent.

Capital gains on long-term holdings of stock are taxed at half the rate applying to interest income. The maximum rate of tax (combined national and representative provincial) is 23.2 percent.

Business Tax Provisions

Income tax rates.--The top national corporate statutory tax rate applying to corporate income from timber or paper manufacturing is 22.12 percent. Provincial taxes vary. For example, in Ontario, the rate of tax is 12 percent. Because the provincial tax is not deductible, the top combined statutory tax rate is 34.12 percent for a corporation in Ontario.

Dividend income from a foreign subsidiary of a Canadian corporation is exempt from taxation if the income is earned in a treaty country. Foreign-source interest income is subject to tax with a tax credit provided for foreign taxes. The maximum combined rate of tax on this income for a corporation in Ontario is 41.12 percent.

Depreciation.--Equipment used in paper manufacturing and timber growing is predominantly depreciated using the declining balance method at a 30 percent annual rate. Buildings used in paper manufacturing are depreciated using a declining balance rate of 4 percent.

⁶ Tax rates for Canada were calculated assuming the company was located in Ontario

Inventory.--Inventory may not be accounted for under the last-in, first-out method.

Forestry and timber costs.--Recovery of most costs begins when they are incurred, either through an immediate full deduction (labor, short-lived tools, seeds and seedlings) or through depreciation (equipment and roads). This is true whether the costs are incurred during reforestation or silviculture. Property taxes on timber lands and the cost of insurance may be deducted currently.

Property taxes.--Property taxes are assessed by local governments at varying rates on land and buildings. Privately owned forest land that is part of an agriculture reserve and subject to a forest management plan is taxed annually. Crown land over which a license to harvest timber has been granted is excluded from taxation. Holders of timber licenses pay stumpage fees on the volume of timber cut.

C. China

Individual Tax Provisions

Investment income earned in the form of interest on bank deposits and corporate bonds and dividends from corporations are taxed at a top rate of 20 percent. The Chinese system does not offer taxpayers any relief from the taxation of corporate dividends.

Capital gains on stock in Chinese companies listed on Chinese stock exchanges are exempt from tax.

Localities do not impose taxes on income.

Business Tax Provisions

Income tax rates.--The top national corporate statutory tax rate applying to corporate income from paper manufacturing is 30 percent. Additionally, corporate income is subject to a 3-percent local surtax, which is not deductible from the national tax. The Chinese government is currently discussing lowering rates in 2006, but there have been no final decisions. Effective since 2001, a zero tax rate applies to timber income (income from timber growing, timber seeds development, and primary timber products processing is exempt from corporate income tax).

Chinese corporations are taxed on their worldwide income. Foreign-source interest and dividend income is subject to tax with a tax credit provided for foreign taxes. The top tax rate, including the local surtax, on income from foreign sources is 33 percent.

Depreciation.--Equipment used in paper manufacturing and timber growing is predominantly depreciated using the straight-line method at a 10 percent annual rate. Buildings used in paper manufacturing are depreciated using a straight-line rate of 5 percent

Inventory.--Inventory may be accounted for under the last-in, first-out method.

Forestry and timber costs.--Recovery of most costs begins when they are incurred, either through an immediate full deduction (labor, short-lived tools, seeds and seedlings) or through depreciation (equipment and roads). This is true whether the costs are incurred during reforestation or silviculture.

Property taxes.--Real estate taxes are assessed by the national government on land and buildings.

D. Finland

Individual Tax Provisions

Beginning in 2005, investment income earned in the form of interest on bank deposits or corporate bonds is taxed at a maximum national tax rate of 28 percent. Corporate dividends are subject to individual taxation, but dividend relief is provided through a partial imputation credit of 30 percent. The resulting individual income tax rate on dividends is 19.6 percent.

Capital gains on long-term holdings of stock are taxed at a maximum rate of 28 percent, but the taxable gain is limited to 80 percent of the sales price.

There is no local tax on individual income.

Business Tax Provisions

Income tax rates.--The top national statutory tax rate applying to corporate income from timber or paper manufacturing is 26 percent. Dividend income from a foreign subsidiary of a Finnish corporation is generally exempt from taxation. Foreign-source interest income is subject to tax with a tax credit provided for foreign taxes. The maximum national rate of tax on this income is 26 percent.

There are no local taxes on business income.

Depreciation.--Equipment used in paper manufacturing and timber growing is depreciated at a declining balance rate of 25 percent. Buildings used in paper manufacturing are depreciated using a declining balance rate of 7 percent.

Inventory.--Inventory may not be accounted for under the last-in, first-out method.

Forestry and timber costs.--Most costs may be recovered currently, either through an immediate full deduction (labor, short-lived tools, seeds and seedlings) or through depreciation (equipment and roads). This is true whether these costs are incurred during reforestation or silviculture. The cost of insurance may be deducted currently.

Property taxes.--Finland levies no property taxes on property used in business. Individuals are subject to a wealth tax of 0.8 percent on the amount of taxable wealth (including timber holdings) in excess of 250,000 Euros. The wealth tax is not deductible against other taxes. The government has announced that it plans to abolish the wealth tax in 2006.

E. Germany

Individual Tax Provisions

Investment income in the form of interest or dividends is included in individual income for tax purposes. Income in the highest bracket in 2005 is subject to an ordinary tax of 42 percent and a Solidarity surcharge of 5.5 percent, producing a total top rate of 44.3 percent. Localities assess trade taxes on individual business income, but they are creditable under the national tax and add no burden. Thus, the maximum tax rate on interest income is 44.3 percent. To relieve double taxation, individuals may deduct one-half of dividend income, making the effective rate on dividend income equal to 22.2 percent.

Long-term capital gains are free of tax. Gain on a building held for over 10 years or other assets held over 12 months qualifies as long-term.

Business Tax Provisions

Income tax rates.--The top national corporate rate is 25 percent, which is subject to the Solidarity surcharge of 5.5 percent, increasing the rate to 26.4 percent. Local trade taxes range from 12 to 20.5 percent; these taxes are own-tax deductible and deductible from the national tax. Using a municipal trade tax of 20 percent, the total corporate tax rate reaches 38.2 percent.

Ninety-five percent of dividend income from a foreign subsidiary of a German corporation is exempt from tax. Foreign-source interest income is subject to tax with a tax credit provided for foreign taxes.

Depreciation.--Equipment used in paper manufacturing and timber growing is depreciated using either the straight-line method or the declining balance method at a rate of 20 percent (with a switch to straight-line when optimal). The depreciation life of equipment varies by type and industry, but is generally 5, 7, or 10 years.

Buildings are depreciated using the straight-line method over 25 to 50 years.

Inventory --Inventory may be accounted for under the last-in, first-out method.

Forest and timber costs.--In general, recovery of costs begins when they are incurred, either through an immediate full deduction (labor, short-lived tools, seeds and seedlings)

or depreciation deductions (equipment and roads) Costs are treated the same whether in reforestation or silviculture.

Property taxes.--Localities assess a real estate tax on immovable property used in a business or for private purposes The tax is based on the fiscal value of the property, which represents a multiple of the average rent which could be collected on a comparable property The fiscal value is generally lower than the actual value of the property.

F. Indonesia

Individual Tax Provisions

Investment income earned in the form of interest on bank deposits or corporate bonds is taxed at a maximum national tax rate of 15 percent. Corporate dividends are subject to individual taxation at a maximum national rate of 35 percent. No provision is made for dividend relief to account for corporate taxes paid on this income.

A tax of 0.1 percent is levied on the sales price of stock holdings. In effect, for long-term holdings of stock the capital gains tax on incremental appreciation is 0.1 percent.

There is no local tax on individual income.

Business Tax Provisions

Income tax rates.--The top national corporate statutory tax rate applying to corporate income from timber or paper manufacturing is 30 percent. Dividend income from a foreign subsidiary of an Indonesian corporation and foreign-source interest income are subject to tax with a tax credit provided for foreign taxes. The maximum national rate of tax on this income is 30 percent.

There are no local taxes on business income.

Depreciation.--Equipment used in paper manufacturing and timber growing may be depreciated using the straight-line method or the declining balance method. The declining balance method results in more accelerated deductions. Paper manufacturing equipment can be recovered at a declining balance rate of 12.5 percent. Buildings used in paper manufacturing are depreciated using the straight-line method over 20 years.

Inventory.--Inventory may not be accounted for under the last-in, first-out method. However, Indonesia does allow the cost of goods sold to be determined on the basis of average costs.

Forestry and timber costs.--There are no specific tax rules on whether costs incurred in the growing of timber should be capitalized and recovered through depletion, or depreciated in the case of machinery, or expensed in the case of labor and materials. The

tax rules do require conformity between the method chosen for accounting purposes and taxes. For a taxpayer with sufficient income against which to claim deductions, currently deducting these expenses will result in the lowest present value of tax payments.

Property taxes.--Indonesia levies a national property tax on land, equipment, and buildings. This tax is deductible against taxable income.

Special export tax on timber.--Indonesia levies a special tax at a rate on timber exports. This tax is in addition to the normal income tax that applies to export income.

G. Russia

Individual Tax Provisions

Investment income earned in the form of interest on bank deposits or corporate bonds is taxed at a maximum national tax rate of 13 percent.

Corporate dividends are subject to withholding tax of 9 percent, but no additional tax at the individual level (the rate increased from 6 percent beginning in 2005).

Capital gains on holdings of stock are included in income and taxed at normal rates, or 13 percent

There is no local tax on individual income.

Business Tax Provisions

Income tax rates.--The national corporate statutory tax rate applying to corporate income timber or paper manufacturing is 6.5 percent. In addition, localities receive the proceeds of an additional 17.5 percent of corporate income, resulting in an overall rate of 24 percent (local taxes are not deductible from the national tax).

Dividend income from a foreign subsidiary of a Russian corporation is subject to a 15 percent tax rate, while foreign-source interest income is subject to tax at the standard rate of 24 percent. A tax credit is provided for foreign taxes.

Depreciation.--Equipment used in paper manufacturing is predominantly depreciated using the double-declining balance method over the useful life. Once the residual value of the asset reaches 20 percent of the original value, the straight-line method is used. For most paper and timber equipment, the useful life spans 10 to 15 years.

Buildings used in paper manufacturing are depreciated using a straight-line method over the useful life, which generally exceeds 20 years.

Inventory.--The last-in, first-out method of inventory accounting is permitted in Russia.

Forestry and timber costs.--In general, recovery of costs begins when they are incurred, either through an immediate full deduction (labor, short-lived tools, seeds and seedlings) or depreciation deductions (equipment, roads, and buildings). Costs are treated the same whether in reforestation or silviculture.

Property taxes.--Property is subject to a local tax on the net book value of fixed assets. The rate is set by localities and cannot exceed 2.2 percent.

V. METHODOLOGY FOR ANALYSIS

Measuring Disincentives: Effective Tax Rate

Concept.--Our measure of the disincentive that a tax system poses for investors is the "effective tax rate." It is the percentage of income from an investment that is expected to be collected in income tax from all participating investors combined. Both income and taxes are counted over the life of the investment project, and they are discounted back to dollars of constant value as of the beginning of the investment. Therefore, for a given flow of income and a given amount of tax in undiscounted dollars, a lower effective tax rate will result if the taxes are bunched late rather than early in the life of the investment.

For example, suppose that an investment is estimated to generate \$100 of income and \$40 of income tax, measured in dollars of current value. The effective tax rate would be \$40 divided by \$100, or 40 percent.

A streamlined illustration of the effective tax rate concept is presented on the next page.

- In this extremely simplified five-step example, an individual Investor puts \$100 in the corporation called Company at the end of 2004 (step 1).
- Company uses Investor's funds to make products which it sells for \$120 at the end of 2005 (step 2).
- Immediately thereafter, Company remits \$8 to Government as a 40-percent tax on \$20 of income (step 3).
- Company remits the other \$12 of profit to Investor, and Company returns Investor's \$100 of capital (step 4).
- Investor immediately pays Government \$4 as a 33-percent tax on the \$12 of income from Company (step 5).

Measured in 2005 dollars, this is a \$103 investment (\$100 increased by an assumed 3-percent inflation). The investment generates \$17 of income (\$120 in sales less \$103 invested). Government collects a total of \$12 of tax out of the \$17 of income. Hence the effective tax rate is \$12 divided by \$17, or 70.6 percent.

Streamlined Illustration: Effective Tax Rate

Facts

End of 2004

1. Investor puts \$100 into Company.

End of 2005

2. Company sells \$120 of product to Public
3. Company pays 40% tax on \$20 of income. Tax is \$8
4. Company pays Investor the remaining \$12 of income and returns Investor's \$100 of capital.
5. Investor pays 33% tax on \$12 of income Tax is \$4.

Results (in 2005 dollars)

a. Original Investment	\$103	(\$100 in 2004; 3% inflation)
b. Sales	\$120	
c. Company profit	\$17	(<i>b</i> minus <i>a</i>)
d. Taxes	\$12	(by Company and Investor)
e. Effective tax rate	70.6%	(<i>d</i> divided by <i>c</i>)

Marginal investment.--An effective tax rate is always computed for the “marginal investment.” The marginal investment is defined to be the investment that generates the minimum rate of return required by investors, measured after taxes and inflation, but nothing more

The marginal investment is important to the study of taxes and investment disincentives because the decision to undertake this investment clearly depends on the current tax system. The marginal investment would become unacceptable if taxes were to increase and drive the after-tax real rate of return below the minimum required by investors.

In contrast, an investment that is vastly superior or inferior to the marginal investment is not a good one to study in order to measure investment disincentives imparted by the income tax system because the decision to accept or reject would not be affected if taxes were slightly higher or lower.

Indicator of disincentives.--There are two markers that make the effective tax rate a telling indicator of investment disincentives: (i) zero and (ii) the statutory tax rate.

If the effective tax rate is zero, it indicates that the tax system is taking nothing out of the income stream of that (marginal) project for which tax considerations really matter as to whether to proceed. In other words, the tax system imparts no disincentive to invest in that case. In the alternative event that the effective tax rate is negative, it indicates that the tax system is contributing to the minimum required rate of return and is subsidizing the project. But in the more conventional alternative in which the effective tax rate is positive, it indicates that the tax system is taking something from the income stream and is putting up a disincentive to investment; the marginal investment has to be that much better to provide the minimum rate of return to investors and pay taxes.

The second marker is the statutory tax rate. This is in a sense the “advertised” tax rate, the rate popularly known and applicable to wage earners, the rate most directly sanctioned by the political process. (In the United States the top statutory tax rate on individuals is 35 percent--39.6 percent after adding in a federally deductible state income tax of 7 percent). If the effective tax rate is about equal to the statutory tax rate, it indicates that investment income is being treated in about the same manner as wage income. If the effective tax rate is much above the statutory tax rate, it indicates that the investment disincentives actually imparted by the tax system are well above those suggested by the advertised tax rate. And if the effective tax rate is much below the statutory tax rate, it indicates that the tax system does not impede investment as much as suggested by the advertised tax rate.

To repeat, the effective tax rate measure used in this study is a measure of the severity of investment disincentives erected by the income tax system. It is not the same as the “effective tax rate” that is reported in corporate financial statements or analyses that focus on an average tax rate for corporations. An average corporate tax rate is the ratio of tax to pre-tax profit over all the investments of a company, measured usually for just a single year, and counting only taxes remitted and income received by the company. The effective tax rate that we compute refers to tax and pre-tax profit for only the *marginal* investment of a company, measured over the *multiyear* life of that investment, and counting taxes remitted and income received not only by the company itself but also by the *individual investors* who supplied the debt and equity to finance the company’s investment.

Use in prior research.--This approach to measuring investment disincentives has been widely used in academic research and policy decision making, at least since the early 1980s. See, for example, *The Taxation of Income from Capital. A Comparative Study in the United States, the United Kingdom, Sweden, and West Germany* (eds. Mervyn King and Don Fullerton), University of Chicago Press, 1984; *Tax Reform and the Cost of Capital. An International Comparison* (eds. Dale W. Jorgenson and Ralph Landau), Brookings Institution, 1993; *Taxing Profits in a Global Economy*, Organization for Economic Cooperation and Development, 1991, and various publications of the Joint Committee on Taxation of the U.S. Congress

Standardized Investment Projects

Assisted by information from the Organization for Economic Cooperation and Development and the American Forest & Paper Association, we have defined a paper manufacturing project and a timber project according to their sources of financing and constituent assets

With an eye to representative conditions, we have assumed that a domestic corporate investment is financed by debt, retained corporate earnings, and new issuances of corporate shares in the following proportions: 35 percent by debt, 55 percent by retained earnings, and 10 percent by new shares

Alternative assumptions with respect to financing result in different effective tax rate computations. For example, increasing the share of investment financing coming from debt (from 35 percent to 50 percent) generally lowers the marginal effective tax rate across countries. However, the general ordering does not change: the United States still has the second highest marginal effective tax rate (see Table 4).

Table 4. Impact of Changing the Source of Financing, 2005

	United States	Brazil	Canada	China	Finland	Germany	Indonesia	Russia
Paper Manufacturing								
35% weight on debt	51%	28%	63%	30%	43%	48%	34%	21%
50% weight on debt	50%	22%	64%	27%	41%	49%	31%	16%
Corporate Forestry								
35% weight on debt	37%	22%	51%	17%	31%	30%	8%	9%
50% weight on debt	36%	16%	51%	22%	28%	33%	4%	4%

Source: PricewaterhouseCoopers calculations. Under the alternative assumption of 50 percent debt finance, it is assumed that 40 percent is financed through retained earnings and 10 percent is financed through new shares

The paper manufacturing project is comprised of investments in machinery, structures, and inventory in the following proportions: machinery, 64 percent; structures, 20 percent; and inventory, 16 percent. The timber project is comprised of investments in land, reforestation, and silviculture in the following proportions: 44 percent land, 29 percent reforestation, and 27 percent silviculture. A 30-year growing period is assumed.

While these percentages were chosen to approximate the typical composition of investment projects, we realize that opportunities for private timber land ownership are quite limited in certain countries. Nevertheless, we analyze the same standardized investments in all competing countries in order to isolate the differential impacts of differences in tax rules.

Similar to the source of financing assumptions, varying the constituent asset assumptions would result in effective tax rates that differ but not affect the ranking of the United States: under almost any alternative composition, the U.S. effective tax rate would be the second highest.

For foreign investment we need to specify both the financing of the foreign subsidiary and the parent company. The foreign subsidiary is assumed to finance its investment by using an equal mixture of retained earnings, borrowing from the parent company, and new capital from the parent company. The parent company is assumed to raise its capital in the same proportions as for domestic investment: 35 percent by debt, 55 percent by retained earnings, and 10 percent by new share issues.

These percentages are important because an income tax system may accord very different treatments to different assets or different means of finance. In the United States, for

instance, the tax system treats corporate financing by debt more favorably for investors than financing by new shares because interest payments are deductible at the corporate level whereas corporate dividend payments are not.

Strengths and Limitations

The concept of the effective tax rate enjoys a good reputation among economic analysts because it provides a comprehensive indicator of the impact of many facets of income taxation, not just the statutory tax rate. No other methodology does a better job in this respect.

However, the effective tax rate concept has its limitations. The measure assumes that income flows from the project under consideration are known with certainty, even though most investments entail a degree of risk. Given variations within countries on the valuation of property for property tax assessments, these taxes are also excluded from the effective tax rates reported in this study.

Research Strategy

The first step in the research strategy is to analyze the tax applying to a domestic investment undertaken by a domestic company, repeating the analysis for each of the eight countries. For instance, we assume that a standardized paper manufacturing project is undertaken in Brazil by a Brazilian corporation, then in Canada by a Canadian corporation, and so on, computing the effective tax rate in each country. This same process is repeated for a standardized timber project. This procedure addresses the question of tax disincentives to investing at home that are faced by corporations due to tax systems in their own countries.

The second step is to analyze the tax applying to a foreign investment project in paper manufacturing undertaken by a multinational corporation, again repeating the analysis for multinational corporations headquartered in each of the eight countries. We assume that the standardized paper manufacturing project is undertaken in the same foreign country (not in the competing group) by a Brazilian corporation, a Canadian corporation, and so on, computing the effective tax rate in each case. The foreign country is not an actual place, but the parameters of its tax system are intended to be representative of expanding economies in Asia and South America--namely, a 30-percent corporate income tax and a 5-percent withholding tax on dividends paid by subsidiaries of foreign corporations. This procedure addresses the question of tax disincentives to investing abroad that are faced by corporations due to tax systems in their own countries.

**REDUCING TAX DISINCENTIVES FOR
CORPORATE INVESTMENT IN
PAPER MANUFACTURING AND
TIMBER PRODUCTION**

prepared for

American Forest and Paper Association

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REDUCING TAX DISINCENTIVES FOR CORPORATE INVESTMENT IN PAPER MANUFACTURING AND TIMBER PRODUCTION

A. Background

Purpose of Study

How much change is needed to make U.S. income taxes moderately competitive compared to the tax systems of other nations that have significant papermaking and timber growing industries? This question is explored by examining how hypothetical changes in income tax rates, depreciation and amortization rules, and other aspects of federal tax law affect the income tax burden on corporate investment in paper manufacturing and timber production

The hypothetical cases are intended only to illustrate how far the U.S. tax system has to go to become passably competitive. The options presented may or may not ultimately be desirable as legislative options.

U.S. Tax System Less Competitive

We recently undertook a study (*Taxes in Competing Nations*, April 2005) to determine how income taxes in the United States compare with income taxes in seven other countries in terms of facilitating or inhibiting investments in paper manufacturing and timber. According to U.S. forest products industry executives, companies in the other countries--Brazil, Canada, China, Finland, Germany, Indonesia, and Russia--compete aggressively with U.S. companies.

We found that *U.S. income taxes are the second-least favorable of all the competing nations for corporate income from papermaking and timber.*

Central point.--In short, U.S. tax rules consistently raise disadvantages for U.S. corporate investments relative to the tax rules in most of the competing nations. The overall effect is that *U.S. companies cannot undertake certain investments that foreign competitors can undertake profitably* because U.S. investors would be left with too little after paying tax whereas foreign investors would enjoy a sufficient return after paying tax. Because U.S. companies compete against foreign companies in capital and product markets both at home and abroad, the U.S. tax disadvantage ultimately limits the degree to which U.S. companies may successfully challenge foreign competitors.

The Rankings

The specific rankings of the competing nations are displayed at the following exhibits. They pertain to tax rules for 2005 (**Exhibits 1 and 2**), as determinable in April 2005. The rankings refer to income taxes levied on corporate income, first the tax paid by the corporation and second the tax paid by shareholders and lenders as a result of their financing the investments that generated the corporate income.

In general, the United States and Canada have the least competitive income taxes, while Brazil, China, Indonesia, and Russia have the most competitive income taxes. Finland and Germany are closer to the least competitive pair.

We reach these rankings and conclusions by computing effective tax rates in the competing countries. An effective tax rate is the percentage of income that is collected in income taxes over the life of a particular investment project--namely, the project that just barely generates the minimum rate of return required by investors, measured after taxes and inflation. Investors in high-tax countries must invest in high-yield projects to make the minimum after-tax rate of return. Only investors in low-tax countries can invest in *both* medium-yield *and* high-yield projects and still make the minimum after-tax rate of return. This is the basis for ranking countries according to effective tax rates and interpreting their tax systems as facilitating or inhibiting investment.

To illustrate, assume that investors require a minimum rate of return of 6 percent, measured after inflation and after taxes, to commit to any investment. Suppose that a potential project for manufacturing paper would yield an inflation-adjusted rate of return of 10 percent *before* tax. U.S. investors could not commit if the facility were built in the U.S. because their real rate of return, after giving up 51 percent in tax, would be an insufficient 4.9 percent (i.e., 10 percent minus tax equal to 51 percent of 10 percent). Brazilian investors, however, could commit if the facility were built in Brazil because their real rate of return, after giving up 28 percent in tax, would be a satisfactory 7.2 percent (i.e., 10 percent minus tax equal to 28 percent of 10 percent).

Exhibit 1

ISSUE: Where are the tax hurdles the highest for a corporation that would invest in papermaking in its own country?

DOMESTIC TAXATION OF DOMESTIC CORPORATE PAPER MANUFACTURING

Favorability	Country	2005 Total Effective Tax Rate
Least Taxed ↑ ↓ Most Taxed	Russia	21%
	Brazil	28%
	China	30%
	Indonesia	34%
	Finland	43%
	Germany	48%
	Canada	63%

USA 51%

CONCLUSION: The U.S. tax system raises very high hurdles compared to other countries. The effective tax rate of the United States is the second highest in the competing group and 17 percentage points higher than the median of the other countries.

Exhibit 2

ISSUE: Where are the tax hurdles the highest for a corporation that would invest in forestry and timber in its own country?

DOMESTIC TAXATION OF DOMESTIC CORPORATE FORESTRY PRODUCTION

Favorability	Country	2005 Total Effective Tax Rate
Least Taxed ↑ ↓ Most Taxed	Indonesia	8%
	Russia	9%
	China	17%
	Brazil	22%
	Germany	30%
	Finland	31%
	Canada	51%



CONCLUSION: The U.S. tax system raises very high hurdles compared to other countries. The effective tax rate of the United States is the second highest in the competing group and 16 percentage points higher than the median of the other countries.

B. What It Takes to be Competitive: Corporate Paper Manufacturing

Objective

Exhibit 3 lists a number of hypothetical amendments to federal tax rules. The particular details of each alternative are calibrated to lower the U.S. effective tax rate from 51 percent to 34 percent for investments made in paper manufacturing in the United States.

Each alternative would put the United States in the “middle of the pack,” as the 34 percent rate is the median effective tax rate in 2005 among the other competing nations (Indonesia has the median rate). If the median rate was achieved by the United States, U.S. corporations evaluating a new papermaking project for the United States would have a tax advantage over Finnish, German, and Canadian investors evaluating the same project for their respective home countries. However, U.S. corporations would be at a tax *disadvantage* relative to investors in the other half of the competing nations--Russia, Brazil, and China

Comments on Alternatives

Income Tax Rates: U.S. income taxes would become moderately competitive if federal income tax rates were cut by 40 percent. That is, the top corporate and individual tax rate would drop from 35 percent to 21 percent and the individual tax rate on capital gains and dividends would drop from 15 percent to 9 percent.

The current 35-percent rate for corporations is basically the product of the Tax Reform Act of 1986. The essential structure of the 1986 Act was (i) curtailment of deductions and credits that reduced tax, in exchange for (ii) lower tax rates, done so that (iii) total revenues went unchanged. If that “revenue neutrality” had been attained for the corporate income tax in isolation from other taxes, the top corporate income tax rate could have been lowered below 30 percent. However, to build popular support for the Act, it was decided to increase corporate taxes by about 15 percent and reduce individual taxes by a like amount, making the Act revenue neutral over all types of taxes. Thus, the tax reform bill that the Senate took into conference on the 1986 Act provided for a top corporate rate of 33 percent. The top rate was increased in conference to 34 percent, then increased to 35 percent in 1993 in the name of reducing annual budget deficits. In 2004, a deduction for domestic production income was enacted, to be phased in over the 2005-2010 period. Our calculations include the benefit of the nine-percent deduction that will be in effect in 2010.

Depreciation: At present, equipment used in the manufacture of paper is depreciated over 7 years using the double declining balance method, while structures are depreciated over 39 years using the straight-line method. Prior to the Tax Reform Act of 1986, equipment was depreciated over 5 years using the 150-percent declining balance method (approximately) and industrial structures were depreciated over 15 to 19 years using the 175-percent declining balance method (approximately).

No halfway approach to more accelerated depreciation deductions is enough, by itself, to make U.S. income taxes moderately competitive for corporate investments in papermaking. However, it would become so if businesses could deduct all costs of structures and equipment when purchased (“expensing”).

Some have argued for expensing as an essential ingredient of comprehensive tax reform. At present, expensing is very limited: small businesses may expense the first \$100,000 (indexed for inflation) of equipment cost through 2007.¹ In 1981 the House of Representatives passed expensing of virtually all equipment for all businesses of all sizes. However, Congress eventually agreed upon a combination of accelerated depreciation and an investment tax credit (rather than expensing and no investment tax credit) when they enacted the Economic Recovery Tax Act of 1981.

Investment Tax Credit: U.S. income taxes would become moderately competitive with the adoption of a 10-percent investment tax credit for the acquisition of new equipment used in papermaking, assuming full basis adjustment for depreciation. Thus, a corporation would be allowed to reduce its income tax by \$100 for each \$1000 it invests in such equipment while deducting the remaining \$900 through depreciation.

Except for brief periods during which it was suspended or repealed, an investment tax credit was allowed for paper manufacturing equipment between 1962 and 1985. For much of that time the credit rate was 10 percent. Immediately prior to the Tax Reform Act of 1986, new equipment used in the manufacture of paper qualified for a 10-percent investment tax credit, with a reduction in depreciable cost for half of the credit allowed. The 1986 Act generally repealed the investment tax credit.

¹ The \$100,000 was the level for 2003; in 2005 the inflation-adjusted limit is \$105,000

Integrate Individual and Corporate Income Taxes: If a country that has both a corporate income tax and an individual income tax does not integrate the two taxes, then income generated by corporate investments will be exposed to two income taxes while income generated by noncorporate businesses bears just one income tax. In an unintegrated system, corporate shareholders will first pay the corporate income tax and then pay individual income tax on (i) dividends that the corporation pays out or (ii) capital gain on increased stock values due to the earnings that the company retains.

The United States reduces the extent of double taxation of corporate income through the lower statutory individual income tax rates on dividends and capital gains. The individual and corporate tax systems could be fully integrated by eliminating these taxes. Such a change would reduce the U.S. effective tax rate, but it would fail to make the U.S. rate comparable to the median of the competing nations.

Composites: U.S. income taxes could be made moderately competitive with various combinations of lower tax rates, an investment tax credit, and accelerated depreciation. Of course, the requisite change in any one factor would not have to be as great when it is combined with changes in other factors.

Composite #1 would make U.S. income taxes moderately competitive for corporate investment. Under this alternative, business equipment costs would be expensed rather than depreciated and federal income tax rates would be cut by 15 percent. After a 15-percent reduction, the top corporate and individual tax rate would be 30 percent and the top individual tax rate on dividends and capital gains would be 12.5 percent.

Composites #2 and #3 also would make U.S. income taxes moderately competitive for corporate investment.

Under Composite #2, corporations would be allowed to immediately deduct 50 percent of the costs of new business equipment and federal income tax rates would be cut by approximately 30 percent. The top corporate and individual income tax rates would fall to 25 percent and the top individual income tax rate on capital gains and dividends would fall to 10 percent.

Under Composite #3, the depreciation period would be 3 years for equipment and 20 years for structures; in addition, federal income tax rates would come down by approximately 20 percent.

Additional Comments

The reform options shown in Exhibit 3 would also make U.S. income taxes more favorable for U.S. investors who want to build a papermaking facility abroad--provided, of course, that the options were also fully applicable to foreign investments. In the past, the United States has not allowed investment tax credits or accelerated depreciation for equipment used outside the United States. The United States could also explicitly consider reforms directed at reducing the tax burden on investments made abroad. For example, many countries, including some in the competing group, follow the principle that income is taxed only in the territory in which it is earned. Under this territorial principle, the "home" country imposes no tax on income earned from investments made outside its borders.

Exhibit 3
Corporate Paper Manufacturing

WHAT IT TAKES TO BE COMPETITIVE

Current Status in 2005

U.S. effective tax rate	=	51%
Median effective tax rate for competing nations	=	34%

U.S. Alternatives for Change

- 1 Reduce the top individual and corporate income tax rates to 21 percent and to 9 percent for individual capital gains/dividends (a 40-percent reduction in all top rates)
 - Makes the U S tax system moderately competitive.
- 2 Allow expensing in lieu of depreciation for new equipment and structures.
 - Makes the U.S. tax system moderately competitive.
- 3 Adopt a 10-percent investment tax credit for new equipment
 - Makes the U S tax system moderately competitive.
- 4 Eliminate the individual income tax on capital gains and dividends.
 - Falls short. Reduces U.S. effective tax rate to 39 percent.
- 5 Composite #1 Allow expensing in lieu of depreciation for new equipment (but not structures), and reduce the top individual and corporate rate to 30 percent and to 12.5 percent for individual capital gains/dividends (approximately a 15-percent reduction in all top rates).
 - Makes the U.S tax system moderately competitive.
- 6 Composite #2. Allow 50-percent bonus depreciation for new equipment, and reduce the top individual and corporate rate to 25 percent and to 10 percent for individual capital gains/dividends (approximately a 30-percent reduction in all top rates)
 - Makes the U.S. tax system moderately competitive.
- 7 Composite #3. Reduce the depreciation period for new equipment from 7 years to 3 years (double declining balance) and for new structures from 39 years to 20 years (straight line); also, reduce the top individual and corporate rate to 27 percent and to 12 percent for individual capital gains/dividends (approximately a 20-percent reduction in all top rates).
 - Makes the U.S tax system moderately competitive.

C. What It Takes to be Competitive: Corporate Timber Production

Objective

As in the previous analysis, the objective here is to reduce the U.S. effective tax rate so that it is in the middle of the competing nations in 2005 for corporate investments in timber. That means reducing the effective tax rate from 37 percent to 22 percent (see **Exhibit 2**).

Hypothetical alternatives for reducing the U.S. effective tax rate to the median rate of the competing nations are listed in **Exhibit 4**

Comments on Alternatives

Exclusion for Capital Gain: Prior to the Tax Reform Act of 1986, corporations paid a 28-percent tax rate on long-term capital gain rather than the ordinary top rate of 46 percent. The special tax rate therefore functioned like a 39-percent exclusion of corporate capital gain from taxable income.

U S income taxes would become moderately competitive if 40 percent of long-term capital gain on the sale of timber were, once again, excluded from taxable income. This would encourage corporations to retain their timberland for production.

Income Tax Rates: U S. income taxes would become moderately competitive for corporate timber investments if income tax rates were cut by 40 percent for corporations and individuals.

Investment Tax Credit for Reforestation Costs: A 10-percent investment tax credit (with full basis adjustment) for reforestation expenses would slightly lower the U.S. effective tax rate, but it would be insufficient to make the United States moderately competitive.

Recovery of Reforestation Costs: Many competing nations allow reforestation costs to be deducted as they are incurred. However, the current U.S. rule requires that costs be amortized over 7 years (only the first \$10,000 of such costs may be expensed).

Allowing the expensing all such costs would reduce the U. S. effective tax rate only a small amount, reducing it from 37 percent to 35 percent.

Composites: Three composite alternatives illustrate how tax rates, capital gains exclusions, the deduction of reforestation costs, or an investment credit for reforestation costs might be combined to make U S income taxes moderately competitive for corporate timber operations.

Composite #1. If expensing of reforestation costs were coupled with a 30-percent reduction of all individual and corporate income tax rates, the U.S effective tax rate would come close to the median of the competing countries, falling to 24 percent.

Composite #2. Combining a 10-percent investment tax credit for reforestation expenditures with a 30-percent exclusion of long-term capital gains on timber sales makes the United States moderately competitive with the other countries

Composite #3. Allowing the expensing of all reforestation costs and excluding 50 percent of long-term capital gain on the sale of timber would lower the U.S. effective tax rate below the median and would make the United States moderately competitive with the other countries

Exhibit 4

Corporate Timber Production

WHAT IT TAKES TO BE COMPETITIVE

Current Status in 2005

U.S. effective tax rate	=	37%
Median effective tax rate for competing nations	=	22%

U.S. Alternatives for Change

1. Allow 40 percent of long-term capital gain from the sale of timber to be excluded from taxable income (reducing the capital gain tax rate on corporate timber to 21 percent).
 - Makes the U.S. tax system moderately competitive.
2. Reduce the top individual and corporate rate to 20 percent and to 8.5 percent for individual capital gains/dividends (a more than 40-percent reduction in all top rates)
 - Makes the U.S. tax system moderately competitive
3. Adopt a 10-percent investment tax credit (ITC) for all reforestation expenditures.
 - Falls short. Reduces U.S. effective tax rate to 35 percent.
4. Allow expensing for all reforestation expenditures in lieu of amortization
 - Falls short. Reduces U.S. effective tax rate to 35 percent.
5. Composite #1 Allow expensing for all reforestation expenditures and reduce the top individual and corporate rate to 25 percent and to 10 percent for individual capital gains/dividends (approximately a 30-percent reduction in all top rates).
 - Comes very close. Reduces U.S. effective tax rate to 24 percent.
6. Composite #2. 10-percent ITC for all reforestation expenditures and exclude 30 percent of long-term capital gain on timber sales from taxable income (reducing the tax rate on capital gain of corporate timber to 24.5 percent).
 - Makes the U.S. tax system moderately competitive.
7. Composite #3 Allow expensing for all reforestation costs and exclude 50 percent of long-term capital gain on timber sales from taxable income (reducing the tax rate on capital gain of corporate timber to 17.5 percent).
 - Makes the U.S. tax system moderately competitive.