Schools #1

INTERROGATORY

1. If a competitive company benefits from a cost reduction due to lower taxes, it must make a decision as to how that money will be distributed, spent or invested. Please describe the impact on inflation, and the specific mechanism by which that impact takes place, depending on whether competitive companies receiving tax savings make each of the following decisions:

    a. Reduce prices of the company’s goods or services. Please describe how the impact on inflation and the mechanism will differ depending on the percentage of the company’s goods or services that are sold domestically vs. internationally.

    b. Increase dividends or other profit distributions to shareholders. Please describe how the impact on inflation and the mechanism will differ depending on whether the shareholders are

        i. Canadian or non-Canadian, or
        ii. taxable or non-taxable entities.

    c. Increase salaries, benefits, or other remuneration to employees. Please describe how the impact on inflation and the mechanism will differ, if at all, depending on the income or consumption levels of the affected employees (eg. executives vs. unionized employees).

    d. Increase retained earnings of the company. Please describe how the impact on inflation and the mechanism will differ depending on whether the increased retained earnings result in reduced debt, or reduced investment in the company’s equity securities, or no change in the company’s capital structure.

    e. Invest in transactions that do not create productivity or competitiveness gains (e.g. buying existing businesses or other income-producing assets). Please describe how the impact on inflation and the mechanism will differ depending on whether:

        i. The businesses or assets purchased are Canadian or foreign.
        ii. The vendors of the assets, or their shareholders, are Canadian or foreign.

iii. The businesses or assets purchased are represented by listed securities or privately traded securities or property.
iv. The purchase price of the businesses or assets is paid fully by the cost reductions, or is financed in part by new debt or equity of the purchaser.

f. Invest in increasing the productivity or competitiveness of the company receiving the cost reduction. Please describe how the impact on inflation and the mechanism will differ depending on whether:

   i. Investments are in capital assets, or on operating costs that produce long term benefits (such as R&D).
   ii. Investments are to increase productive capacity in order to expand sales or revenues, or to improve efficiency in order to reduce unit costs.

PEG RESPONSE

a. This is the most direct way for lower taxes to slow input price inflation. If all companies used tax savings to lower prices, the benefits of savings would be passed quickly to customers. The slowdown in inflation will be diminished to the extent that Canadians trade the product internationally.

b. If a company used the tax cuts only to bolster distributions to shareholders its reported earnings would surge. If this strategy was pursued by many companies it would encourage an increase in industry capacity. The new supply to the market would slow price inflation. The nationality of shareholders should not have a major effect on inflation. However, the taxation status of the entity does. Non-taxable entities will not receive a direct cost reduction, although they will benefit indirectly by the general slowdown in price inflation.

c. If all companies passed their tax savings on to employees there would be no slowdown in price inflation. The job status of employees will have no major effect on the inflationary impact.

d. If suppliers used the tax cuts only to bolster retained earnings it would, once again, increase its profitability. This would encourage new investment in the industry that slows inflation by increasing the supply of goods and services. The use of the retained earnings would not have a major effect on the inflationary impact.

e. To the extent that established suppliers used the tax cuts only to make non-productive investments the impact on inflation would be reduced. The inflationary impact would not depend much on how the retained earnings were used.

f. To the extent that established suppliers used the tax cuts in investments that increase capacity and/or accelerate productivity growth, inflation would slow.

Schools #2

INTERROGATORY

In the case of each of the answers in question #1, please provide your estimate of the lag between the tax change and the inflation impact you estimate will occur. If the inflation impact is graduated (i.e. builds over time), please provide your estimate of the trajectory of that impact and its timing. In either case, please provide your full calculations.

PEG RESPONSE

I am not qualified to provide accurate calculations concerning the lags involved. However, the lags will be clearly be greater when savings are used to increase capacity or make productivity enhancing investments than they are when they are used to reduce revenue. Lags will be even greater to the extent that savings are used to bolster earnings since then other firms must recognize the profit opportunities and make productive investments.

Schools #3

INTERROGATORY

In the case of each of the answers in question #1, please advise the extent to which either the impact or the mechanism will differ based on whether the inflation measure is GDPIPPIFDD or CPI (All Items).

PEG RESPONSE

The GDPIPIFDD differs from the CPI chiefly in covering capital equipment and government services in addition to consumer goods and services.   The slowdown in GDPIPIFDD inflation will be a little slower in each scenario, chiefly because the government sector does not experience reduced tax expenses. Please note that the government does benefit from a slowdown in the prices of other inputs.

Witness: Mark Lowry

Schools #4

INTERROGATORY

In the case of each of the answers in questions #1, #2, and #3, please advise how your answers would differ, if at all, if we were referring to a U.S. company with changes in U.S. taxes.

PEG RESPONSE

The responsiveness of the Canadian GDPIPI to the drop in domestic taxes would be somewhat less than its U.S. counterpart to the extent that Canada, with a smaller economy and comparably low trade barriers, is more reliant on imports.

Witness: Mark Lowry

Schools #5

INTERROGATORY

In the case of each of the answers in question #1, please advise the extent to which either the impact or the mechanism will differ depending on whether, as effective Canadian corporate tax rates decline, tax rates for U.S. corporations:

a. Decline at a similar pace and level;
b. Remain unchanged;
c. Increase.

PEG RESPONSE

A comparable or greater decline in U.S. corporate tax rates would be likely to magnify the slowdown in the Canadian GDPIPI because of the extensive trade between the two countries. No change or an increase in U.S. corporate tax rates would have the opposite effect. According to *Advantage Canada*, a 2006 publication of the Department of Finance, U.S. corporate income tax rates are trending downward (see chart on p. 74).

Schools #6

INTERROGATORY

Please advise how the inflation outlook and/or projections of the major forecasting bodies (StatsCan, Bank of Canada, major banks, etc.) have been adjusted to reflect the announced changes in corporate tax rates in Canada. Please provide specific references to the publications of those forecasting bodies. Please advise how U.S. bodies that forecast inflation adjust those forecasts to reflect changes in corporate tax rates, and provide examples through references to the publications of those forecasting bodies.

PEG RESPONSE

A quick survey of Canadian government publications revealed two mentions of how tax cuts affect inflation.

1. The January 2008 *Monetary Policy Report Update* of the Bank of Canada states that

> The inflation projection has also been revised down, particularly for 2008, primarily reflecting the price-level adjustment noted above and the recent one-percentage point reduction in the GST. Both core and total CPI inflation are projected to fall below 1 1/2 per cent by the middle of this year before returning to the 2 per cent target by the end of 2009. Excluding the impact of the recent GST reduction, total CPI inflation is projected to average close to 2 per cent throughout 2008 and 2009.

2. The February 19, 2008 edition of the *Latest Release from the Consumer Price Index* states that

> Since the price changes measured by the Consumer Price Index (CPI) take into account the value of the consumption taxes paid by Canadians, the one-percentage-point decrease in the GST announced by the government to take effect in January will have an impact on the CPI in that month.
>
> A rough estimation of this impact is that the rate of change would be lower by 0.6% than it otherwise would have been if the entire amount of the decrease were transferred to consumers through lower prices. To the extent that businesses raise their margins at the same time the impact could be correspondingly less. Also, if

> some businesses had already reduced their prices in anticipation of the coming GST reduction (*e.g.* car dealers), the impact in January would also be less.

I expect that U.S. forecasting agencies make similar pronouncements when there are major changes in corporate tax rates but have not gathered analogous quotations.

Schools #7

INTERROGATORY

Please provide your estimate of the extent to which the domestic prices of goods and services are controlled by non-Canadian markets or price-setters, as opposed to Canadian market forces. Please provide references if available.

PEG RESPONSE

I believe that the Canadian prices of many final goods and services are influenced by non-Canadian business conditions. This reflects low trade barriers and the modest size of Canada's economy. I have gathered no evidence that sheds light on this issue.

Schools #8

INTERROGATORY

Please provide a description of the interaction, if any, between

a. reduced Canadian federal government revenues resulting from corporate tax cuts,
b. Canadian interest rates and the shape of the interest rate curve, and
c. exchange rates between Canadian dollars and the currencies of our major trading partners.

PEG RESPONSE

The Bank of Canada does not adjust interest rates for the first round effects of drops in indirect (*e.g.* sales and excise) taxes. See, for example, the discussion in Tiff Macklem, "A New Measure of Core Inflation", *Bank of Canada* Review, August 2001. I would presume that the Bank would maintain the same policy concerning scheduled cuts in corporate income and capital taxes but have seen no evidence that explicitly supports this notion. If interest rates do not rise mechanistically in response to the tax cuts I would not anticipate that the tax cuts would have much effect exchange rates.

Witness: Mark Lowry

Schools #9

INTERROGATORY

Please provide your calculation of the reduction in GDPIPPIFDD that can reasonably be expected to arise in each of the years 2007 through 2012 as a result of the announced changes in Canadian federal corporate tax rates, federal CCA rates, and Ontario capital tax rates, assuming each is implemented as currently scheduled. If you are unable to calculate the impact on GDPIPPIFDD, please explain why, and provide instead your calculation of the annual reductions in CPI (All Items) instead.

PEG RESPONSE

I am not qualified to prepare an accurate estimate of the inflation impact of the tax reductions.

Schools #10

INTERROGATORY

Please describe the ways, if any, that Canadian core CPI is adjusted for changes in tax rates. Please advise how those adjustments differ based on whether the taxes are direct or indirect, or based on the nature of the tax changes. Please describe the extent, if any, to which similar adjustments are used in the calculation of Canadian GDPIPPIFDD, and describe the reason for any differences from the core CPI adjustments. Please describe how your answers would be different if this question were referring to US core CPI and the US GDP domestic price deflator.

PEG RESPONSE

The Canadian core CPI is adjusted for changes in indirect (*e.g. sales and excise*) taxes but not for the effects of other taxes. For details see Tiff Macklem, “A New Measure of Core Inflation”, *Bank of Canada Review*, Autumn 2001 and Bank of Canada, “Targets for Reducing Inflation: Further Operational and Measurement Considerations”, *Bank of Canada Review*, September 1991.

Schools #11

INTERROGATORY

Please confirm that, in general, if a future cost reduction is known and expected, companies in the economy may in certain circumstances change their investment patterns or amounts in anticipation of the change, but they will less often change their prices before the change has already occurred. Please provide references to any empirical studies known to you that analyse or provide further details on this phenomenon.

PEG RESPONSE

Investments are probably more likely to change in advance of a known and expected future cost reduction than are price reductions. This is due largely to the facts that investments can involve sizable lead times and are generally more sensitive to expectations concerning business conditions over a multiyear period. Investments made in anticipation of a tax cut can, by increasing capacity and raising productivity, start to slow inflation before the tax cuts actually occur.

Witness: Mark Lowry

Schools #12

INTERROGATORY

On average, what percentage of the assets of a Canadian company are in each of Class 1 and Class 45 of the federal CCA tables? What is the percentage of the assets of Union Gas in each of those CCA classes.

PEG RESPONSE

I do not know the answers to these questions.

Witness: Mark Lowry

Schools #13

INTERROGATORY

What percentage of the price of distribution services provided by Union Gas is represented by costs driven by capital assets (ie. costs of capital, including both debt and equity, depreciation, and taxes)? What percentage of the prices of Canadian companies general is represented by costs driven by capital assets (as above)?

PEG RESPONSE

The share of capital cost in the distribution cost of Union Gas is around 56%. I do not know the share of capital cost in the total cost of the typical Canadian company but it is presumably much lower. That is because gas distribution technology is unusually capital intensive.

Witness: Mark Lowry

Schools #14

INTERROGATORY

Please provide copies of all studies, papers or other publications authored by you (or in which you were involved) in which the connection between changes in tax rates or amounts, and changes in the inflation rates, has been analysed or referred to. If any of those documents are empirical studies, please so identify.

PEG RESPONSE

I have not been involved in any publications on this topic.

Schools #15

INTERROGATORY

Please provide a bibliography of all studies or other reference materials used or referred to by you in developing your evidence dated February 8, 2008. Please identify which of those materials are empirical studies of the relationship between tax changes and inflation.

PEG RESPONSE

I did not rely on any studies or reference materials in the preparation of my evidence, which required only economic intuition and a knowledge of index logic.

Witness: Mark Lowry

Schools #16

INTERROGATORY

Please confirm that "the inflation measure and other terms of the PCI formula already provide an appropriate rate adjustment for the event" (Evidence, page 5) would, in the context of tax changes, apply only if the rate adjustment so provided through the PCI is at substantially the same dollar level as the actual change in the cost input.

PEG RESPONSE

I do not understand this question. However, my testimony is clear on the fact that the GDPIPI is not designed to measure the trend in gas distribution cost input prices and therefore may not correctly capture the effect of tax reductions on the price of gas distribution inputs.

Witness: Mark Lowry

Schools #17

INTERROGATORY

Please describe the key ways in which the relationship between monetary policy as it relates to inflation, and fiscal policy, differs between Canada and the United States.

PEG RESPONSE

I am not an expert on this topic. I will note, however, that due to the much larger size of the U.S. economy, U.S. suppliers probably have a larger impact on the domestic prices of goods and services than is true in Canada. This would tend to make prices in the States more sensitive to the impact of corporate tax cuts.

Witness: Mark Lowry