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Canada: Selected Issues

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CANADA

Selected Issues

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Approved by the Western Hemisphere Department

January 7, 1999

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I. THE BEHAVIOR OF THE CANADIAN DOLLAR[1]

1. Over much of the past year, the Canadian dollar experienced periodic bouts of heavy selling pressure, and in late August the currency reached an all-time low value against the U.S. dollar. While the decline in the value and the increase in the volatility of the Canadian dollar have been largely attributed to the sharp deterioration in Canada's terms of trade in the wake of the Asian crisis, from a longer perspective, the recent decline has been part of a downward trend in the currency's value that has occurred since early 1991 (Figure 1). Notwithstanding this trend, the precipitous fall in the Canadian dollar during 1998 has raised some concerns and renewed the debate over the main underlying forces driving the exchange rate.

2. This paper reviews empirical evidence on the main determinants of the real bilateral exchange rate between the Canadian and U.S. dollars, with particular emphasis on the role played by cyclical and longer-term economic factors. The paper also aims to identify the nature of the shocks that have contributed to the recent downward trend in the Canadian dollar. The analysis shows that fluctuations in the real bilateral exchange rate can be explained reasonably well by its long-term fundamentals, such as the terms of trade, Canada's net foreign asset position, the relative price of nontraded to traded goods (which proxies relative productivity growth in the traded goods sector), risk premia, and real interest rates. This finding is buttressed by an alternative model for the real exchange rate that points to long-run supply shocks, such as terms of trade and productivity shocks, as being the most important factors behind the depreciation of the Canadian dollar in 1997 and 1998.

A. Factors Influencing the Real Exchange Rate

3. In the case of Canada, several important regularities stand out in examining the real bilateral exchange rate and some of its likely economic fundamentals (Tables 1 and 2)[2]. First, the cyclical ("transitory") and trend ("permanent") components of the relative price of

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[1]Prepared by Martin Cerisola, Phillip Swagel, and Alex Keenan.

[2]Amano and Van Norden (1995) show that most of the historical variation in the real exchange rate in Canada is attributable to terms of trade shocks, with monetary factors usually playing a minor role. In general, studies have confirmed the importance of terms of trade shocks in accounting for deviations from purchasing power parity (Mendoza, 1995), with an additional but typically weak link between movements in real exchange rates and real interest rate differentials. While Campbell and Clarida (1987) and Meese and Rogoff (1988) found no statistically significant link between the real exchange rate and interest rate differentials, Baxter (1994) presents evidence showing a significant link between the cyclical components of real exchange and interest rate differentials but no cointegrating relationship between them in certain advanced economies.

nontraded to traded goods[3] are positively correlated with their counterparts in the real bilateral exchange rate, while the cyclical and trend components of the net foreign asset position and the risk premium (as proxied by Canada's net government debt relative to the United States) are highly negatively correlated with the real bilateral exchange rate (Figure 2).[4] Second, the cyclical components of the terms of trade, the fiscal balance, and the real interest rate are significantly correlated with the cyclical component of the real bilateral exchange rate. Third, shocks to the real bilateral exchange rate, the relative price of nontraded to traded goods, the relative terms of trade, and the risk premium are highly persistent, as suggested by the high positive autocorrelations, while shocks to the real interest rate differential seem to disappear more rapidly. Overall, these stylized facts suggest that the terms of trade, the relative price of nontraded to traded goods, and risk premia may be important factors in explaining fluctuations in the Canadian real exchange rate.

B. Modeling the Real Bilateral Exchange Rate

4. Following Clark and MacDonald (1998), a real exchange rate equation was estimated for Canada that aims to explain real exchange rate fluctuations in terms of a relevant set of economic fundamentals.[5] The model underlying the equation assumes that the real exchange

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[3]The existence of nontraded goods may allow for two different sources of systematic change in real exchange rates. First, the Balassa-Samuelson effect assumes that the nominal exchange rate adjusts so as to ensure a constant relative price of traded goods over time. However, differences in productivity of traded goods across countries may introduce a bias to the real exchange rate when it is defined using overall price indices. If prices for traded and nontraded goods are linked to wages, and wages to productivity, faster productivity growth in the traded sector in one country would be reflected in higher growth in the relative price of nontraded to traded goods. As a result, the real exchange rate, so defined, would appreciate even if the relative price of traded goods were constant. Second, a demand side bias arising from an income elasticity of nontraded goods that exceeds unity will tend to raise the relative price of nontraded goods as income rises. This relative price is therefore likely to provide a reasonable proxy for the productivity bias between the Canadian and U.S. traded good sector and the difference in the share spent by Canadian and U.S. households on nontradable goods. An increase in any of these variables would induce an appreciation of the real exchange rate.

[4]See Annex I for the definition of variables.

[5]Clark and MacDonald (1998) refer to this as a behavioral equilibrium exchange rate (BEER) approach. As a result, the estimated real exchange rate reflects more of a behavioral equilibrium rather than a long-term equilibrium, since the long-term "equilibrium" values of the fundamental determinants of the exchange rate are not used in the estimation. This methodology is different from that used by the Consultative Group on Exchange Rates

(continued...)

rate is determined by the expectation of the real exchange rate at a certain period in the future, the real interest rate differential for that same period, and the risk premium. In this model, the unobservable expectation of the exchange rate is assumed to be determined exclusively by the terms of trade, the relative price of nontraded to traded goods, and the net foreign asset position.[6] Therefore, a vector autoregressive system (VAR) which includes the real exchange rate, the relative price of nontraded to traded goods, the terms of trade, the net foreign asset position, the net government debt, and the real interest rate differential was estimated to obtain the long-run relationship between these variables (cointegrating vector) (Table 3). A series for the real exchange rate was then derived using the estimated long-run coefficients and the actual values of the economic fundamentals. The coefficients on the long-run determinants are correctly signed and highly significant, suggesting that an increase in the relative terms of trade, the relative price of nontraded to traded goods, the net foreign asset position, and real interest rates in Canada tend to appreciate the real exchange rate over the long run.[7]

5. The estimated model accounts for most of the fluctuations in the Canadian real exchange rate between 1984 and the second quarter of 1998 (Figure 3). The fitted real exchange rate is derived from the estimated cointegrating vector and its long-run fundamental determinants, so that the differences between the actual and fitted rate reflect the effects of unobserved cyclical and random factors, in addition to the extent to which the economic fundamentals differ from their sustainable values. More specifically, the real depreciation that has taken place since early 1991 seems to be explained relatively well by its long-run determinants. A steady decline in the relative terms of trade and, possibly, in the productivity growth of the tradable sector in Canada relative to that of the United States as suggested by

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[5](...continued)
(CGER) at the Fund, which aims at estimating an equilibrium multilateral exchange rate indirectly by comparing the projected saving-investment balance for any country relative to its long-term "equilibrium."

[6]See Clark and MacDonald (1998) for further details.

[7]The model appears to be relatively well specified, as the diagnostic tests for the underlying VAR show that residuals have no serial correlation, are homoskedastic, and are normally distributed (Table 3). However, the results are sensitive to the sample period, the number of lags included in the VAR, and to the expected inflation rate component of the real interest rate differential. A lag equal to two was chosen in order to maximize degrees of freedom in the VAR given the small sample size relative to the number of variables used in the estimation. As seen in Table 4, the presence of serial correlation in the REER equation in the VAR may be reflecting the relatively low degrees of freedom in the system and may be also contributing to the lack of a statistically significant feedback effect (the alpha coefficient) from the lagged deviations of the real exchange rate level from the cointegrating vector onto the variables in the VAR, in particular the change in the real exchange rate.

the relative price of nontraded to traded goods, together with a rapid buildup in net government debt relative to the United States, were the most important contributing factors behind the real depreciation since 1991. In addition to these factors, a narrowing real interest rate differential vis-à-vis the United States and a deteriorating net foreign asset position seem to have also contributed to the real depreciation observed between late 1996 and mid-1998. Even when removing the cyclical component from the long-run economic fundamentals using the Hodrick and Prescott filter (Figure 3), the model still accounts for most of the real depreciation through mid-1998. However, the model is not able to capture fully the real depreciation that took place in the third quarter of 1998, which may be partly explained by the sharp cyclical decline in the terms of trade.

C. An Alternative Approach to Modeling the Real Exchange Rate

6. An alternative methodology for identifying the nature of shocks driving fluctuations in the real exchange rate follows Clarida and Gali (1996), in which a structural VAR that includes real output, the real bilateral exchange rate, and the general price level, is used to assess the extent to which supply, demand, and nominal shocks have been responsible for the weakness of the Canadian dollar.[8] Movements in output, the real exchange rate, and prices can be thought of as corresponding to "supply," "demand," and "nominal" shocks, respectively. Intuitively, a supply shock is defined as a shock that has long-run implications for the level of production, whereas demand and nominal shocks have temporary effects on output. The restrictions imposed on the model are that price shocks do not have permanent effects on output or the real exchange rate; real exchange rate shocks can have permanent effects on the real exchange rate and price level but not on the level of output; and output shocks can have permanent effects on all three variables. In the VAR, restrictions consistent with the analytical model are imposed on the long-run responses of the three variables to unexpected shocks in each of the three variables in the system, while the short-run dynamics of all variables are left unconstrained. The VAR is also used to gauge the average importance of these shocks in accounting for exchange rate movements at various forecast horizons over the period from 1976 to 1998.

7. In assessing the effects of unexpected shocks on the value of the Canadian dollar in 1997 and 1998 (as opposed to simply the effects of past changes in the three variables), the VAR estimates show that adverse supply shocks have accounted for approximately a

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[8] The econometric model here was estimated using quarterly data from the first quarter of 1976 to the third quarter of 1998. This model is based on an extended Mundell-Fleming framework and includes three variables: growth of real GDP in Canada relative to GDP growth in the United States, the percent change in the Canada-U.S. real exchange rate, and the relative rates of inflation in the two countries. Each variable was regressed on a constant, 12 quarterly lags of itself and the other 2 variables in the system. For additional technical details, see Clarida and Gali (1996).

7 percent cumulative decline of the Canadian dollar. Supply shocks in this framework are any influences that have permanent effects on the level of output, such as changes in commodity prices that affect the two countries differently as well as changes in relative productivity. In addition, relative nominal shocks (shocks to the relative money supply and the demand for real balances) between Canada and the United States have contributed to a 3 percent depreciation over the same period (Figure 4). These two types of shocks have been somewhat offset by favorable relative demand shocks, which have accounted for a 2 percent appreciation of the Canadian dollar.

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Annex I: Data Sources and Definitions

The sample period is from the first quarter of 1984 to the third quarter of 1998, based on data available as of December 15, 1998. The sources and definitions are as follows:

real exchange rate (REER) is the bilateral rate, expressed as U.S. dollars per Canadian dollars, adjusted by the differential inflation rates in the respective gross domestic product implicit price deflators. An increase in the variable denotes an appreciation. The variable is expressed in logs. Sources: Statistics Canada and U.S. National Income and Product Accounts.

terms of trade (TOT) is the logarithm of the ratio of Canada's export price index for goods (1992=100) to the import price index relative to the same ratio of the export to import prices of goods for the United States. Sources: Bank of Canada Review, Statistics Canada, and Bureau of Labor Statistics, U.S. Department of Labor.

relative price of nontraded to traded goods (TNT) is the logarithm of the ratio of the Canadian consumer price index to the wholesale or producer price index relative to the equivalent ratio in the United States. Sources: Statistics Canada and U.S. Bureau of Labor Statistics.

net foreign assets (NFA) is the ratio of net foreign assets, excluding monetary gold, to GDP in Canada relative to the same ratio for the United States. Source: OECD, staff estimates after 1994.

relative fiscal balance (RFB) is the ratio of Canada's federal budget balance on a national accounts basis to GDP relative to the same ratio of the federal government balance to GDP for the United States. Sources: Statistics Canada and U.S. National Income and Product Accounts.

relative stock of government debt (NGD) is the ratio of net general government debt to GDP in Canada relative to the same ratio of the net general government debt to GDP in the United States. Sources: Statistics Canada and U.S. Flow of Funds, Federal Reserve Board.

real interest rates (RIR): is the Canadian ten-year government bond yield deflated by a two-quarter moving average of CPI inflation relative to the same estimate of the real long-term interest rate for the United States. Sources: Statistics Canada and Haver Analytics.

Table 1. Canada: Correlations with Canada's Real Exchange Rate

	Correlation with 1/					
	Terms of Trade	Relative Price Nontraded-Traded	Fiscal Balance	Net Foreign Assets	Net Government Debt	Real Interest Rate
Real exchange rate						
Actual	0.29	0.78	-0.30	-0.59	-0.69	0.01
Trend	0.04	0.96	-0.69	-0.66	-0.71	0.03
Cycle	0.60	0.29	0.12	-0.40	-0.75	-0.10

Sources: Statistics Canada; and staff estimates.

1/ From the first quarter of 1984 to the third quarter of 1998. The trend and cycle correlations correspond to detrended data using the Hodrick-Prescott filter. Each variable is defined relative to that of the United States. Since these variables are nonstationary, the correlations for the trend components may not be very meaningful. They are presented to summarize the patterns of movement between the variables within the sample.

Table 2. Canada: Autocorrelation of Canada's Real Exchange Rate and Its Major Determinants

	Autocorrelation Order 1/				
	First	Second	Third	Fourth	Fifth
Cyclical component of:					
Real exchange rate	0.87	0.74	0.61	0.43	0.26
Terms of trade	0.68	0.34	0.17	0.03	-0.07
Relative price nontraded to traded goods	0.95	0.81	0.65	0.48	0.30
Fiscal balance	0.42	0.13	0.03	-0.23	-0.38
Net foreign assets	0.89	0.67	0.43	0.21	0.04
Net government debt	0.87	0.70	0.51	0.34	0.15
Real interest rate	0.47	-0.23	-0.43	-0.27	0.03

Sources: Statistics Canada; and staff estimates.

1/ The auto-correlations correspond to detrended data using the Hodrick-Prescott filter. Each variable is defined relative to that of the United States.

Table 3. Canada: Cointegration Analysis

Multivariate stationarity test 1/

Variable	REER	TOT	TNT	NFA	NGD	RIR
Chi-Square (6)	89.84	83.60	89.30	85.30	86.20	63.20
p-value	(0.000)**	(0.000)**	(0.000)**	(0.000)**	(0.000)**	(0.000)**

Cointegration analysis 2/

Ho: r =	0	1	2	3	4	5
Eigenvalue	0.786	0.394	0.374	0.241	0.149	0.048
Trace	176.7 **	85.8 **	56.3*	28.7	12.4	2.9
Trace II	140.8 *	68.4	44.8	22.8	9.9	2.3

Cointegrating vector for [REER, TOT, TNT, NFA, NGD, RIR, CONSTANT]

=[1 -0.380 -0.887 -0.864 0.987 3.267 -0.155]

Standard Errors for cointegrating vector

=[0 0.133 0.109 0.221 0.095 0.281 0.071]

Estimated Real Exchange Rate Equation

REER = 0.155 + 0.38 TOT + 0.887 TNT + 0.864 NFA - 0.987 NGD + 3.267 RIR

1/ An asterick or double asterisk denotes rejection of the null hypothesis of no unit root at the 5 and 1 percent level of significance, respectively. Augmented Dickey Fuller tests also reject the null of stationarity for each variable.

2/ The Trace and Trace II statistics are Johansen's trace eigenvalue before and after adjustment for degrees of freedom, respectively. The null hypothesis is in terms of the cointegration rank r implying that rejection of r=0 is evidence in favor of at least one cointegrating vector.

Table 4. Canada: Residual Diagnostic Tests

	Residual Diagnostics 1/			
	LM(4)	Normality	ARCH (4)	Chi-Square
Real exchange rate	2.69	0.42	0.29	0.91
	(0.04)*	(0.81)	(0.88)	(0.60)
Terms of trade	0.45	2.86	0.52	0.54
	(0.77)	(0.24)	(0.72)	(0.93)
Relative price nontraded	0.73	1.01	0.42	0.47
	(0.58)	(0.60)	(0.79)	(0.96)
Net foreign assets	1.74	1.98	1.08	0.51
	(0.16)	(0..37)	(0.38)	(0.94)
Net government debt	0.30	0.78	2.67	0.66
	(0.88)	(0.68)	(0.05)*	(0.84)
Real interest rate	1.41	2.79	1.54	1.63
	(0.25)	(0..25)	(0.21)	(0.14)
VAR	1.33	10.01	--	547.50 2/
	(0.06)	(0.61)	--	(0.09)

1/ Significance levels reported in parentheses. LM corresponds to the Lagrange-multiplier test for serial correlation. ARCH stands for autoregressive conditional heteroskedasticy. Chi-square is also a test or heteroskedasticity. An asterisk denotes rejection of the null of no serial correlation at a 1 percent level of significance.

2/ Corresponds to the test for heteroskedasticity based on a multivariate regression of all error variances and covariances on the original regressors and their squares.

FIGURE 1

CANADA

REAL EXCHANGE RATE
TREND AND CYCLICAL COMPONENTS
(in logarithm)

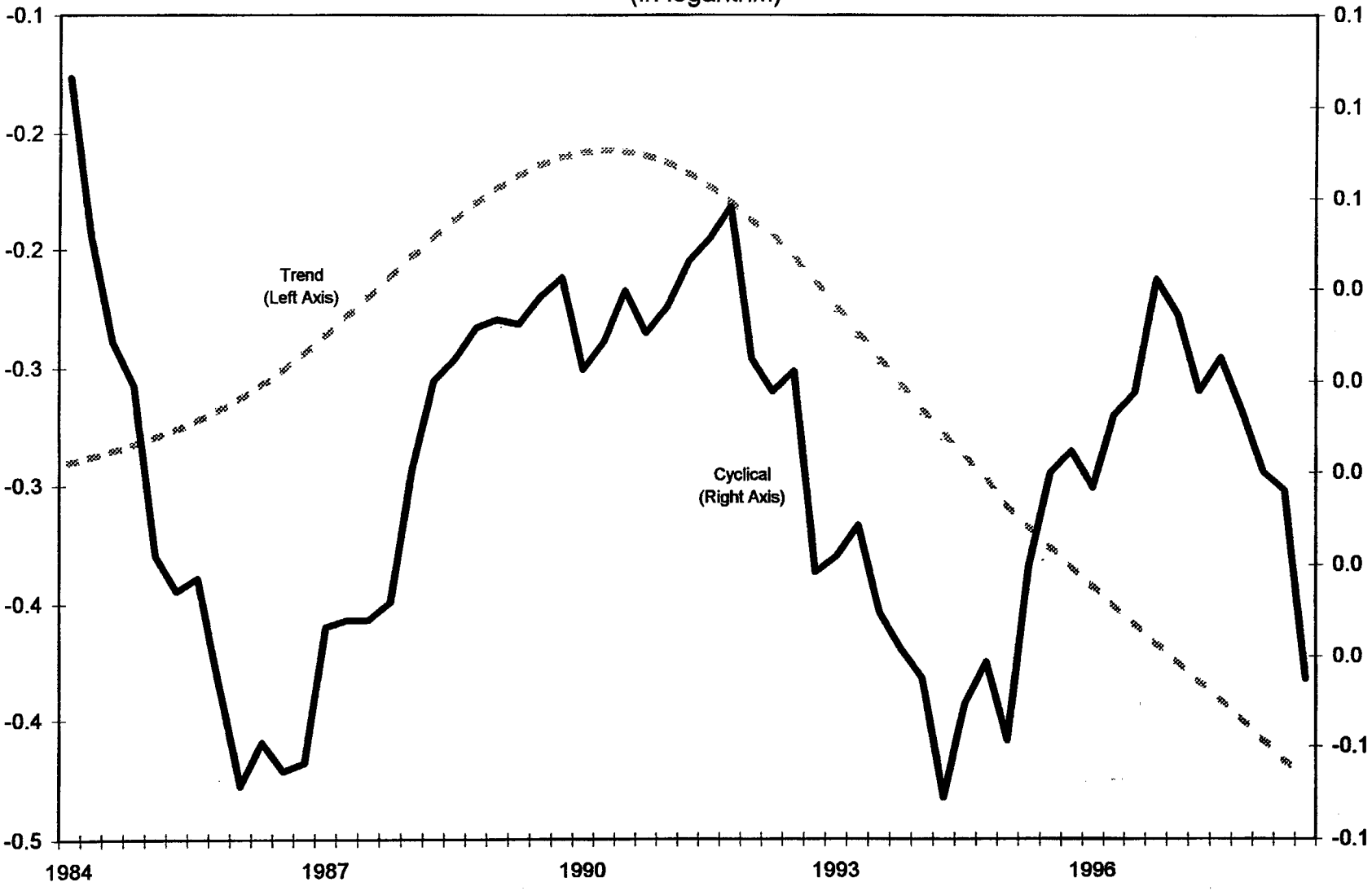
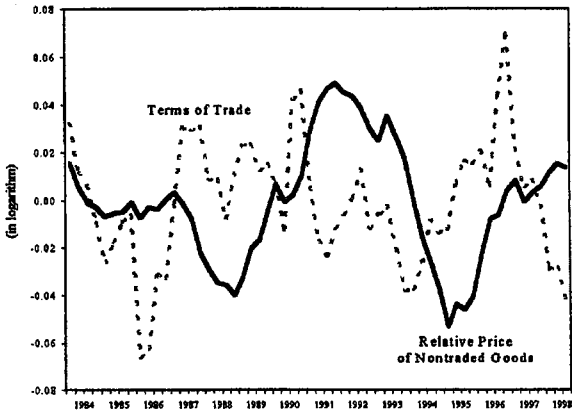


FIGURE 2

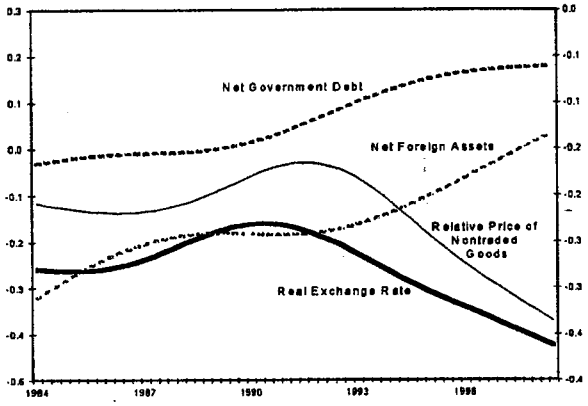
CANADA

REAL EXCHANGE RATE AND LONG-RUN DETERMINANTS 1/

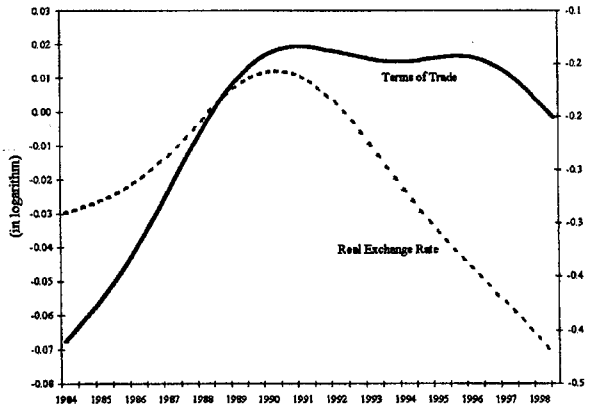
Terms of Trade and Relative Price of Nontraded Goods: Cyclical Components



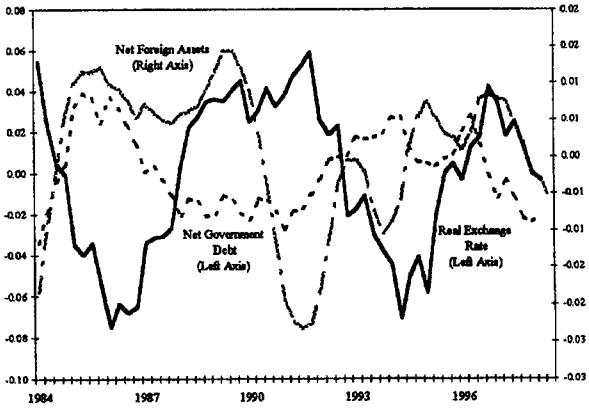
Real Exchange Rate, Net Government Debt, and Relative Price of Nontraded Goods: Trend Components



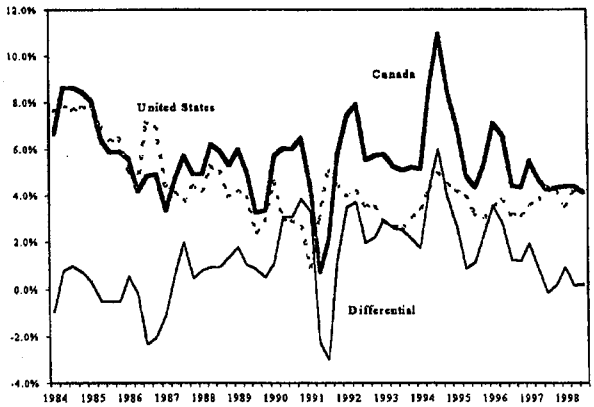
Real Exchange Rate and Terms of Trade: Permanent Components



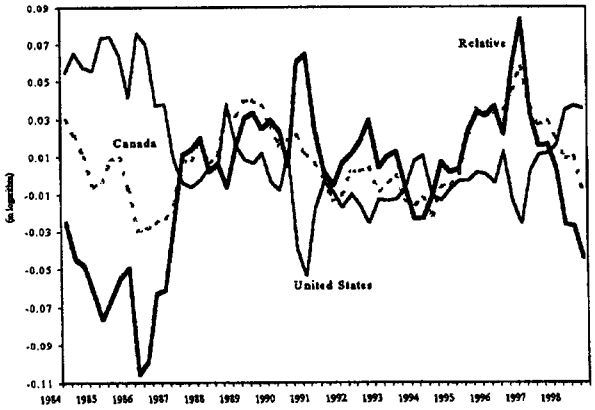
Real Exchange Rate and Net Government Debt: Cyclical Components



Real Interest Rates



Terms of Trade

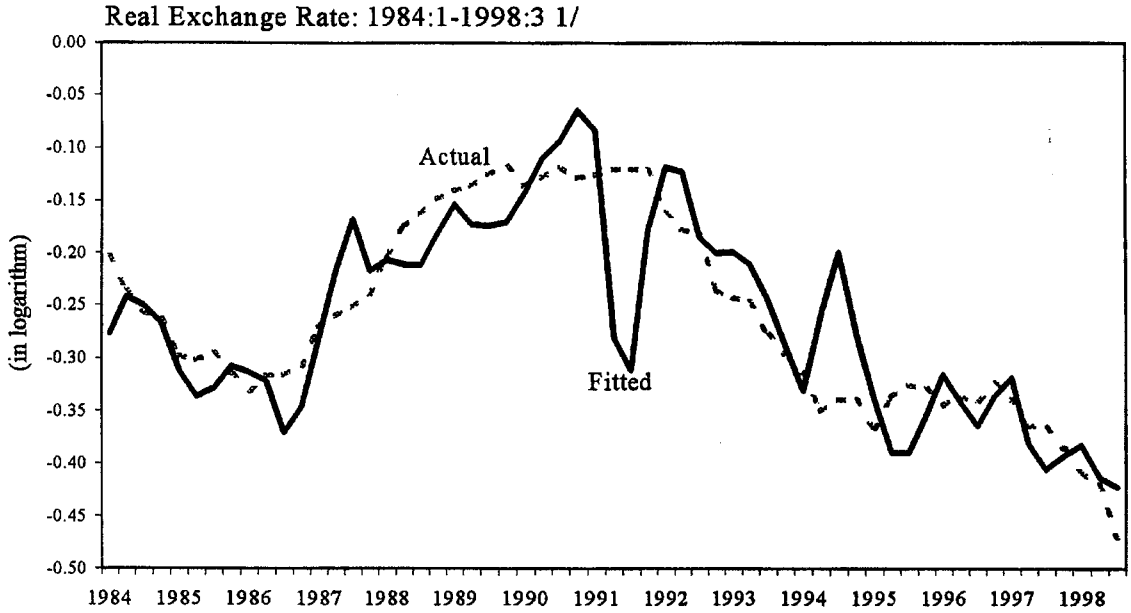


1/ The trend and cyclical components were calculated using the Hodrick-Prescott filter.

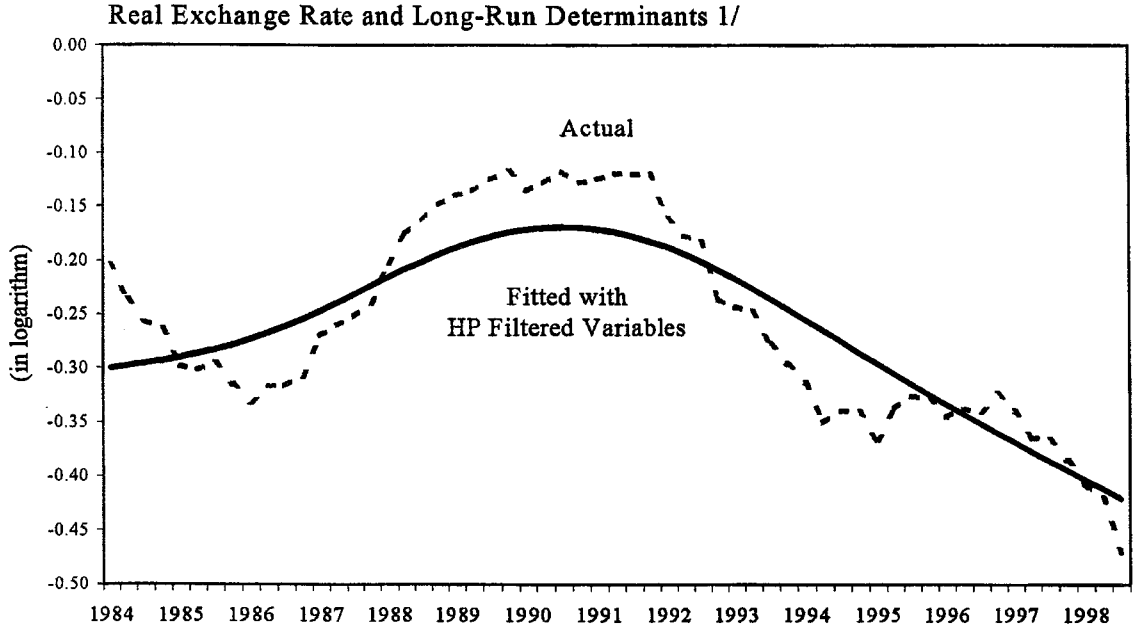
FIGURE 3

CANADA

REAL EXCHANGE RATE



1/ An increase denotes appreciation.

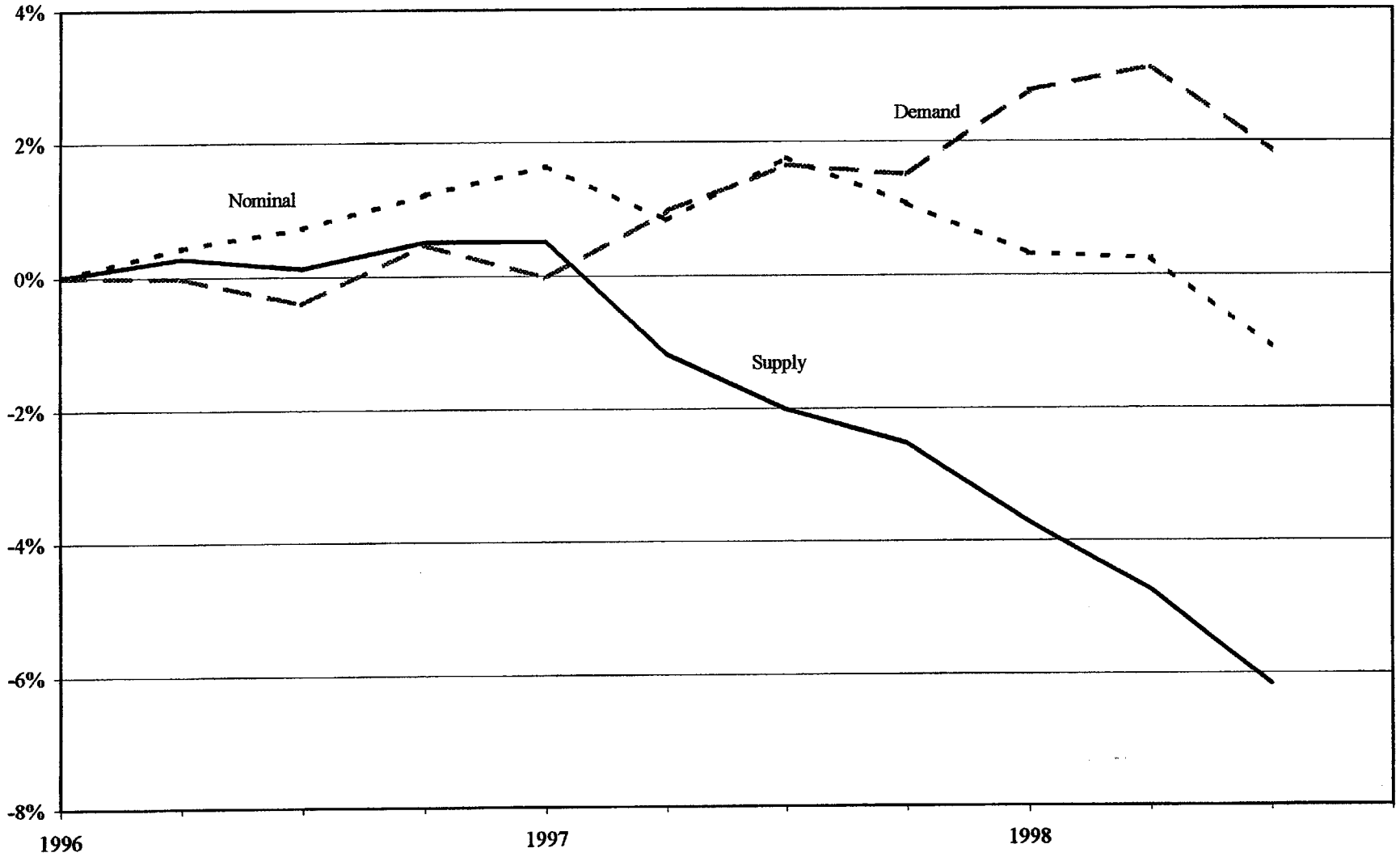


1/ An increase denotes appreciation.

FIGURE 4

CANADA

CUMULATIVE EFFECT OF SHOCKS ON THE REAL EXCHANGE RATE



II. INFLATION AND THE NATURAL RATE OF UNEMPLOYMENT IN CANADA[1]

1. This paper examines whether the recent low inflation in Canada is consistent with a traditional Phillips-curve relationship between activity and inflation. Inflation in Canada has remained below 2 percent since 1995, and for the past two years, it has been near the bottom of the Bank of Canada's 1 to 3 percent target range. Over this period, there has been sustained growth in the economy, with the unemployment rate declining from nearly 10 percent in mid-1996 to 8 percent in late 1998, a level that is close to most estimates of the natural rate of unemployment in Canada (Figure 1). In these circumstances, it would be expected that there would be upward pressure on prices, as slack in the labor market was reduced.

2. The results presented here suggest that the absence of price pressures in part may reflect supply-side influences, such as a decline in import prices. However, the estimated Phillips-curve equations consistently overpredict the inflation rate after the first half of 1997. One possible explanation for these results might be that the natural rate of unemployment is lower than its conventional estimated level. As discussed below, assuming a natural rate of unemployment for 1997 and 1998 of around 6.5 percent basically reconciles the model forecasts to the actual inflation performance.

3. Table 1 presents results for three Phillips-curve equations estimated using quarterly data for the period 1976 to 1996. In these regressions, CPI inflation depends on the unemployment gap alone, or on the unemployment gap plus the rate of change of either import prices or the nominal exchange rate with the U.S. dollar.[2] Import prices and exchange rates are included since these represent supply-side shocks to the cost of imported goods, which would be expected to affect consumer prices directly through their effect on the price of imported final goods, and indirectly through their effect on the price of imported intermediate goods.[3] The first column of the table shows estimates of the traditional Phillips

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[1]Prepared by Phillip Swagel.

[2]The unemployment gap is defined as the unemployment rate minus the conventional estimate of the natural rate, so that a larger gap corresponds to weaker activity. The values for the natural rate are IMF staff estimates, with linear interpolation used to produce quarterly values from the annual series estimated for the natural rate. Inflation, import prices, and exchange rates are expressed as the annualized percentage changes of the respective quarterly indexes. Four lags are used for each of the explanatory variables in the regressions.

[3]Specifications were also estimated with core inflation (which excludes food and energy costs and changes in indirect taxes), but the coefficient on the unemployment gap is not significant in any of these regressions. Similarly, additional supply-side influences on inflation, including commodity prices (oil, non-oil, and all commodities) and changes in indirect taxes, were not

(continued...)

curve in which inflation depends only on activity, while columns 2 and 3 add import prices and exchange rates, respectively. The point estimates for the unemployment gap have the expected sign in all cases, but the coefficient is significantly different from zero only in the specification which includes the change in the exchange rate (column 3). However, the regression diagnostics are satisfactory in all cases, with a high degree of fit and the Godfrey-Breusch test statistics indicating an absence of serial correlation.

4. Figure 2 shows fitted values from the equations including import prices and the exchange rate, with the values for 1997 and 1998 calculated as static projections. In both cases, the equations explain inflation reasonably well through the first half of 1997; however, both equations predict that inflation should have been 0.5 to 1.3 percentage points higher in 1998 than was actually the case. The breakdown in the passthrough of exchange rates into import prices partly explains why the equation including changes in the exchange rates predicts higher inflation than the equation with changes in import prices, but both equations predict higher-than-actual inflation owing to a narrowing of the unemployment gap.

5. While it is possible that the overprediction of inflation by the equations may reflect the influence of other factors not included in the equations, it could also be attributed to an overestimate of the natural rate of unemployment. To test implications for the estimate of the natural rate, a dynamic forecast for inflation was made using the Philips-curve equation including import prices, and this forecast was compared to an alternative forecast based on the assumption of a 1 percentage point lower natural rate of unemployment (Figure 3).[4] For 1997, the simulation with the lower natural rate leads to forecast values for inflation that are somewhat lower than actual inflation, but the decline in actual unemployment relative to the 1 percentage point lower natural rate is so great that forecast inflation still rises substantially above actual inflation in 1998. To fully account for actual inflation in 1998, the unemployment gap would have to remain around 2 percent in 1997 and 1998, implying a natural rate of around 6.5 percent in 1998 instead of the conventional estimate of around 8 percent.

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[3](...continued)
statistically significant in specifications that include import prices or the exchange rate.

[4]The baseline forecast of inflation in Figure 3 is substantially higher than actual inflation, and is also above the corresponding static forecast in Figure 2. This is because higher predicted inflation feeds through to future periods in the dynamic forecast, while in the static forecast, the lower values of actual inflation are used for the lags terms in the equation.

Table 1. Canada: Estimates of Phillips-Curve Regressions 1/

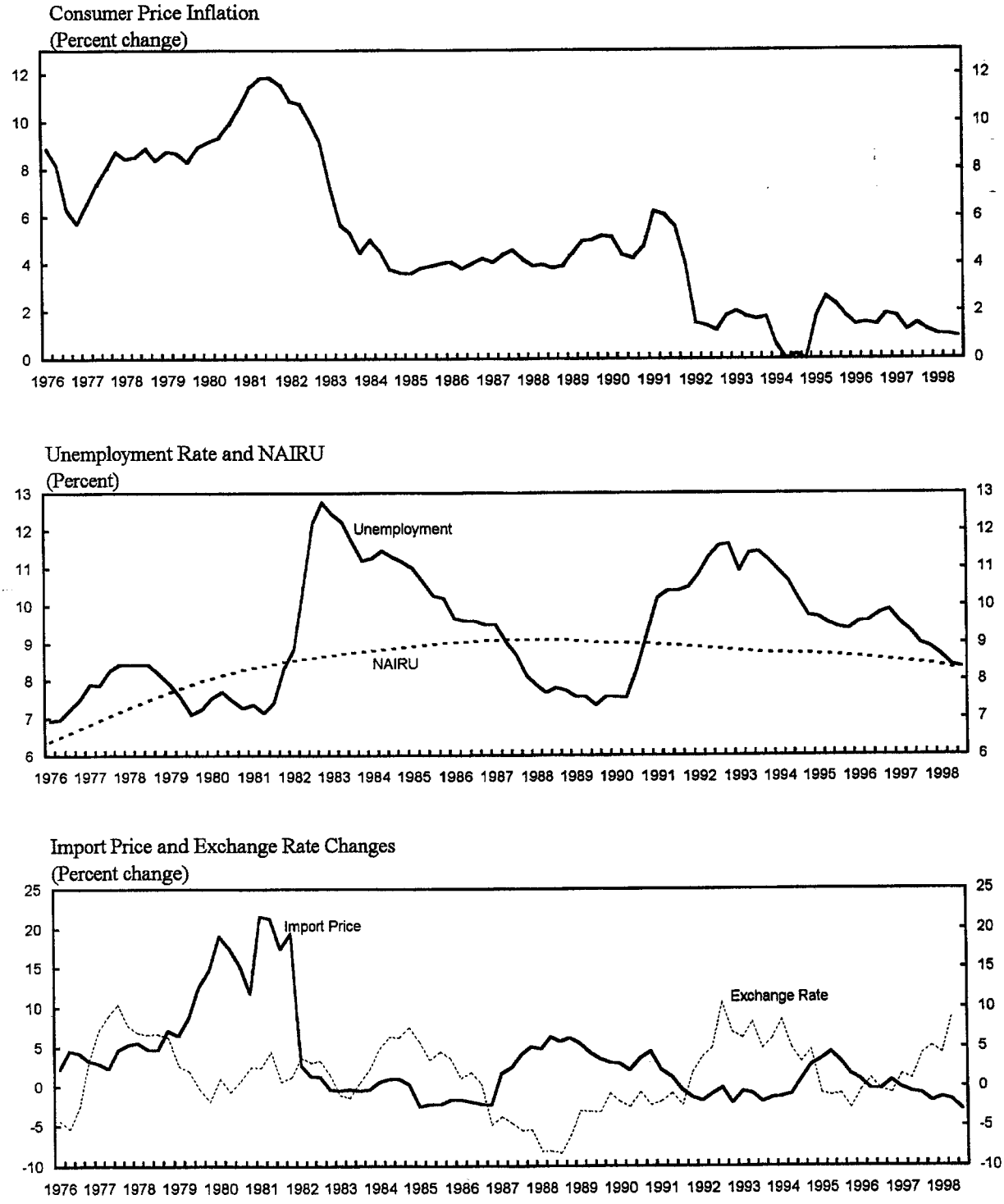
	Overall Inflation (1976Q1–1996Q4)		
	(1)	(2)	(3)
Lagged inflation	0.924 (12.84)	0.850 (8.09)	0.885 (11.66)
Unemployment gap	-0.219 (-1.30)	-0.143 (-0.75)	-0.475 (-2.10)
Import price growth		0.063 (0.99)	
Exchange rate growth			0.098 (1.60)
Adjusted R^2	0.74	0.73	0.75
Godfrey-Breusch test for first order serial correlation 2/	0.80	0.39	0.37

1/ The table shows the sum of coefficients on four lags of the variables. The t-statistic for each coefficient is in parentheses. Inflation, import price growth, and exchange rate growth are annualized percent rates of change.

2/ The Godfrey-Breusch test shows the significance level at which the null hypothesis of no serial correlation can be rejected. A value for the test statistic of less than 0.05 is the usual standard for concluding that the estimates are affected by serial correlation, while a value close to 1.0 indicates the absence of serial correlation.

FIGURE 1

CANADA
INFLUENCES ON INFLATION



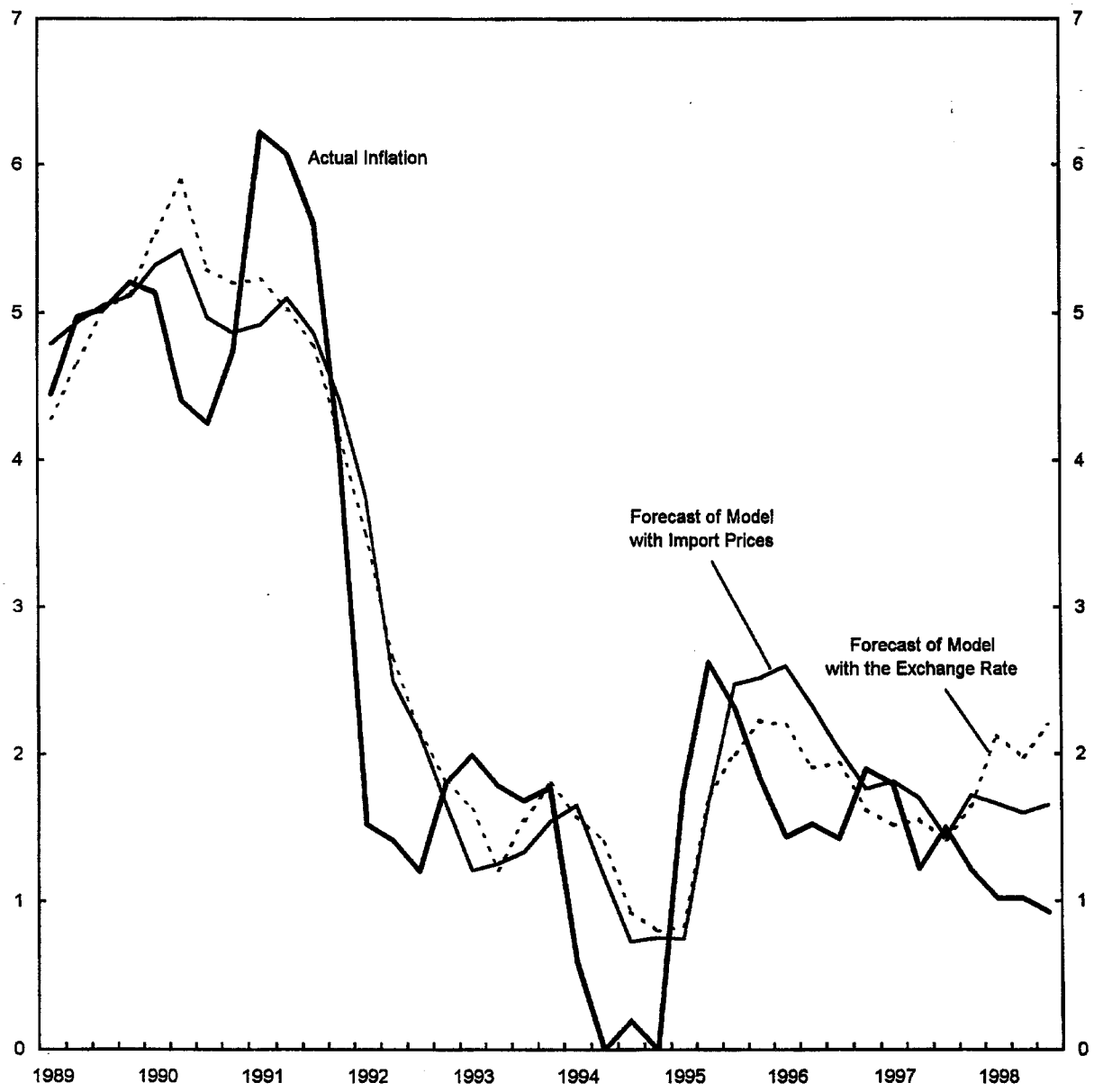
Sources: Statistics Canada; and Fund staff estimates.

FIGURE 2

CANADA

PHILLIPS-CURVE REGRESSION FORECASTS

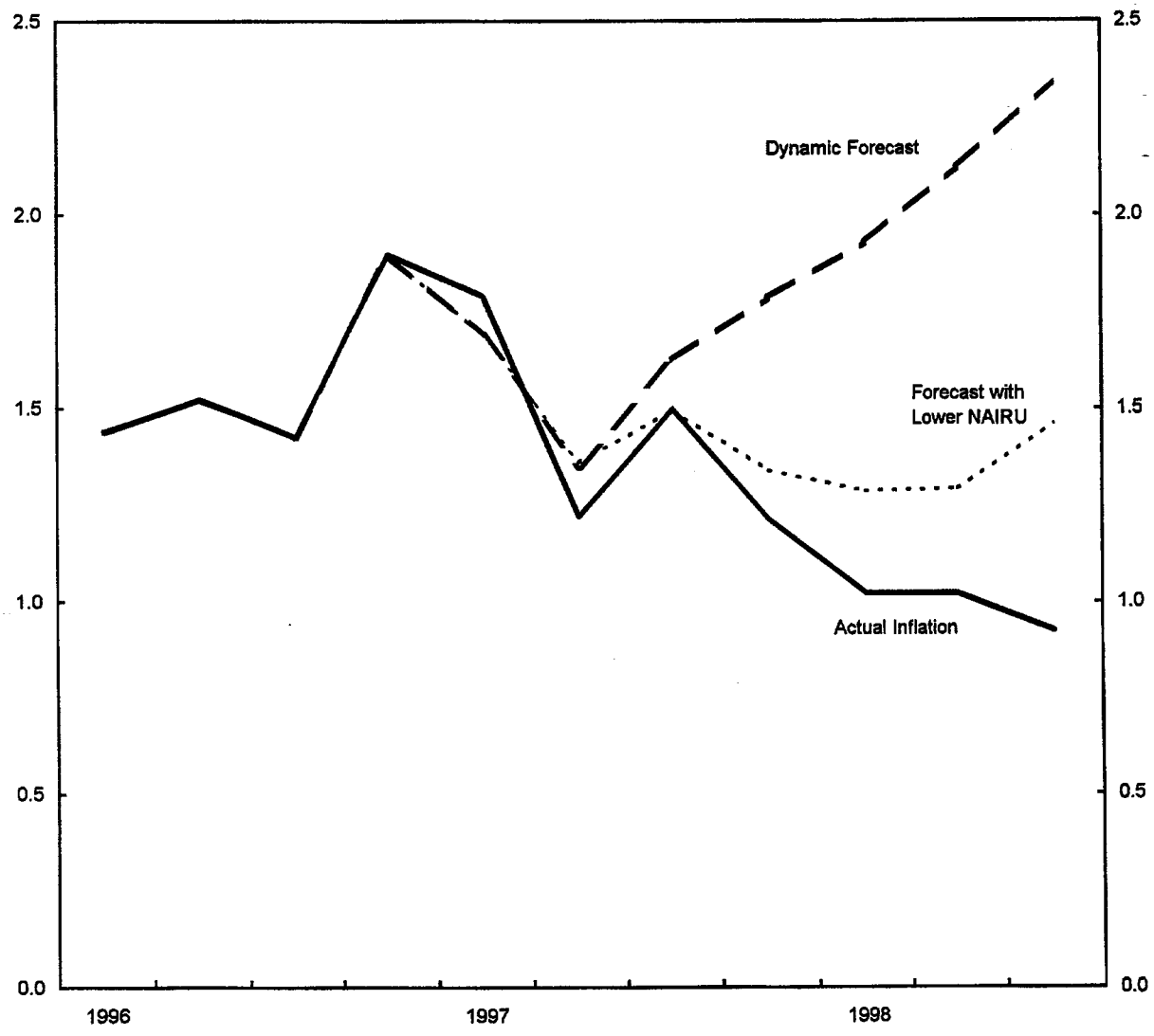
(Percent change)



Source: Fund staff estimates.

FIGURE 3

CANADA
EFFECT OF ONE PERCENT LOWER NAIRU
(Percent)



Source: Fund staff estimates.

III. BUSINESS TAXATION IN CANADA: AN UPDATE[1]

1. On March 16, 1996, the Canadian government established a Technical Committee on Business Taxation to analyze taxes related to investment and business activity and to recommend changes. The Committee was asked to consider ways of improving, in a revenue-neutral way,[2] the business tax system to promote: (i) job creation; (ii) economic growth; (iii) simplification and ease of compliance; and (iv) fairness. The Committee also was charged with examining the interaction between business taxes—including corporate income, capital, and payroll taxes—and taxes paid by individuals on investment income. The Technical Committee's report was released to the public on April 6, 1998. This note briefly summarizes the state of business taxation in Canada and reviews the recommendations presented in the report.

A. Business Taxation in Canada[3]

2. The overall business tax environment includes corporate income taxes, payroll taxes, taxes on capital, and selected aspects of the personal income tax, particularly the taxation of dividends and capital gains. It also includes various tax preferences (credits and deductions) that tend to lower the effective corporate income tax rate relative to the statutory rate. In general, corporate income tax rates in Canada vary according to a firm's size, its production activity, and its provincial location.

3. The federal corporate statutory income tax rate is 28 percent for general business income. However, a number of statutory tax preferences offer reductions from the general rate. Small domestically owned incorporated businesses, or Canadian-controlled private corporations (CCPCs), qualify for a rate reduction of 16 percentage points (to 12 percent) on the first $200,000 of taxable income. For income in excess of the small-business threshold, the general federal rate is reduced by 7 percentage points (to 21 percent) for income derived from manufacturing and processing. The provinces also frequently grant reductions in provin-cial corporate income tax rates for small businesses and in some cases for manufacturing and processing activities. When both federal and provincial rates are considered, there is significant variation in statutory tax rates on corporate income across Canada. Small business income earned in Newfoundland, for example, faces a 12 percent federal tax together with a

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[1]Prepared by Michael Leidy.

[2]"Revenue neutral" implies that the proposed changes would have no effect on overall revenues from all sources of business taxation.

[3]This section draws on Cole and Leidy (1997). An overview of the corporate income tax system is presented in Department of Finance (1998, Chapter 5) and the Report of the Technical Committee (1998, Chapter 2).

5 percent provincial tax, while general business income earned in New Brunswick faces a 28 percent federal tax along with a 17 percent provincial tax (see tabulation below). Federal and provincial governments also levy an annual tax of 0.225 percent on the paid-up capital of Canadian corporations.

4. Tax credits restrict the size of the corporate tax base by crediting certain corporate expenditures against the general corporate tax obligation. The current tax code grants tax credits, for example, for certain expenditures on research and development, for investment in eligible depreciable property used in Atlantic Canada, for certain exploration expenditures, and for certain contributions to registered political parties.[4] Moreover, tax credits not used in the current tax year may be carried forward.

Federal and Provincial Corporate Income Tax Rates, 1998

	General Business	Manufac-turing and Processing	General Small Business
Federal 1/	28.00	21.00	12.00
Newfoundland	14.00	5.00	5.00
Prince Edward Island	16.00	7.50	7.50
Nova Scotia	16.00	16.00	5.00
New Brunswick	17.00	17.00	7.00
Québec	9.15	9.15	5.91
Ontario	15.50	13.50	9.50
Manitoba	17.00	17.00	9.00
Saskatchewan	17.00	10.00	8.00
Alberta	15.50	14.50	6.00
British Columbia	16.50	16.50	9.00
Yukon	15.00	2.50	6.00
Northwest Territories	14.00	14.00	5.00

Source: Report of the Technical Committee on Business Taxation (1998).

1/ In addition, a federal surtax is imposed raising the general business rate to 29.12, the manufacturing and processing rate to 22.12, and the general small business rate to 13.12.

5. A variety of income exemptions and deductions also reduce the size of the corporate tax base and increase complexity. These include an additional deduction from taxable income for certain exploration and development expenditures; deductions of corporate charitable giving; deductions of gifts to the Crown; and deductions of interest on loans for small business financing. The rules governing corporate income tax deferrals also affect the size of the tax

[4]Tax credits are discussed in detail in Department of Finance (1998), pp. 81–88.

base and potentially affect the amount and timing of capital expenditure decisions. Certain business investment losses may also be deducted from current income.

6. Payroll taxes in Canada include employment insurance premiums, Canada Pension Plan (CPP) contributions,[5] workers' compensation premiums, the provincial health/post-secondary education tax levied by some provinces, and general payroll taxes collected by some provinces.[6] The structure and level of payroll taxes vary considerably across provinces and, with the exception of workers' compensation, taxes paid across firms are not closely linked to potential benefits received.

7. The individual income tax treatment of dividends and capital gains can affect the flow of financing for corporations and thus alter business investment decisions. Three-quarters of net capital gains, beyond a $500,000 lifetime exemption for farms and small corporations, are taxed as personal income. Gains realized from the sale of a principal residence are fully exempt, as are gains from the sale of certain personal property worth less than $1,000. Dividend income accruing to resident taxpayers from taxable Canadian corporations has been granted partial tax relief for several decades. This relief occurs through a gross-up and credit under the personal income tax. The gross-up and credit has been adjusted periodically with a view to maintaining rough parity in the tax treatment of small corporations and unincorporated businesses. Dividends are currently grossed-up by 25 percent and this grossed-up amount is taken into taxable income. The federal "basic tax" is then applied to personal income including grossed-up dividends, before the federal tax is reduced by a credit equal to 13.33 percent of the grossed-up dividend. When provincial taxes are taken into account, the net effect is to offset the double taxation of corporate source income accruing to individuals by roughly 50 percent for public companies and 100 percent for private corporations.

B. April 1998 Report of the Technical Committee on Business Taxation

8. The Committee reached a number of conclusions regarding the deficiencies of the current system of business taxes. First, combined federal-provincial corporate income tax rates, which average 43 percent, are higher than comparable rates in Canada's major trading partners. High corporate tax rates on non-manufacturing activities, in particular, tend to discourage business operations in Canada. Second, the relatively high variation in corporate tax rates across provinces and across industries exacerbate economic inefficiencies and unfairness, and increase compliance costs. Third, Canada's growing reliance on profit-insensitive business

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[5]The province of Québec has its own separate pension plan that is roughly comparable to the CPP. Residents of Québec have the option of participating in either the CPP or the Québec Pension Plan.

[6]Lin, Picot, and Beach (1996) present a comprehensive review of developments in Canadian payroll taxes since 1961.

taxes (capital, property, payroll, sales, excise, and other non-profit business taxes) also exacerbate inequities and inefficiencies.

9. Broadly, the Committee recommends a number of steps to move closer to a neutral business tax system (one that does not alter investment or financing decisions), which would enhance efficiency, promote fairness, and improve competitiveness internationally. The Committee's recommendations include: (i) lowering corporate income tax rates toward international norms while broadening the tax base; (ii) altering certain profit-insensitive taxes so that these fall more heavily on those deriving associated benefits (the user pays principle); (iii) reducing compliance costs and improving tax enforcement; and (iv) enhancing the coordination and disentanglement of federal-provincial corporate tax policies.

10. By lowering the corporate income tax rate and broadening the base, overall tax-based disincentives to business activity could be reduced while also mitigating tax-induced distortions in resource allocation. The Committee notes that lowering the average federal-provincial corporate income tax rate to 33 percent for large businesses would be expected to ensure the system's international competitiveness. Thus, the Committee proposes that the general federal corporate income tax rate be reduced from 28 percent to 20 percent and that provincial corporate income taxes be reduced on average by 1 percentage point to 13 percent. Revenue neutrality would be maintained through the elimination of certain tax preferences, credits, and deductions. Preferences for small businesses would be retained, but with some modifications, including incentives for companies to increase employment.

11. The Committee also recommends that a closer correspondence be established between the level of certain profit-insensitive business taxes paid by firms and the economic benefits these firms receive from public goods or services, or the costs they impose on society (the user pays principle). Recommended measures include adopting experience-weighted employment insurance (EI) premiums for employers, under which employers with a history of fewer layoffs would pay lower EI premiums, and restructuring the federal fuel excise tax to include other pollutants in the tax base to ensure that the cost of environmentally damaging activities is borne, at least in part, by the responsible agent.

12. Measures recommended to enhance compliance and strengthen enforcement include: (i) harmonization of the structure and administration of certain federal and provincial business taxes—notably capital taxes; (ii) revised procedures for drafting tax legislation to enhance clarity; (iii) new mechanisms enabling Revenue Canada to apply sound commercial practices to settle disputes and collect assessed taxes; and (iv) provisions to expand civil penalties to include tax advisors and promoters of tax-related advice deemed to be grossly negligent.

13. In order to promote further tax cooperation and disentanglement between federal and provincial business tax policies, the Committee makes three principal recommendations. First, federal and provincial governments are encouraged to work toward using common, neutral corporate income and capital tax bases. Second, federal and provincial governments should extend the existing federal-provincial tax collection agreement to capital taxes, and to include

all provinces. Finally, capital taxes should not be deductible from the corporate income tax base in order to eliminate an incentive for one level of government to expand its capital taxes. The provinces are also urged to enact an offsetting reduction in corporate income and capital taxes as base-broadening measures take affect.

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IV. THE CANADIAN PERSONAL INCOME TAX SYSTEM[1]

1. The personal income tax system in Canada creates a number of disincentives to save and distorts the allocation of resources as a consequence of high marginal tax rates. The lack of full indexation of the personal income tax since 1986 has drawn individuals who were previously exempt from tax into the tax base, while it has pushed existing taxpayers into higher tax brackets. These problems could be addressed through a reduction in marginal tax rates and adjustments in nominal income thresholds (the income levels at which different tax rates apply), and standard credits. In addition, moving to full indexation of the personal income tax system would address the problem of bracket creep. Ameliorating the disincentives created by the personal income tax system, however, would likely be costly in terms of revenue foregone.

2. In Canada, personal income is taxed at both the federal and provincial levels. The federal income tax is progressive, with four marginal rates: 0, 17, 26, and 29 percent.[2] The progressivity of the federal income tax is increased further by a system of refundable tax credits that provides assistance for low-income individuals and by surtaxes that rise with income.[3] In some cases, credits are used instead of deductions to limit the tax relief to high-income earners.

3. From 1988 to 1998, effective federal marginal rates rose as a result of increases in both the general surtax and the high-income surtax, while average federal tax rates also increased as a result of the shift from full to partial indexation in 1986. Over the period from the early 1980s to 1994, Davies (1998) reports that average federal income tax rates rose from about 10.4 percent in 1980 to nearly 14 percent in 1994. Provincial income taxes are

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[1]Prepared by Stephen Tokarick.

[2]For 1998, federal income tax rates were 0 percent for income between $0–$6,456, 17 percent for income between $6,456–$29,590, 26 percent for income between $29,590–$59,180, and 29 percent on income over $59,180. Effective July 1, 1998, a supplement of $500 to the basic personal credit became available to low-income filers, which effectively eliminates the income tax on incomes up to $6,956. The supplement is phased out at a rate of 4 percent of income in excess of $6,956.

[3]Prior to July 1998, all individuals were subject to a 3 percent surtax. Effective July 1, 1998, the 3 percent surtax on incomes less than $50,000 was eliminated, while it was reduced for those with incomes between $50,000 and $65,000. No reduction was granted for those with incomes above $65,000 in order to focus tax relief on low- and middle-income earners. Also, an additional 5 percent surtax applies to individuals who owe $12,500 or more in basic federal tax (those with incomes of approximately $65,000 and above).

generally calculated as a percentage of the basic federal tax plus any applicable surtaxes.[4] Combining federal and provincial taxes for 1998, marginal tax rates were 25 percent for those with incomes between $7,000 and $30,000, 40 percent for those with incomes between $30,000 and $60,000, and 51 percent for individuals with income in excess of $60,000. Compared to U.S. tax rates, Canadian tax rates generally rise more quickly and the highest tax rate becomes applicable at a relatively low level of income. For example, the combined federal and average state marginal tax rate in the United States was only 32 percent for those with incomes between the Canadian dollar equivalent of $60,000 to $95,000. The highest combined marginal tax rate in the United States was 45 percent and did not become applicable until an individual reached an income level in excess of the equivalent of $430,000 Canadian dollars.

4. Compared to other OECD countries, Canada's marginal income tax rates in 1995 were above the OECD average for middle- and high-income earners, while marginal rates for low-income individuals were below the OECD average (OECD 1997). For example, an individual who earned 100 percent of the average production wage in 1995 faced a combined marginal tax rate of 45.9 percent, compared with the OECD average of 41.4 percent. An individual who earned 200 percent of the average production wage in 1995 faced a combined marginal tax rate of 48.1 percent, compared with the OECD average of 47.2 percent. Conversely, an individual who earned only 66 percent of the average production wage in 1995 faced a marginal tax rate of 31.4 percent, well below the OECD average of 37.9 percent.

5. The federal income tax system is indexed annually if the rate of inflation (as measured by the consumer price index) exceeds 3 percent. If inflation exceeds 3 percent, the excess of the rate over 3 percent is used to create index factors to adjust (increase) tax thresholds. Because inflation has remained below 3 percent since 1992, there have been no indexing adjustments to the tax system. As a consequence, individuals that were previously exempt from being taxed have been drawn into the tax base, and existing taxpayers have been pushed into higher tax brackets (bracket creep). The Department of Finance estimates that partial indexation since 1988 has drawn 1.3 million individuals into the tax base who would have been exempt if the system had been fully indexed, while another 2 million individuals were pushed from the 17 percent to the 26 percent tax bracket and another 562,000 people were pushed from the 26 percent to the 29 percent bracket. KPMG (1997) has calculated that for 1997, the lack of full indexation costs an individual with taxable income between $35,941 and $59,180 an extra $1,210 in taxes, and it costs an individual with taxable income in excess of $71,883 an extra $1,782.

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[4]An exception is Québec, which administers its income tax separately from the federal tax.

6. Recipients of income support through the Old-Age Security (OAS) and Guaranteed Income Support (GIS) system face serious disincentives to save as a result of tax-back rates.[5] While GIS payments are not explicitly taxed, they are taxed implicitly because the amount of GIS benefits are reduced by 50 cents for each dollar of income in excess of the OAS/GIS minimum. Thus, recipients of GIS, who are in the lowest income groups, face a tax-back rate of 50 percent, which makes it unattractive to save for retirement. Middle- and high-income recipients do not face the high GIS tax-back rate, but face a disincentive to save as a consequence of the OAS tax-back rate of 15 percent.

7. The disincentives to save noted above are offset to some degree by provisions in the tax system that are designed to encourage saving, such as the deductibility of contributions to a registered retirement savings plan (RRSP) and the deferral of tax on interest income from this source. While this provision encourages savings to some extent, its effects are constrained by the fact that there are limits on the amounts that can be deducted from taxable income for retirement.[6] Furthermore, these limits are frozen in nominal terms over the period from 1997 to 2004, which will erode the real value of this deduction. Also, these incentives are likely to be used by those with higher-than-average incomes, and so they do not mitigate the disincentives to save facing low- and middle-income savers. For this reason, these incentives may be perceived as inequitable.

8. The Department of Finance estimates that the costs of addressing the problems of the personal income tax system, principally through reductions in marginal tax rates and restoring full indexation, is substantial in terms of foregone revenue (Table 1). In 1999, the cost of reducing all marginal tax rates, the general 3 percent surtax, and the high-income 5 percent surtax by 1 percentage point is estimated to be about $4.2 billion (0.5 percent of GDP), with about $0.4 billion attributable to the cut in the general surtax, $0.1 billion to the cut in the high-income surtax, and $3.7 billion to the cut in all basic marginal rates. Restoring full indexation to the personal income tax would result in a revenue loss that grows from about $0.6 billion in the first year to $2.4 billion in the fourth year. The combined costs of reducing all marginal tax rates by 1 percentage point and restoring indexation (in the first year) are estimated to be $5 billion, about 0.5 percent of GDP.

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[5]OAS pays benefits to Canadians age 65 and over, based on years of residence in Canada. Benefits are taxable and paid to all qualified individuals. GIS provides additional benefits to low-income seniors based on income and marital status.

[6]In 1997, individuals may deduct contributions to a registered retirement savings plan (RRSP) up to a limit (18 percent of income in 1996 or $13,500) and these limits are frozen at $13,500 until 2004 when the new limit will become $14,500. In 2005, the limit will rise to $15,500 and be indexed thereafter to increases in the average industrial wage.

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Table 1. Fiscal Costs of Personal Income Tax Reductions

(Full-year impact estimates for 1999)

	Cost of Change ($ Million)
$100 tax reduction for all taxpayers 1/	1,450
$100 increase in amounts used to established selected credits	
Basic personal amount	250
Married/equivalent-to-married amount	40
Federal surtaxes	
Reduction by 1 percentage point of the general 3 percent surtax 2/	350
Reduction by 1 percentage point of high-income 5 percent surtax 3/	130
Reduction in marginal tax rates (per percentage point) 4/	
Lowest rate (17 percent)	2,060
Middle rate (26 percent)	1,100
High rate (29 percent)	570
1 percentage point reduction in each rate	3,730
$100 increase in base benefit under Canada Child Tax Benefit 5/	600
Restoring indexation of tax parameters: 6/	
Total impact:	
Year 1	840
Year 2	1,690
Year 3	2,550
Year 4	3,410
Of which: Personal credits and tax brackets	
Year 1	610
Year 2	1,215
Year 3	1,825
Year 4	2,435

Source: The Economic and Fiscal Update: Strong Economy and Secure Society, Department of Finance, 1998.

1/ Nonrefundable.

2/ The general 3 percent surtax was eliminated for all taxpayers earning less than $50,000 and reduced for those with incomes between $50,000 and $65,000 in the 1998 budget. The cost refers to the remainder of the surtax.

3/ Currently applies on basic federal tax in excess of $12,500 on an income level of about $65,000.00

4/ 17 percent rate applicable to taxable incomes up to $29,590; 26 percent rate applicable to taxable incomes from $29,591 to $59,180; 29 percent rate applicable to taxable incomes from $59,181 and up.

5/ Current credit value of base Canada Child Tax Benefit (CCTB) is $1,020.

6/ Estimates assume 1.5 percent annual inflation. Impacts are cumulative.

V. "BRAIN DRAIN" FROM CANADA TO THE UNITED STATES[1]

1. Available data indicate that emigration of highly skilled Canadian professionals to the United States increased substantially in the 1990s. This emigration of highly skilled individuals—"the brain drain"—has potentially significant implications for the Canadian economy. While the flows of emigrants particularly in occupations such as physicians, nurses, engineers, and computer scientists has increased significantly, the size of the emigration flows has been small relative to the stock of existing workers in Canada who are employed in these occupations. At the same time, immigration of workers with similar skills has at least partially offset the number of emigrants to the United States. However, while no firm consensus exists on how the productivity of immigrants to Canada from the rest of the world compares with the productivity of Canadian-born workers, available evidence suggests that immigrants to Canada may be less productive because it takes some time for them to catch up with Canadian-born workers in terms of earnings. As a result, the loss of Canadian professionals to the United States is likely to have imposed a net cost on the Canadian economy.

2. One factor that may serve as an incentive for highly skilled individuals to emigrate from Canada to the United States is the relatively higher personal income tax burden in Canada compared to the United States, especially the burden applicable to the higher-income segment of the work force. A reduction in personal income tax rates could reduce the incentive for highly skilled Canadians to migrate to the United States.

A. Data on the Size of Canadian Migration to the United States

3. The average yearly flow of permanent skilled emigrants from Canada to the United States rose from about 3,100 in the period from 1982 to 1989 to 4,834 during the period from 1990 to 1996 (Table 1).[2] Within this group of skilled workers, the average yearly flow of Canadian professionals who emigrated to the United States rose from 1,743 over 1982–89 to 2,689 over 1990–96, while the corresponding yearly averages were 985 and 1,756 for Canadian managerial workers. This increase in the average yearly gross flows of Canadian emigrants to the United States, coupled with the decline in the flows of U.S professional and managerial workers who emigrated to Canada during 1990–96, led to an increase in the net flows of professional workers from Canada to the United States. DeVoretz and Laryea (1998) argue that this increased emigration has been costly for Canada because emigrants embody education subsidies paid by Canadian taxpayers. The authors calculate that the net emigration of Canadians to the United States in four occupational categories (managers, natural scientists, professors and teachers, and professionals) resulted in an aggregate taxpayer

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[1]Prepared by Stephen Tokarick.

[2]DeVoretz and Laryea (1998, p. 4) define a permanent migrant as someone who "has the intention of holding permanent employment."

subsidy of $651 million in 1993–94 (about 0.1 percent of GDP) from Canada to the United States. Concentrating on the occupational categories of professionals and managers, DeVoretz and Laryea (1998) estimate that the social cost of the emigration of these workers from Canada to the United States over the longer period from 1982 to 1996 amounted to $6.6 billion (0.8 percent of GDP in 1996) and a net subsidy to the United States of $3.7 billion (0.4 percent of Canada's GDP in 1996).

4. In addition to the significant increase in the number of permanent emigrants, there has also been a sharp rise in the number of temporary migrants from Canada to the United States since 1989. New visa categories have been created under U.S. immigration law as a result of both the Canada-U.S. Free Trade Agreement (FTA) in 1989 (the TC visa) and the North American Free Trade Agreement (NAFTA) in 1994 (the TN visa), which have greatly facilitated the movement of workers, especially professional workers, from Canada to the United States (Table 2). The main advantage of the TN visa is that it has reduced the cost of employing a temporary immigrant in the United States, as it is no longer necessary for the employer and the potential employee to prove that there will be no adverse effects on the employment of U.S. workers. The establishment of the TN visa status has become, as DeVoretz and Laryea (1998) note, a "backdoor to permanent emigration into the United States," because the rates of conversion from temporary to permanent status is high for some kinds of workers. For example, more than 37 percent of intracompany transfers between Canada and the United States in 1996 resulted in a switch from temporary visa status to permanent resident status.

5. Cast in the broader perspective of overall migration into and out of Canada, it can be argued that emigration of skilled workers to the United States may not have had a substantial impact on Canada.[3] Data on overall migration indicate that losses of highly skilled individuals to the United States in a number of key professions have been more than offset by the inflow of skilled migrants from the rest of the world (Table 3). While Canadian emigrants to the United States outnumbered U.S. emigrants to Canada in every year over the period from 1986 to 1996 in the occupations of physicians, nurses, engineers, computer scientists, natural scientists, and managerial workers, net migration to Canada from countries other than the United States offset this net loss of emigrants to the United States in all of these occupations, except for physicians and nurses. These data also indicate that, although the number of Canadian emigrants to the United States has grown significantly in the last ten years, the size of the flows are relatively small in relation to the stock of skilled workers in key occupations (Table 4).

6. The argument that the brain drain from Canada to the United States is not a serious problem because any losses to the United States are offset by inflows from the rest of the world implicitly assumes that immigrants to Canada can substitute one for one with Canadian emigrants. DeVoretz and Laryea (1998) argue that immigrants impose "churning costs" on the

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[3]Statistics Canada (1998).

recipient country, relating to administrative and settlement costs of the immigrants, but more importantly, to costs that arise from the fact that immigrants may not be as productive as the emigrants that they replace. DeVoretz and Laryea (1998) note that the "entire post-1967 stock of professional immigrants typically took 10 to 15 years to catch up with the earnings of their Canadian-born cohorts." The difference in earnings between Canadian-born workers and non-U.S. immigrants may arise for a number of reasons, including language barriers. The data reported by Statistics Canada (1998) on the number of immigrants from countries other than the United States include individuals who declare themselves to have the appropriate qualifications for certain professions, but they may not be able to obtain the necessary certification to practice their professions in Canada. For these reasons, it may be misleading to conclude that immigrants from the rest of the world can replace Canadian emigrants on a one-for-one basis.

7. Taking into account the earnings gap between Canadian-born workers and non-U.S. immigrants to Canada, as well as administrative and settlement costs of new immigrants, DeVoretz and Laryea (1998) provide some estimates of the churning costs that arose from Canadian immigration during the period 1982–96. They estimated that the costs of replacing the outflow of highly skilled workers from Canada to the United States over this period amounted to $12.5 billion (1.5 percent of GDP in 1996), with most of this cost ($11.2 billion, or 1.3 percent of GDP in 1996) occurring in the period 1989–96 when there was a significant increase in Canadian emigration to the United States.

B. Incentives for Canadian Emigration to the United States

8. On average, wages are higher in the United States than in Canada, and this provides one incentive for Canadian workers to emigrate. Moreover, given the higher wages in the United States, a significant public subsidy for higher education in Canada tends to provide a further incentive for emigration because the subsidy increases the supply of highly educated workers. The establishment of two temporary visa categories under the FTA and the NAFTA has lowered the costs of emigrating from Canada to the United States and has become an avenue for more permanent emigration.

9. Relatively high personal income taxes in Canada, compared to those in the United States, are also likely to be a significant incentive for emigration. The Canadian personal income tax becomes applicable at income levels that are lower than in the United States.[4]

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[4]For example, a single-income tax payer in Canada can earn about $7,000 and a taxpayer with two children can earn nearly $12,000 before incurring any federal tax. No provincial tax would be applicable in these cases, since provincial taxes are calculated as a percentage of the basic federal tax. A single-income taxpayer in the United States can earn the equivalent of about $9,700 in Canadian dollars before incurring federal tax, while a married couple with two

(continued...)

Moreover, the highest marginal income tax rates in Canada become applicable at income levels that are much *lower* than in the United States.[5] For an income level as low as $30,000, the marginal income tax rate in Canada (federal and provincial) is about 40 percent, while in the United States, the typical marginal rate (federal and state) is about 26 percent. At income levels between $30,000 and $95,000 in Canadian dollars, the differential in marginal income tax rates between the two countries widens, as Canadian rates increase more steeply than U.S. rates. There has been a significant increase in the emigration of Canadian workers engaged in professional and skilled occupations to the United States in the 1990s, and the income of these occupational groups falls on average between $37,000 and $90,000. In some of these occupations, the average income exceeds $60,000, and the tax differential between Canada and the United States is greatest for incomes between $60,000 and $95,000. Table 5 provides a comparison of the tax liabilities of individuals with various levels of income at certain locations in the United States and Canada to illustrate the combined effects of federal and provincial/state income taxes in the two countries.

10. Figures 1 and 2 present plots of the number of Canadian professional and managerial workers, respectively, who emigrated to the United States over the period from 1982–96. Both of these figures also include plots of two variables that may influence the decision to emigrate: the difference between the Canadian and the U.S. unemployment rates (defined as the Canadian rate minus the U.S. rate) and the difference between the ratio of personal income taxes to GDP in Canada (at the federal and provincial levels) and the United States (at the federal and state levels). As shown in both figures, the increase in the number of Canadian professional and managerial workers who emigrated to the United States over the period is clearly associated with a positive, and rising unemployment rate differential. Also, the difference between the personal income tax to GDP ratios widened over the period from 1989 to 1991, which coincided with the sharp increase in the number of Canadian skilled workers who emigrated to the United States.[6]

11. A number of changes were made to the personal income tax system in Canada between 1986 and 1991 that could help explain the rise in the personal income tax to GDP ratio in Canada relative to the United States. The income surtax on all taxpayers was increased to 3 percent in 1987, from 1.5 percent in 1986. This general surtax was increased to 4 percent in

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[4](...continued)
children can earn as much as $25,000 in Canadian dollars free of federal tax. It should be noted however, that state tax laws vary, so it may be possible for an individual to be exempt from federal tax and liable for state tax.

[5]In Canada, the highest marginal income tax rates (federal and provincial) become applicable at an income level of about $60,000, while in the United States, the highest federal and state rates kick in at an income level of about $430,000 in Canadian dollars.

[6]The differential increased from about 2.5 percent in 1989 to 4.5 percent in 1991.

1989, and to 5 percent in 1990. In 1989, an additional high-income surtax of 1.5 percent was introduced and subsequently raised to 5 percent in December 1991, bringing the total surtax to 10 percent for individuals in the top tax bracket. The income threshold at which the high-income surtax became applicable was also lowered in 1991. In 1986, full indexation of the personal income tax system was replaced by partial indexation, which drew individuals who were previously exempt from taxation into the tax base and pushed others into higher tax brackets.[7]

12. Since 1991, the difference between the personal income tax to GDP ratios in Canada and the United States narrowed, but remained positive, mainly on account of tax increases in the United States that became effective in 1993.[8] The gap also narrowed because the personal income tax to GDP ratio declined in Canada between 1991 and 1994, mainly as a result of reductions in the general income surtax (from 5 percent in 1991 to 3 percent in 1993), but the tax ratio rose again between 1994 and 1996 on account of "bracket creep" resulting from the lack of indexation in Canada. Despite the narrowing in the personal income tax differentials between Canada and the United States in 1991–96, emigration of skilled workers from Canada to the United States continued to rise. A number of factors could serve to explain this development, including differences in real wages between the United States and Canada and the differential unemployment rate.

13. Table 6 contains the results from pooling the number of Canadian professional (PROF) and managerial (MANG) emigrants into a total emigrant group (EMIG), and regressing this group on the differential unemployment rates (DIFFUR) and the differential personal income tax to GDP ratios (DIFFTAX). This regression allows the coefficient on DIFFUR to vary by type of emigrant (PROF and MANG), but imposes a common coefficient on DIFFTAX. The results reveal that the coefficients on DIFFUR are of the expected sign, significant at the 1 percent level for professional emigrants, and significant at the 3 percent level for managerial emigrants. The coefficient on DIFFTAX is of the expected sign and significant at the 1 percent level. It should be noted that these results merely suggest that DIFFUR and DIFFTAX are positively correlated with the number of Canadian professional and managerial emigrants to the United States and that these variables may be important factors in explaining the rise in emigration since 1989. Still, this regression omits a number of other factors that are likely to be relevant in explaining the movement of skilled workers from Canada to the United States, some of which cannot be quantified.

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[7]Indexing adjustments are made when the inflation rate exceeds 3 percent.

[8]The differential declined from 4.5 percent in 1991 to 3 percent in 1996.

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Table 1. Canada: Bilateral Immigration Flows by Occupational Group, 1982-96

	1982-89									1990-96		
	Total Flow	Yearly Average	1990	1991	1992	1993	1994	1995	1996	Total Flow	Yearly Average	Total 1982-96
Total Canadian flows to the United States	24,774	3,097	4,996	3,946	4,559	5,256	5,052	4,031	5,997	33,837	4,834	58,611
Professionals 1/	13,940	1,743	2,493	2,080	2,384	2,916	2,929	2,440	3,581	18,823	2,689	32,763
Managers	7,883	985	1,751	1,327	1,853	2,022	1,861	1,415	2,065	12,294	1,756	20,177
Other skilled 2/	2,951	369	752	539	322	318	262	176	351	2,720	389	5,671
Total U.S. flows to Canada	13,774	1,722	n.a.	1,367	1,489	1,516	1,374	1,080	993	7,819	1,117	21,593
Professionals 1/	8,176	1,022	n.a.	834	980	999	877	676	641	5,007	715	13,183
Managers	3,783	473	n.a.	351	360	370	374	332	302	2,089	298	5,872
Other skilled 2/	1,815	227	n.a.	182	149	147	123	72	50	723	103	2,538
Net flows	11,000	1,375	n.a.	2,579	3,070	3,740	3,678	2,951	5,004	26,018	3,717	37,018
Professionals 1/	5,764	721	n.a.	1,246	1,404	1,917	2,052	1,764	2,940	13,816	1,974	19,580
Managers	4,100	513	n.a.	976	1,493	1,652	1,487	1,083	1,763	10,205	1,458	14,305
Other skilled 2/	1,136	142	n.a.	357	173	171	139	104	301	1,997	285	3,133

Sources: Data are reported in Devoetz and Laryea (1998). Data on Canadian emigration to the United States are taken from the U.S. Department of Immigration and Naturalization. Data on U.S. emigration to Canada are taken from the Canadian Department of Immigration and Naturalization.

1/ Includes professionals in the natural and social sciences, teaching, medicine and health, and the performing arts.

2/ Includes workers in precision production, machining, crafts, and repair and construction occupations.

Table 2. Canada: Flows of Canadian Non-Immigrant Professionals and Their Families to the United States Under FTA and NAFTA, 1989-96

	1989	1990	1991	1992	1993	1994	1995	1996
Professional workers under FTA (TC Visa)	2,677	5,293	8,123	12,531	16,610			
Percent change		97.7	53.5	54.3	32.6			
Spouses and children	140	594	777	1,271	2,386			
Percent change		324.3	30.8	63.6	87.7			
Professional workers under NAFTA (TN Visa)						19,806	23,904	26,987
Percent change							20.7	12.9
Spouses and children						5,535	7,202	7,694
Percent change							30.1	6.8

Source: DeVoretz (1998). Data are originally taken from United States Department of Justice, Immigration and Naturalization Service, *Statistical Yearbook of the Immigration and Naturalization Service* (Washington, D.C.: Immigration and Naturalization Service, Office of Policy Planning, Statistics Branch), various years.

Table 3. Canada: Net and Gross Immigration Flows for Selected Occupations, 1986-96

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Physicians											
Canadian flows to the United States	153	131	88	149	149	203	264	325	321	365	522
U.S. flows to Canada	23	22	17	22	16	25	20	29	16	16	7
Net bilateral balance 1/	-130	-109	-71	-127	-133	-178	-244	-296	-305	-349	-515
Immigration from rest of world to Canada	419	427	339	460	450	489	464	529	358	335	342
Total net flows	289	318	268	333	317	311	220	233	53	-14	-173
Nurses											
Canadian flows to the United States	362	381	294	285	373	531	755	993	1,058	897	1,104
U.S. flows to Canada	104	109	111	90	87	78	69	58	30	31	28
Net bilateral balance 1/	-258	-272	-183	-195	-286	-453	-686	-935	-1,028	-866	-1,076
Immigration from rest of world to Canada	393	739	1,049	1,188	1,270	1,163	1,012	872	827	634	421
Total net flows	135	467	866	993	984	710	326	-63	-201	-232	-655
Engineers											
Canadian flows to the United States	518	508	319	433	524	541	685	567	447	422	506
U.S. flows to Canada	60	72	48	56	52	72	77	85	76	78	93
Net bilateral balance 1/	-458	-436	-271	-377	-472	-469	-608	-482	-371	-344	-413
Immigration from rest of world to Canada	1,005	1,881	1,881	2,207	2,544	2,357	2,318	3,736	4,719	6,195	8,278
Total net flows	547	1,445	1,610	1,830	2,072	1,888	1,710	3,254	4,348	5,851	7,865
Computer scientists											
Canadian flows to the United States	91	101	88	127	120	127	161	148	153	116	148
U.S. flows to Canada	65	73	53	61	38	63	82	92	102	118	113
Net bilateral balance 1/	-26	-28	-35	-66	-82	-64	-79	-56	-51	2	-35
Immigration from rest of world to Canada	493	1,184	1,151	895	1,094	1,272	1,698	2,921	3,610	4,887	6,467
Total net flows	467	1,156	1,116	829	1,012	1,208	1,619	2,865	3,559	4,889	6,432

Table 3. Canada: Net and Gross Immigration Flows for Selected Occupations, 1986-96 (Concluded)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Natural scientists											
Canadian flows to the United States	94	115	87	74	112	111	140	197	137	114	195
U.S. flows to Canada	49	43	33	46	45	47	54	53	67	63	61
Net bilateral balance 1/	-45	-72	-54	-28	-67	-64	-86	-144	-70	-51	-134
Immigration from rest of world to Canada	364	549	598	773	784	779	623	770	1,335	1,934	2,794
Total net flows	319	477	544	745	717	715	537	626	1,265	1,883	2,660
Managerial workers											
Canadian flows to the United States	1,490	1,679	1,185	1,571	1,620	1,773	2,829	2,882	2,607	2,060	2,659
U.S. flows to Canada	538	615	498	524	388	384	415	424	425	370	355
Net bilateral balance 1/	-952	-1,064	-687	-1,047	-1,232	-1,389	-2,414	-2,458	-2,182	-1,690	-2,304
Immigration from rest of world to Canada	3,984	8,514	10,453	11,027	11,193	8,494	10,710	11,740	11,452	10,630	13,508
Net outflows from Canada	3,032	7,450	9,766	9,980	9,961	7,105	8,296	9,282	9,270	8,940	11,204

Source: Data are taken from Statistics Canada (1998).

1/ A minus (-) sign denotes a deficit for Canada.

Table 4. Canadian Emigration to the United States For Selected Occupations

	Annual Average Emigration to the United States (1990–96)	Total Stock of Workers in the Canadian Labor Force (1996)	Emigration as a Fraction of the Stock
Physicians	307	59,340	5/1000
Nurses	816	246,800	3/1000
Computer scientists	139	168,385	1/1000
Engineers	527	172,415	3/1000
Managerial workers	2,347	1,927,760	1/1000

Source: Statistics Canada (1998).

Table 5. Canada: Comparison of Personal Income Tax Liabilities Between Canada and the United States, 1997

(All values are in U.S. dollars)

Tax Category	Tax Liabilities			
	New York City 1/	Houston 1/	Toronto 2/	Calgary 2/
1. Single person Rents Income = $25,000	6,200	4,600	6,100	6,100
2. Single person Rents Income = $60,000	21,300	16,300	21,900	21,100
3. Married, nonworking spouse Two children Owns home with mortgage Income = $60,000	14,000	10,400	20,700	20,000
4. Married, nonworking spouse Two children Owns home with mortgage Income = $100,000	27,200	21,100	41,300	38,500
5. Married, with working spouse Two children Owns home with mortgage Income = $100,000	29,300	23,200	33,500	32,900
6. Married, nonworking spouse Two children Owns home with mortgage Income = $300,000	99,400	81,400	144,000	130,600
7. Married, nonworking spouse Two children Owns home with mortgage Income = $500,000	178,000	161,800	246,700	222,700

Source: Robert Brown, "Tax Impacts on People Transfers: Notes and Tables to Illustrate a Talk," C.D. Howe Institute, 1997.

1/ U.S. taxes include federal, state, and social security taxes.
2/ Canadian taxes include federal, provincial, and CPP taxes.

Table 6. Canada: Regression Results for Professional and Managerial Emigrants from Canada to the United States

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Results for Pooled Regression:

$$\underset{}{EMIG} = \underset{(285.6)}{98.8} + \underset{(88.1)^{*}}{464.0 \cdot DIFFUR\text{--}PROF} + \underset{(87.9)^{**}}{214.0 \cdot DIFFUR\text{--}MANG} + \underset{(62.9)^{*}}{207.6 \cdot DIFFTAX}$$

$R^2 = 0.79$, Durbin-Watson = 1.84, F-statistic = 21.5

Notes:

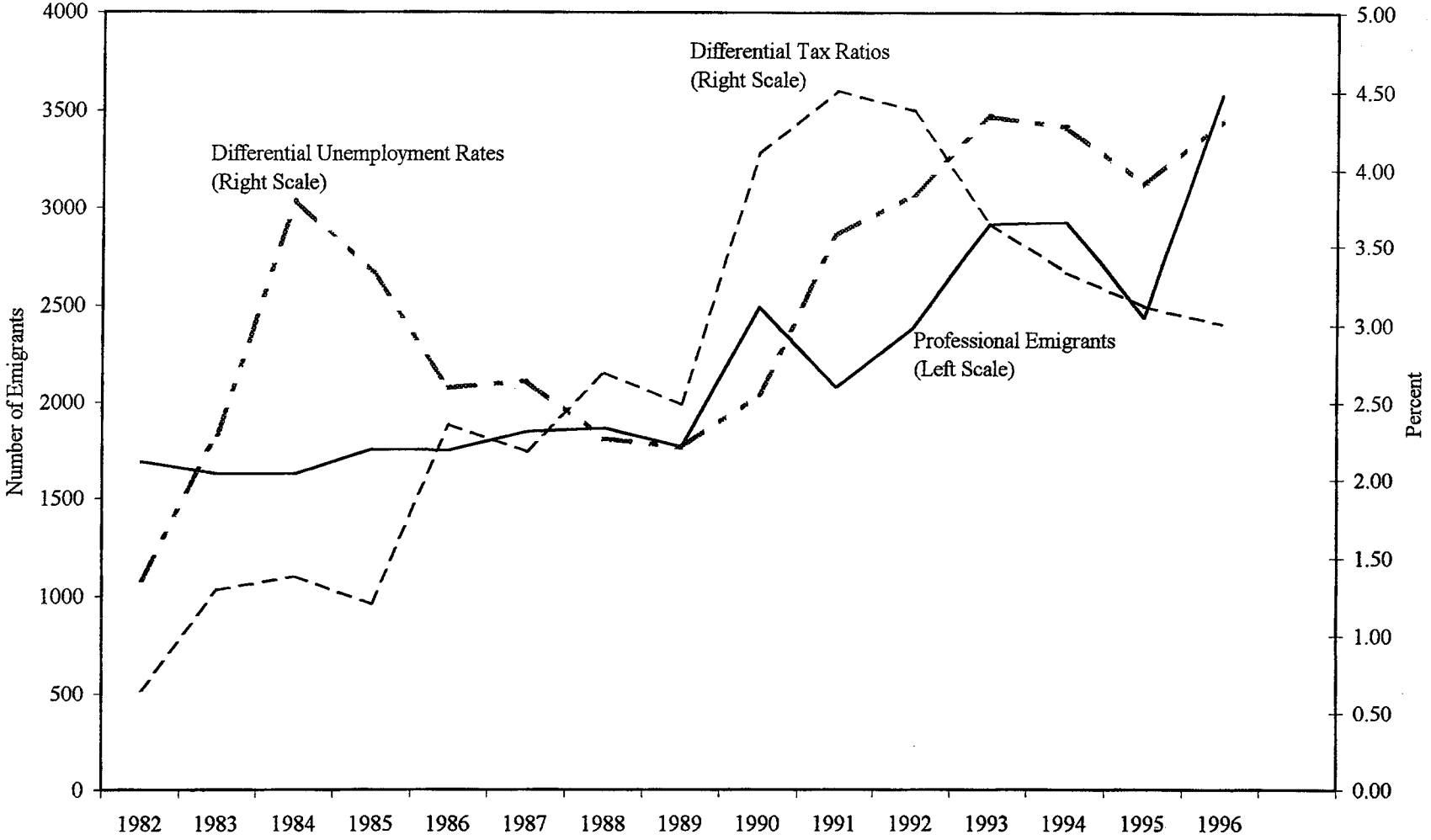
1. EMIG = pooled sample of Canadian professional and managerial emigrants.
2. PROF = number of professional Canadian emigrants to the United States.
3. MANG = number of managerial Canadian emigrants to the United States.
4. DIFFUR = Canadian unemployment rate - U.S. unemployment rate.
5. DIFFTAX = Ratio of personal income taxes (at federal and provincial levels) to GDP in Canada minus the ratio of personal income taxes (at the federal and state levels) in the United States.
6. Equations are estimated over the period from 1982-1996 using annual data.
7. Standard errors of the coefficients are reported in parenthesis.

* Significant at the 1 percent level.
** Significant at the 3 percent level.

FIGURE 1

CANADA

PROFESSIONAL EMIGRANTS FROM CANADA TO THE UNITED STATES

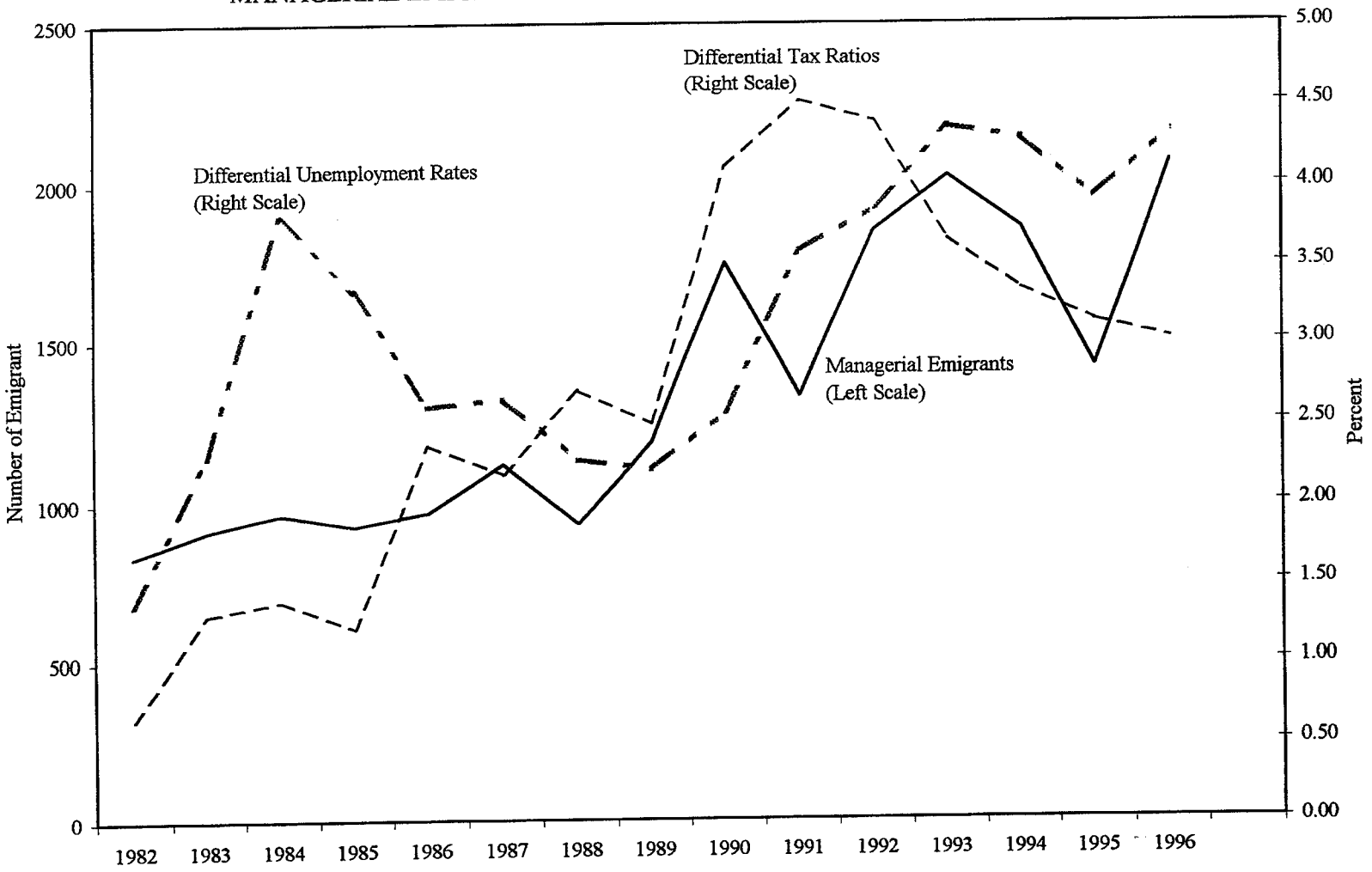


Sources: DeVoretz and Laryea (1998); Statistics Canada; Department of Finance, Government of Canada; Economic Report of the President, 1998; and U.S. Bureau of the Census.

FIGURE 2

CANADA

MANAGERIAL EMIGRANTS FROM CANADA TO THE UNITED STATES



Sources: DeVoretz and Laryea (1998); Statistics Canada; Department of Finance, Government of Canada; Economic Report of the President, 1998; and U.S. Bureau of the Census.

VI. POVERTY TRAPS AND SOCIAL ASSISTANCE REFORM IN CANADA[1]

1. Macroeconomic and structural policy changes, exogenous world events (such as commodity price shocks), and the ordinary functioning of dynamic market economies can cause dislocation in labor markets. Policies intended to ease the burden of adjusting to such dislocation help to maintain social and economic stability. Such programs, however, if not well designed, may introduce incentives to withdraw from the labor force and present hurdles to labor-force re-entry, and thus may create "poverty traps." From the early 1980s through the mid-1990s, participation in social assistance programs across Canada trended upward. Facing rising welfare rolls and substantial fiscal pressures, most Canadian provinces have recently initiated or completed significant reforms of their social assistance systems. This paper reviews recent developments in social assistance (welfare) programs across Canada with a view to evaluating the scope, extent, and province-specific nature of the poverty trap problem.[2]

A. National and Provincial Developments in Income Support Statistics

2. The share of the Canadian population on social assistance increased from about 5½ percent at the beginning of the 1980s to a peak of 10½ percent in 1994, before declining to just over 9 percent in 1997 (Table 1 and Figure 1). During the recession years of 1981–82 and 1990–92, the share increased without returning to pre-recession levels in the ensuing years of economic expansion. Although many of the provinces exhibited a similar pattern, the growth of welfare populations varied significantly across provinces. The most dramatic increase occurred in Ontario, where beneficiaries as a share of the population tripled from the early 1980s to their peak in 1994. Over roughly the same period, the ratio doubled in British Columbia and Alberta, increased by around 80 percent in Manitoba, Nova Scotia, and Saskatchewan, and rose by about 40 percent from already high levels in Québec and Newfoundland.

3. After rising by about 30 percent during the 1970s, real social assistance outlays per capita across Canada rose by about 45 percent during the 1980s, before skyrocketing another 70 percent from 1990 to 1994 (Table 2 and Figure 2). Beginning in the 1980s, these increases significantly outpaced the growth rate of real per capita personal income, illustrating the sharply growing burden of social assistance spending on the general population (Figure 3). Real benefits per recipient also increased during the 1970s, 1980s, and the first half of the 1990s (Figure 4), rising by about 20 percent during the 1980s and by another 10 percent over the period 1990–94, compared with real per capita personal income growth of about

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[1]Prepared by Paula De Masi and Michael Leidy.

[2]The focus of the paper is on poverty traps generated by social assistance, and therefore employment insurance, disability insurance, old-age income support programs, and social assistance for the disabled are excluded from the discussion.

18 percent and negative 4 percent during these respective periods. Reforms implemented in the past few years at both the federal and provincial levels have brought overall expenditures down by about 20 percent from their 1994 peak. However, the reductions in spending vary considerably across the individual provinces.

4. The percentage of long-term welfare recipients also increased during the 1990s. In March 1990, 41 percent of all welfare recipients had been receiving benefits for 25 consecutive months or longer (defined as "long-term" recipients). As the welfare population rose in the recession years of 1990–92, the influx of new recipients initially reduced the share of long-term recipients to 32 percent by March 1992 (Table 3). However, the share of long-term recipients rose steadily through March 1997, when it reached 50 percent.

5. The real value of social assistance benefits by recipient type rose from the mid-1980s to the early 1990s in Québec, Ontario, and British Columbia, but remained roughly constant, or fell slightly, in the other provinces (Table 4). For single parents and couples with two children, many provinces offered benefits in 1993 that were at or above two-thirds of the average manufacturing wage of full-time workers. Since 1993–94, however, real social assistance benefits have tended to fall across Canada, with relatively steep cuts occurring in Prince Edward Island, Québec, Ontario, Manitoba, and Alberta.

B. Federal and Provincial Roles in Poverty Programs

6. Since adoption of the 1966 Canada Assistance Plan (CAP), the federal government's role in social assistance has been largely confined to establishing basic national standards and providing transfers to the provinces.[3] The specific design, and the associated incentive structure of assistance programs, has been largely the responsibility of the provinces, resulting in a wide variety of rules and regulations. In recent years, the federal government has exerted indirect influence over the structure of these programs through restrictions on federal financing. The systemic decline in real benefits across Canada that has taken place over the past several years was influenced by the restraint in the growth of federal transfers for social assistance exercised in the early 1990s and strengthened under the Canada Health and Social Transfer (CHST).[4] More recently, the federal government has been working with the provincial governments to develop a set of shared principles and objectives to underlie social programs in Canada.

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[3]Under the CAP, the federal government finances half of the total value of provincial outlays for social assistance, provided provincial programs meet certain national standards.

[4]Beginning in fiscal year 1996/97, the federal government's contribution to provincial health and social programs (including post-secondary education) was consolidated in a single block transfer, the CHST.

7. The National Child Benefit (NCB) is another significant piece of the social safety net in Canada. Launched in July 1998, the NCB is a cooperative initiative by the federal and provincial governments that seeks to mitigate the poverty trap problem by providing payments to all low- and moderate-income families with children regardless of their sources of income. This federal transfer replaces separate systems of child benefits and working income supplements in the various provinces (with the exception of Québec) with an integrated system that does not discriminate against those entering the labor force. Corresponding to this new federal benefit, the provinces have agreed to reduce social assistance payments to families with children by the amount of the NCB and to allocate the freed-up funds to complementary programs that will improve work incentives and benefits for all low-income families with children, rather than just those on social assistance.[5]

C. Incentive Effects of Income Support Programs

8. Although the trend toward increased welfare participation in Canada likely has multiple causes (including reduced employment opportunities for poorly educated individuals, and a rise in the number of single-parent families), the role of financial disincentives to work, and thus to terminate reliance on social assistance—poverty traps—should not be understated. The poverty traps problem can be decomposed into two elements. The first is the extent to which the system of income support tends to draw people out of the labor force and onto government assistance rolls. The second is the extent to which the system of income support tends to discourage existing recipients from re-entering the labor force. The level of benefits relative to average wages for unskilled workers, the restrictiveness of eligibility rules and their enforcement, and the extent, if any, of social stigma attached to welfare, are among the features of a social assistance program that determine the tendency to attract participants. Once in the system, effective marginal income tax rates, determined in large part by the withdrawal of benefits upon entry into the labor force (but also by payroll taxes and federal and provincial income tax rates), can strongly discourage labor market participation. For example, a social assistance beneficiary moving into the workforce to earn $600 a month in labor income could face an effective marginal income tax rate in excess of 80 percent (tabulation below). Also, time limits on the duration of benefits and education and training opportunities all help to determine the extent to which existing welfare recipients might be discouraged from working. However, if social assistance recipients are allowed to retain some benefits after re-entering the labor force, effective marginal tax rates can be reduced, but low-wage workers that have migrated through social assistance to work may be financially better

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[5]See, for example, the summary of provincial benefits for families with children in Clark (1998). Under the NCB, provinces are expected to implement new programs for all low-income families with children including one or more of the following: (i) income support programs; (ii) earned income supplements; (iii) child support supplements; (iv) extension of in-kind benefits now available to social assistance recipients to all low-income families; (v) tax measures; and (vi) other social services, such as child care.

off than those who have never accepted social assistance benefits (tabulation below). This condition may create a "revolving door" through social assistance. The specific design of social assistance programs can exacerbate or mitigate all of these conditions to varying degrees.

Marginal Income Tax Rates for Social Assistance Recipients, Earning $600 per Month from Employment 1/

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Earned income (in dollars)	600	1,200	1,800	2,400	3,000	3,600	4,200	4,800	5,400	6,000	6,600	7,200
Applicable payroll and federal tax rates (in percent):												
Canada Pension Plan tax 2/	0	0	0	0	0	3.2	3.2	3.2	3.2	3.2	3.2	3.2
Employment Insurance tax 3/	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Personal income tax 4/	0	0	0	0	0	0	0	0	0	0	0	17
Cumulative earned income net of taxes (in dollars)	584	1,168	1,751	2,335	2,919	3,500	4,064	4,629	5,193	5,758	6,323	6,846
Cumulative income exemption (in dollars)	100	200	300	400	500	600	700	800	900	1,000	1,100	1,200
Clawback rate after income exemption (in percent) 5/	80	80	80	80	80	80	80	80	80	80	80	80
Cumulative clawback (in dollars)	387	774	1,161	1,548	1,935	2,320	2,691	3,063	3,435	3,806	4,178	4,517
Cumulative income net of taxes and clawback (in dollars)	197	394	590	787	984	1,180	1,373	1,566	1,759	1,952	2,145	2,329
Cumulative net income of nonworking social assistance recipient (in dollars) 6/	917	1,833	2,750	3,667	4,583	5,500	6,417	7,333	8,250	9,167	10,083	11,000
Cumulative net income of working social assistance recipient (in dollars) 6/	1,113	2,227	3,340	4,454	5,567	6,680	7,790	8,899	10,009	11,118	12,228	13,329
Effective average tax rate 7/	**67.2**	**67.2**	**67.2**	**67.2**	**67.2**	**67.2**	**67.3**	**67.4**	**67.4**	**67.5**	**67.5**	**67.7**
Effective marginal tax rate 7/	**80.5**	**80.5**	**80.5**	**80.5**	**80.5**	**81.2**	**81.2**	**81.2**	**81.2**	**81.2**	**81.2**	**84.6**

1/ The average social assistance benefit for a single parent with one child was $11,000 in 1997.
2/ 3.2 percent for income above $3,500 per year.
3/ 2.7 percent for all insurable income in 1998. Reduced to 2.55 percent in 1999.
4/ 17 percent for income over $6,956.
5/ Varies across provinces from 75 to 100 percent and is applied to net income.
6/ Assumes a single parent with one child receiving benefits of $11,000 per year.
7/ Total excludes provincial tax rates which range from 45 to 69 percent of the personal income tax bill. Surtaxes also apply in a number of provinces.

D. Recent Developments in Provincial Social Assistance Programs

9. Although the approach that has been taken across provinces varies widely, a number of generalizations can be drawn to describe recent provincial social assistance reforms. One feature that has been common across most reforming provinces is to divide social assistance

recipients into two distinct groups: employable and unemployable (the disabled and mothers with young children). The rules and regulations governing social assistance benefits differ significantly depending on this classification, and only those rules and regulations governing employable recipients are discussed here. The typical provincial reform package applicable to employable individuals has reduced the generosity of benefits, tightened eligibility requirements, and strengthened training and employment search requirements (Table 5).[6] There was also some effort to reduce the high effective marginal income tax rates faced by welfare recipients. Notably absent from the list of reforms is the introduction of time limits on the duration of benefits.

10. Of those provinces that adjusted the level of benefits, all but one (Nova Scotia) reduced benefits. Frequently, cutbacks were greater for single employable individuals than for employable individuals with dependent children. Ontario, Prince Edward Island, and Alberta enacted the largest relative cuts in benefits.

11. In several cases, steps were taken to significantly raise the bar for obtaining social assistance benefits. In Alberta, for example, program administrators adopted more intensive reviews of new and existing cases; required new applicants to attend information sessions before processing applications; required recipients to follow through on their case plans (including plans for finding employment) as a condition of continued eligibility; established waiting periods for non-emergency cases; and, in some districts, routinely denied first applications, except in certain hardship cases, to encourage applicants to pursue other means of support including employment.[7] British Columbia ended eligibility altogether for people under 19 years of age, and Ontario extended the waiting period for recently unemployed individuals and placed new restrictions on the eligibility of cohabiting couples. In contrast, Québec eased eligibility somewhat by raising the ceiling on personal liquid assets above which an individual is excluded from receiving social assistance benefits.

12. Provinces generally strengthened training and job-search requirements as a condition of continued receipt of benefits. In many cases, refusal to participate in training and/or education programs intended to improve employment prospects can be grounds for ineligibility. Although in some cases such conditions were formally in place prior to the reform drive, enforcement was generally lax. The Ontario Works Program is a clear example of the trend toward social assistance programs with strict training and work requirements. In British Columbia, the strictest job search and training requirements were established for recipients ages 19–24.

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[6]Brief summaries of provincial reforms are available in a longer draft of this paper.

[7]For a detailed discussion of welfare reform in Alberta, see Boessenkool (1997), and National Council on Welfare (1997a).

13. The introduction of the National Child Benefit in July 1998 helped to lower the marginal effective tax rate faced by certain very low-income workers, but did not change the effective rate for social assistance recipients. Because the National Child Benefit is separate from social assistance benefits, payments for children are no longer clawed back at low-to-moderate levels of earned income. However, while this lowers the marginal effective tax rates of certain low-income workers whose welfare benefits have been fully substituted by earned income, welfare recipients still face high rates of clawback of non-child benefits (see Appendix). As long as there are significant welfare benefits remaining that are subject to clawbacks, a social assistance recipient continues to face a high marginal effective income tax rate, and thus strong disincentives to work. Such disincentives could be dealt with by reducing the clawback rate, offering an earned income supplement, or by substituting a negative income tax[8] for the traditional type of social assistance program. While some provinces have reduced the clawback rates of social assistance benefits and/or increased the earnings exemption, clawback rates remain high (Tables 5 and 6). Alberta enacted the most significant reduction in the clawback rate, reducing it from 90 percent to 75 percent. Saskatchewan introduced an earnings supplement that is designed to ensure that families would be better off working. Ontario and Newfoundland raised the earnings exemption to help offset a reduction in benefit levels.

E. Considerations in Structuring Further Reforms

14. Because it is difficult to measure the costs and benefits associated with the different approaches to welfare reform and because the precise goals for social assistance programs likely differ across provinces, no single optimal approach can be identified. The elements of any reform package can be separated into those factors that affect eligibility directly (the "sticks") and those that affect financial incentives (the "carrots"). The former address the specific criteria that must be met before administrators may certify eligibility. The latter address the relative appeal of social assistance benefits relative to work, which, in turn, influences an individual's choice between social assistance and work.

15. Restrictions that directly affect eligibility include: asset restrictions; duration restrictions; minimum age restrictions, training/education and/or work-search requirements; and various administrative measures such as waiting periods, fraud detection efforts, and routinely discouraging first-time applicants. A proper assessment of any of these measures requires consideration of the costs and benefits, which are difficult to quantify. In the case of asset restrictions, for example, although it is consistent with the goals of a social safety net to exclude from eligibility individuals with significant tangible and financial assets, such

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[8]A negative income tax establishes a guaranteed minimum level of income support available to all working-age individuals. In its purest form, an unconditional income transfer would replace all other types of social assistance support (in-kind or cash). Earned income is then taxed according to statutory tax rates without any withdrawal of the income transfer.

restrictions could also discourage saving by low-income workers and could penalize those with the longest work history. Restricting the duration of social assistance helps ensure that social support does not become an extended lifestyle choice, but it also implies that some of the truly needy could become unprotected. The same is true of age limits that, for example, might prohibit the participation of young people. Education/training and work-search requirements help to advance the goal of returning social assistance recipients to work, but both may also entail steep budgetary costs.

16. Policies affecting financial incentives include the generosity of benefits; benefit clawback rates; the earnings threshold below which benefits are not subject to clawbacks; earned income supplements for former welfare recipients; and the negative income tax approach to social assistance. Although cutting the generosity of social assistance benefits can reduce the financial incentive to seek or to retain benefits, at some point this will also undermine the adequacy and "fairness" of the social safety net. An overly generous system, on the other hand, may draw individuals from the labor force, implying a deadweight economic loss for the economy as a whole, and will be relatively costly in terms of budgetary outlays. Although lowering clawback rates will reduce the disincentive to work by reducing the marginal effective income tax rate, it also implies that social assistance recipients who enter the labor force will be better off than identical workers who have remained off of social assistance. Very low rates of clawback may thus create a "revolving door," whereby some low-skill workers will enter social assistance in order to achieve the higher-income levels available to them upon returning to work. Low clawbacks may also be deemed "unfair" by low-wage workers who have remained off social assistance. Earned income supplements for welfare recipients who choose to return to work will also reduce the marginal effective tax rate facing social assistance recipients and so improve work incentives. But income supplements are also subject to the "revolving door" and "unfairness" critiques. A negative income tax approach to social assistance ensures that the marginal effective tax rate facing low-wage workers and non-workers is equalized, and thus does not discourage re-entry into the labor force. At the same time, however, this approach may draw workers from the labor force (imposing a deadweight loss on the economy) if the guaranteed income level is relatively high. Because such an income transfer is not targeted to the needy but is available across the board, it generally would be quite costly to adopt. If, on the other hand, the guaranteed level of income support were set very low, which would alleviate the problems mentioned above, it may not fulfill the objectives of a social safety net.

17. One possible reform that would appear not to have any drawbacks in terms of the objectives of a social safety net is to establish rules that reduce benefits and/or set time limits on the duration of benefits for employable social assistance recipients who reject repeated offers of employment. Repeated offers of employment can be taken as a strong indication that if social assistance benefits were to be reduced and eventually eliminated, such individuals would not fall through the social safety net but would return to the workforce. In order for this type of reform to work, however, it would have to be implemented in combination with a strict employment search obligation and adequate monitoring arrangements.

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Appendix: The National Child Benefit and Marginal Effective Income Tax Rates

Representative Social Assistance Parameters:

Suppose the monthly benefit for a single employable mother with one child is $400 before the National Child Benefit (NCB).

Let the monthly benefit for a single employable mother with one child be $300 after the NCB.

Assume the monthly NCB = $100

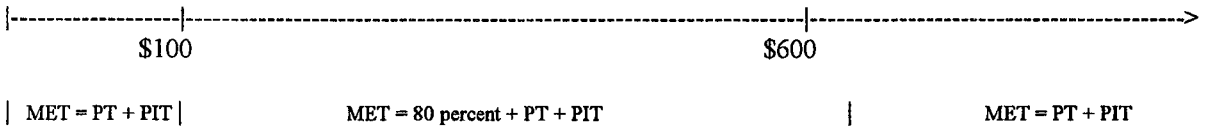
Assume that the clawback rate is 80 percent and is applied to gross income.[1]

Monthly earnings exemption = $100

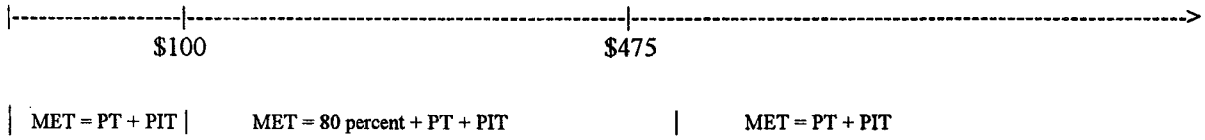
Notation:

PT = payroll tax rate
PIT = personal income tax rate
MET = marginal effective income tax rate

Before NCB



After NCB



[1]Although clawbacks are typically applied to net earned income, this assumption simplifies the exposition and does not affect the conclusion. Applying the clawback rate to net income only increases the thresholds beyond which the marginal tax rate falls to PT + PIT.

Table 1. Canada: Share of Population on Social Assistance, by Province, 1971-97 1/ 2/
(In percent of population)

	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon	Northwest Territories	Canada
1997	12.77	8.10	9.91	9.28	10.68	10.08	6.93	7.81	3.17	8.21	6.34	19.02	9.18
1996	12.63	8.57	10.95	8.82	11.00	10.79	7.55	7.93	3.80	9.65	5.43	17.72	9.82
1995	12.38	9.17	11.10	8.89	10.93	12.11	7.53	8.12	4.13	10.00	6.91	18.21	10.38
1994	11.61	9.78	11.14	9.72	10.80	12.61	7.94	8.03	5.12	9.69	8.06	17.01	10.61
1993	11.67	9.50	10.63	10.36	10.26	11.93	7.86	6.78	7.33	9.11	8.25	17.53	10.31
1992	10.28	8.98	10.04	10.41	9.43	11.14	7.26	6.01	7.15	8.08	5.68	16.70	9.56
1991	8.93	7.87	9.40	9.62	8.41	8.89	6.45	5.31	6.03	7.24	4.15	16.91	8.13
1990	8.28	6.57	8.60	9.05	7.93	6.55	6.04	5.35	5.84	6.56	3.57	16.26	6.96
1989	7.76	6.36	8.35	9.18	8.06	5.81	5.70	5.59	6.07	7.18	3.30	16.37	6.79
1988	8.32	6.86	8.20	9.64	8.67	5.41	5.68	5.85	6.09	7.72	4.14	16.54	6.90
1987	8.76	7.21	8.15	10.10	9.56	5.37	5.51	6.00	6.16	8.10	4.65	14.97	7.19
1986	8.13	7.15	8.09	9.46	10.31	5.13	5.73	6.07	5.21	8.47	5.65	12.85	7.23
1985	8.46	7.50	8.29	9.52	10.60	5.21	5.79	6.23	5.15	8.96	6.11	13.52	7.42
1984	9.17	7.73	7.68	9.50	10.61	5.27	5.52	6.26	4.88	8.70	4.57	13.22	7.38
1983	8.94	9.01	7.93	9.78	10.21	5.20	5.27	5.95	5.45	7.85	5.45	14.21	7.21
1982	9.49	9.11	7.50	8.83	8.52	4.55	4.56	4.89	3.87	5.03	6.13	13.11	5.97
1981	8.75	8.16	7.28	9.52	8.12	4.41	4.52	4.48	3.41	4.53	4.87	15.52	5.70
1980	8.46	7.57	6.00	9.37	7.85	4.05	4.40	4.27	3.47	4.47	4.38	11.15	5.44
1979	6.89	6.90	5.88	9.23	7.38	4.41	4.58	4.39	3.85	5.50	26.13	...	5.56
1978	9.47	6.84	5.88	9.04	7.19	4.14	5.04	4.34	4.21	5.38	23.71	...	5.51
1977	9.26	7.23	6.65	9.63	7.09	3.98	5.32	4.11	4.44	6.28	23.28	...	5.59
1976	10.84	7.43	6.48	7.61	6.69	4.37	5.57	4.66	4.19	6.38	37.28	...	5.63
1975	11.34	7.14	6.33	8.20	6.57	4.04	5.52	4.94	4.31	6.48	25.98	...	5.53
1974	11.49	6.29	5.81	7.78	6.30	3.87	5.96	4.88	4.58	5.61	12.37	...	5.29
1973	12.96	6.31	6.50	8.90	6.53	3.81	6.99	6.21	4.95	4.39	4.23	...	5.42
1972	14.91	14.00	6.50	9.49	7.47	4.19	7.83	7.54	5.24	5.82	6.39	...	6.20
1971	17.42	9.42	5.75	10.30	8.03	4.68	7.63	7.35	5.70	6.99	1.50	...	6.70

Sources: Human Resources Development Canada; and Fund staff estimates.

1/ Including dependents.
2/ Fiscal year ending in March.

Table 2. Canada: Per Capita Expenditures on Social Assistance, by Province, 1971-97 1/
(In 1997 dollars) 2/

	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon	Northwest Territories	Canada
1997	447	282	390	327	469	500	298	313	138	396	270	532	421
1996	436	298	404	323	497	597	320	318	160	464	250	497	476
1995	406	327	405	344	500	640	326	324	179	482	299	540	498
1994	360	358	397	369	501	655	348	317	298	484	336	512	515
1993	326	340	367	395	466	619	344	264	378	441	302	463	492
1992	280	312	330	390	414	529	286	224	349	373	229	435	427
1991	252	282	286	353	338	378	243	207	291	318	151	400	335
1990	234	241	264	356	366	292	228	216	295	311	117	408	307
1989	218	237	257	371	369	262	218	233	303	328	99	409	299
1988	231	240	243	364	425	245	214	245	301	352	99	381	310
1987	230	237	235	366	419	228	201	260	287	374	112	311	303
1986	214	232	229	365	446	216	201	262	248	403	158	276	306
1985	212	226	220	368	432	210	192	262	221	411	136	244	298
1984	224	236	208	351	412	200	178	257	216	395	136	261	285
1983	214	270	196	358	357	179	148	241	218	325	172	265	254
1982	204	247	183	318	300	156	126	186	150	211	141	246	206
1981	217	232	177	322	292	152	126	176	135	211	117	267	202
1980	211	212	177	311	279	153	124	177	150	242	66	243	203
1979	213	206	175	336	272	158	135	179	164	220	83	266	203
1978	217	190	184	280	269	160	133	168	185	232	81	198	204
1977	236	188	175	409	261	156	137	200	180	221	57	186	205
1976	243	168	167	331	236	167	144	137	164	246	93	286	199
1975	257	152	150	256	211	154	142	143	153	254	68	469	185
1974	210	115	150	221	203	131	145	181	151	163	70	40	163
1973	280	126	131	203	226	133	174	169	178	172	66	...	175
1972	313	124	141	184	224	153	194	164	160	184	27	...	183
1971	290	123	111	149	168	129	181	138	160	194	59	...	155

Sources: Human Resources Development Canada; and Fund staff estimates.

1/ Fiscal year ending in March.
2/ Deflated using consumer price index.

Table 3. Canada: Social Assistance Cases by Length of Spell, 1990-97

Length of Spell	1990	1992	1994	1995	1996	1997	Percent Change 1990-97
0-3 months	152,111	238,643	210,024	198,048	156,696	143,287	-5.8
In percent of total	24	25	19	18	16	15	
4-6 months	69,100	131,643	123,987	114,667	98,277	88,024	27.4
In percent of total	11	14	11	11	10	9	
7-12 months	70,597	136,935	143,098	132,916	120,786	99,617	41.1
In percent of total	11	14	13	12	12	11	
13-24 months	81,606	142,446	186,337	175,234	159,933	139,477	70.9
In percent of total	13	15	17	16	16	15	
25+ months	260,809	305,968	430,091	461,336	472,833	472,763	81.3
In percent of total	41	32	39	43	47	50	
Total 1/	**634,223**	**955,635**	**1,093,537**	**1,082,201**	**1,008,525**	**943,168**	**48.7**

Source: National Council of Welfare (1998).

1/ Total includes social assistance cases from all provinces and territories, except for New Brunswick, Quebec, and municipal social assistance cases in Nova Scotia and Manitoba, and accounts for between 60 and 66 percent of total national social assistance cases.

Table 4. Canada: Provincial and Territorial Social Assistance Benefits

(In constant 1996 dollars, unless otherwise noted)

											Benefits in Percent of:		
											Provincial Minimum Wages	2/3 Average Income 1/	
	1986	1989	1990	1991	1992	1993	1994	1995	1996	1997	1997	1993	1997
Newfoundland													
Single employable	4,595	4,430	4,408	4,335	4,555	4,499	4,486	4,395	2,502	4,252	41	28	26
Disabled person		8,925	8,839	8,562	8,767	8,642	8,617	8,443	8,310	8,167	79	55	50
Single parent, one child	11,521	11,279	11,268	11,380	11,859	11,712	11,679	11,442	11,262	11,068	107	74	67
Couple, two children	13,327	13,048	13,030	12,596	12,834	12,673	12,637	12,381	12,186	11,976	116	80	73
Prince Edward Island													
Single employable	8,535	8,254	8,223	8,210	8,336	8,274	7,425	5,725	5,245	5,225	49	62	37
Disabled person		9,606	9,517	9,370	9,493	9,410	9,283	8,939	9,048	8,774	83	71	62
Single parent, one child	11,765	11,379	11,478	11,374	11,564	11,494	11,262	10,733	10,242	9,800	92	87	69
Couple, two children	17,240	16,948	16,961	17,039	17,265	17,130	16,782	16,117	14,873	14,718	139	129	103
Nova Scotia													
Single employable	6,273	6,991	6,676	6,341	6,252	6,140	6,122	5,998	5,922	4,352	40	38	28
Disabled person		9,203	9,153	9,009	8,896	8,736	8,860	8,705	8,568	8,421	78	54	54
Single parent, one child	10,863	11,186	11,114	10,968	10,980	10,783	10,923	10,729	10,560	9,211	85	67	59
Couple, two children	13,076	14,230	13,609	13,137	13,165	12,971	12,933	12,672	13,602	13,751	127	80	88
New Brunswick													
Single employable	3,092	3,343	3,296	3,222	3,228	3,182	3,198	3,146	3,132	3,114	29	19	19
Disabled person		8,761	8,631	8,369	8,387	8,332	6,529	6,511	6,483	6,548	61	51	40
Single parent, one child	9,286	9,065	8,930	8,721	8,794	8,819	9,171	9,628	9,573	9,800	91	54	61
Couple, two children	10,045	9,807	9,648	9,546	9,868	9,892	10,241	10,778	10,711	11,133	103	61	69
Quebec													
Single employable	3,254	4,179	5,935	6,156	6,348	6,365	6,222	6,096	6,000	5,808	52	34	31
Disabled person		7,513	7,800	8,012	8,267	8,262	8,387	8,217	8,268	8,244	74	45	45
Single parent, one child	10,951	10,154	10,828	9,897	11,250	11,715	11,955	11,713	11,528	10,738	96	63	58
Couple, two children	14,154	13,261	12,986	13,351	13,820	14,227	14,024	13,741	13,524	12,610	113	77	68
Ontario													
Single employable	6,955	7,474	8,166	8,371	8,669	8,638	8,634	8,024	6,584	6,133	46	45	32
Disabled person		10,791	11,520	11,760	11,969	11,898	11,890	11,650	11,466	10,968	81	62	57
Single parent, one child	12,456	13,413	15,042	15,394	15,691	15,663	15,657	14,535	11,940	11,390	85	81	59
Couple, two children	15,505	16,927	19,737	20,081	20,540	20,483	20,286	18,716	15,428	14,717	109	106	76

Table 4. Canada: Provincial and Territorial Social Assistance Benefits (Concluded)

(In constant 1996 dollars, unless otherwise noted)

											Benefits in Percent of:		
											Provincial Minimum Wages	2/3 Average Income 1/	
	1986	1989	1990	1991	1992	1993	1994	1995	1996	1997	1997	1993	1997
Manitoba													
Single employable	6,901	7,157	7,255	7,159	7,313	7,193	6,687	6,562	6,070	5,260	50	43	32
Disabled person		7,782	7,686	7,550	9,294	8,368	8,293	8,125	7,997	7,859	74	50	48
Single parent, one child	10,661	10,444	10,325	10,141	11,244	10,085	9,993	9,790	9,636	9,470	89	60	57
Couple, two children	16,153	16,950	18,250	18,235	18,788	17,125	17,405	17,042	15,273	13,987	132	101	85
Saskatchewan													
Single employable	5,777	5,779	5,652	5,477	5,692	5,990	5,973	5,852	5,760	5,661	51	37	33
Disabled person		9,417	9,125	8,764	8,694	8,611	8,586	8,412	8,520	7,371	67	53	43
Single parent, one child	11,853	11,803	11,475	11,033	10,919	10,796	10,765	10,548	10,381	10,252	93	67	60
Couple, two children	16,627	16,377	15,913	15,279	15549	15,333	15,348	15,040	14,803	14,602	133	95	86
Alberta													
Single employable	8,220	5,711	5,451	5,922	5,973	5,628	4,903	4,804	4,728	4,682	48	32	26
Disabled person		7,063	6,742	7,092	7,053	6,845	6,811	6,693	6,588	9,600	98	38	54
Single parent, one child	12,036	10,708	10,222	10,715	10,700	10,271	9,532	9,339	9,192	9,164	93	58	52
Couple, two children	17,895	15,777	15,060	16,585	16,622	16,006	15,007	14,856	14,622	14,488	147	90	82
British Columbia													
Single employable	5,871	6,440	6,588	6,476	6,680	6,701	6,860	6,743	6,131	5,976	43	33	28
Disabled person		8,887	9,198	8,976	9,379	9,440	9,649	9,486	9,337	9,127	66	46	43
Single parent, one child	10,574	11,633	11,763	11,514	12,044	12,084	12,367	12,155	11,964	11,660	85	59	55
Couple, two children	14,443	14,530	14,639	14,285	15,238	15,324	15,771	15,502	15,258	15,389	112	75	72
Yukon													
Single employable	6,977	8,419	8,525	8376	8,361	8,211	8,187	8,021	7,895	7,759	58	40	35
Disabled person		9,418	9,478	9,278	9,250	9,084	9,058	9,545	9,395	9,233	68	44	42
Single Parent, One Child	12,529	13,916	14,010	13,876	13,886	13,636	13,597	13,322	13,112	12,886	96	66	59
Couple, two children	19,197	20,891	20,764	20,740	20,931	20,556	20,496	20,081	19,765	19,425	144	100	88
Northwest Territories													
Single Employable						11,756	11,722	11,485	11,229	7,607	60	51	32
Disabled Person						13,316	13,278	13,009	13,029	9,376	73	58	40
Single Parent, One Child						19,931	19,873	19,471	19,074	17,018	133	87	72
Couple, Two Children						23,587	23,556	23,079	22,596	21,287	167	103	90

Sources: National Council of Welfare, (1997b); Clark (1998); and Statistics Canada.

1/ Average income calculated as average hourly earnings of employees paid by the hour for each province or territory multiplied by 2,000 hours, which proxies for the average. full-time hours worked per year

Table 5. Canada: Recent Welfare Reforms, by Province 1/

	Measures to Reduce High Effective Marginal Tax Rates?	Workfare?	Generosity of Benefits?	Time Limits?	Eligibility Restrictions?	Summary of Approach to Welfare Reform
British Columbia	The Family Bonus income supplement improved the income of working families relative to welfare recipients. Because the Family Bonus is deducted from welfare benefits, it does not reduce the clawback rate facing welfare recipients.	Strengthened requirements for job search and training for employable recipients. Refusing to accept or pursue work is grounds for ineligibility for employable individuals.	Essentially unchanged.	No explicit limits.	Young people under 19 no longer eligible. Strict job search and/or training requirements for 19–24 year olds. Adults 25 and over must seek and accept work if offered, but subject to less regimented criteria.	Emphasis on job search and training for employment. Also improved the incomes available to working parents through the Family Bonus.
Alberta	Reduced the clawback rate from 90 percent to 75 percent.	Recipients must actively seek work or enter training when youngest child reaches six months (the old policy was two years). The province became more likely to cut off benefits to those refusing work without good cause.	Benefits reduced (between 12–19 percent) to bring them in line with incomes of low-wage workers.	No explicit limits.	Administrative restrictions: e.g., Officials routinely deny first applications; enhanced follow-up checks to verify eligibility; increased fraud investigations; enhanced home visits to verify eligibility; waiting periods established.	Reforms did little to reduce work disincentives for those already receiving benefits. To discourage new welfare cases, emphasized less generous benefits and tighter eligibility restrictions through changes in administrative practices.

Table 5. Canada: Recent Welfare Reforms, by Province 1/

	Measures to Reduce High Effective Marginal Tax Rates?	Workfare?	Generosity of Benefits?	Time Limits?	Eligibility Restrictions?	Summary of Approach to Welfare Reform
Ontario	No earnings exemption for the first three months on welfare. Earnings exemption was raised to offset a cut in benefit levels. The clawback rate after the exemption is 75 percent.	Ontario Works requires recipients of social assistance to pursue work and/or training, and refusal to accept work can eventually lead to ineligibility for social assistance.	Benefits were cut by 21½ percent for all but the elderly and disabled.	No explicit limits.	Extension of the waiting period for employable person who quits or loses a job without just cause; restrictions on cohabiting couples.	Primarily workfare combined with benefit cuts.
Newfoundland	Earnings exemption for families was increased. Pilot income supplement program will be introduced.	None.	Benefits declined in real terms by 7 percent over the period 1992–97 and were raised by 2 percent in 1998.	No explicit limits.	No explicit restrictions.	Emphasis on job search and training for employment. Reduced disincentives to work.
Prince Edward Island	None.	None.	Benefits reduced by 37 percent for single persons and 15 percent for families.	No explicit limits.	No explicit restrictions.	Benefit cuts.

Table 5. Canada: Recent Welfare Reforms, by Province 1/

	Measures to Reduce High Effective Marginal Tax Rates?	Workfare?	Generosity of Benefits?	Time Limits?	Eligibility Restrictions?	Summary of Approach to Welfare Reform
New Brunswick	Introduced extended wage exemption. Allows families (single individual) a $200 ($150) per month exemption plus 35 (30) percent of income on any additional income for the first six months, and 30 (25) percent for the second six months.	Beneficiaries under the age of 21 are required to attend school or participate in training to receive maximum benefits. Noncompliance results in substantial reductions in benefit levels.	Essentially unchanged.	No explicit limits.	No explicit restrictions.	Emphasis on job search and training; reduced disincentives to work.
Nova Scotia	None. Under Family Benefits, individuals without dependents are allowed $100 per month in earned income without reduced benefits; thereafter, 75 percent of gross earnings are charged against benefits. The earnings exemption is doubled for individuals with dependents.	Social assistance recipients are required to seek work and accept available employment; also required to undertake training as a condition of eligibility.	Social assistance benefits were increased in some regions to meet the higher levels offered by the more costly municipalities.	No explicit time limits.	Limits on liquid assets.	Consolidated programs that had been set up and administered by municipalities into a provincial system.

Table 5. Canada: Recent Welfare Reforms, by Province 1/

	Measures to Reduce High Effective Marginal Tax Rates?	Workfare?	Generosity of Benefits?	Time Limits?	Eligibility Restrictions?	Summary of Approach to Welfare Reform
Saskatchewan	The Saskatchewan Employment Supplement ensures that families are better off working than receiving social assistance benefits.	None.	Essentially unchanged.	No explicit limits.	To be eligible for the Saskatchewan Employment Supplement, a family must reside in the province; have a valid social insurance number; and have at least $125 in employment income per month.	Employment Supplement combined with emphasis on job search and training for employment.
Quebec	Earnings exemption for recipients will be increased.	Employment Assistance Allowance will be offered to welfare beneficiaries who participate in an individualized training and employment plan; only able beneficiaries between the ages of 18-24 will be required to participate. A Return to Work Supplement grants $500 to beneficiaries who find a new job.	Essentially unchanged.	No explicit limits.	Increased permissible level of liquid assets.	Emphasis on job search and training for employment.

Sources: National Council of Welfare (1997a); Boessenkool (1997); and various provincial ministries responsible for social assistance.

1/ Information on reforms in Manitoba was unavailable.

Table 6. Canada: Monthly Earnings Exemptions and Clawback Rates for Employable Individuals on Welfare

	Maximum Earnings Exemption	Clawback Rate
Newfoundland	$40 for unemployed single adults; $100 for unemployed family, no children; and $150 family with dependent children.	100 percent.
Prince Edward Island	$50 for single person; $100 for family.	90 percent of net wages.
Nova Scotia	$50 for single person; $100 for family.	100 percent.
New Brunswick	$150 for single person; $200 for family. If a recipient is designated as having high employment potential, the exemption is increased for a single person by an additional $250; for a family by $200 for two months and by $100 for a third month. Two-parent employable families are eligible for the $200 exemption for 6 months with allowable extensions.	70 percent of net earned income for singles and couples with children for the first 6 months; then 75 percent for the next 6 months; then 100 percent thereafter. 65 percent of net earned income for families with children for the first 6 months; then 70 percent for the next six months; then 100 percent thereafter.
Quebec	$174 for single person; $60 for single parent; $225 for two-parent family.	100 percent.
Ontario	$143 for single person; $275 for single parent with one child; and $346 for couple with two children.	75 percent.
Manitoba	$100 for each employable person in household.	75 percent of net earnings.
Saskatchewan	$100 for single person; $175 for a two-person family considered non-disabled; and $125 for families with children.	100 percent of net earnings for single person and two person family with no children; for families with children, Saskatchewan Employment Supplement offers benefits equal to a proportion of net earnings above $125.
Alberta	$115.	75 percent.
British Columbia	25 percent of any income earned after recipient has been on welfare for three months; the exemption is available only 12 months during a 36-month period, and the 12 months need not be consecutive.	75 percent for twelve months during a 36- month period; thereafter 100 percent.

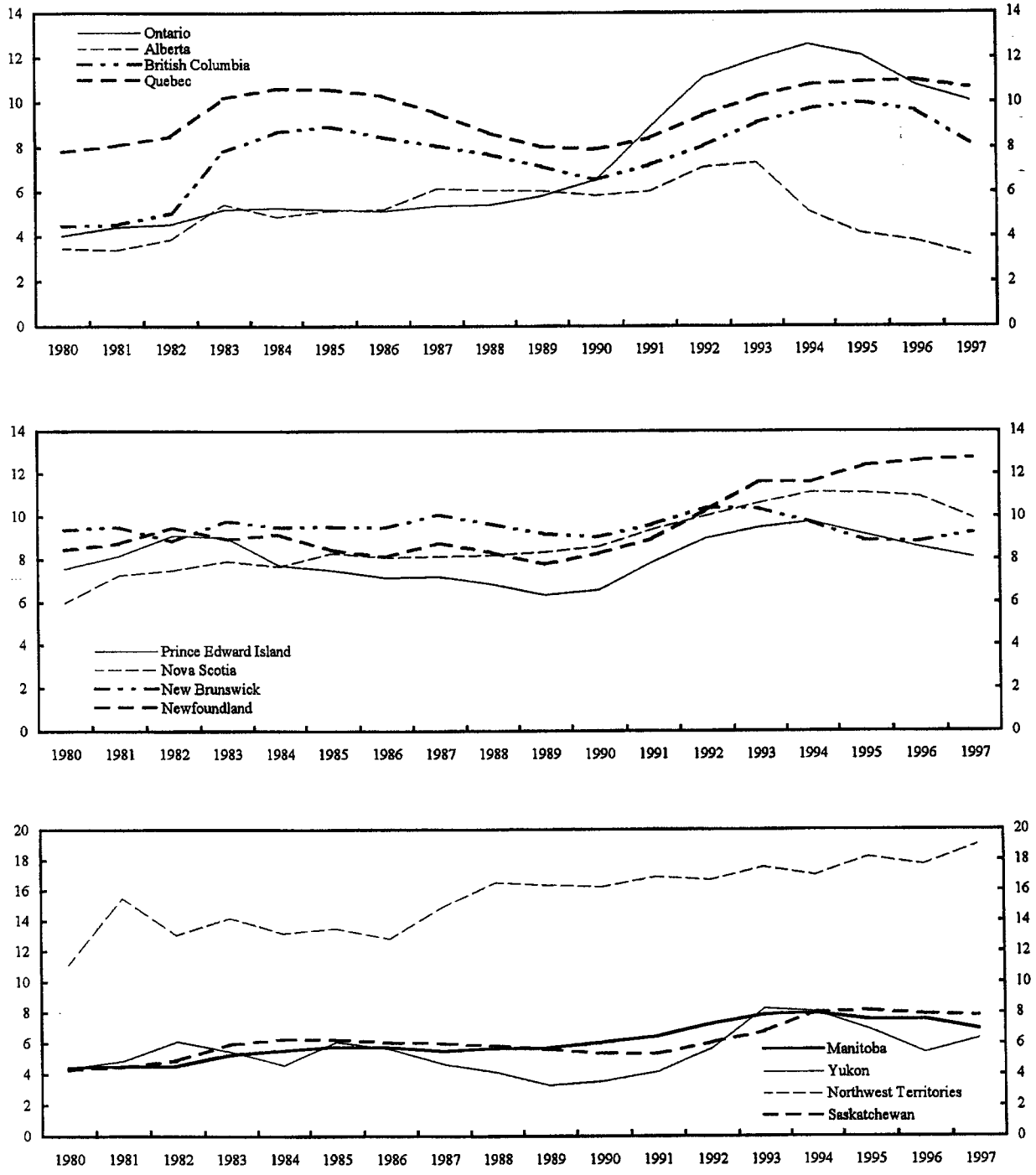
Sources: National Council of Welfare (1997b); and various provincial ministries responsible for social assistance.

FIGURE 1

CANADA

SHARE OF POPULATION ON SOCIAL ASSISTANCE, BY PROVINCE, 1980-97 1/ 2/

(in percent of population)



Sources: Human Resource Development Canada; and Fund staff estimates.

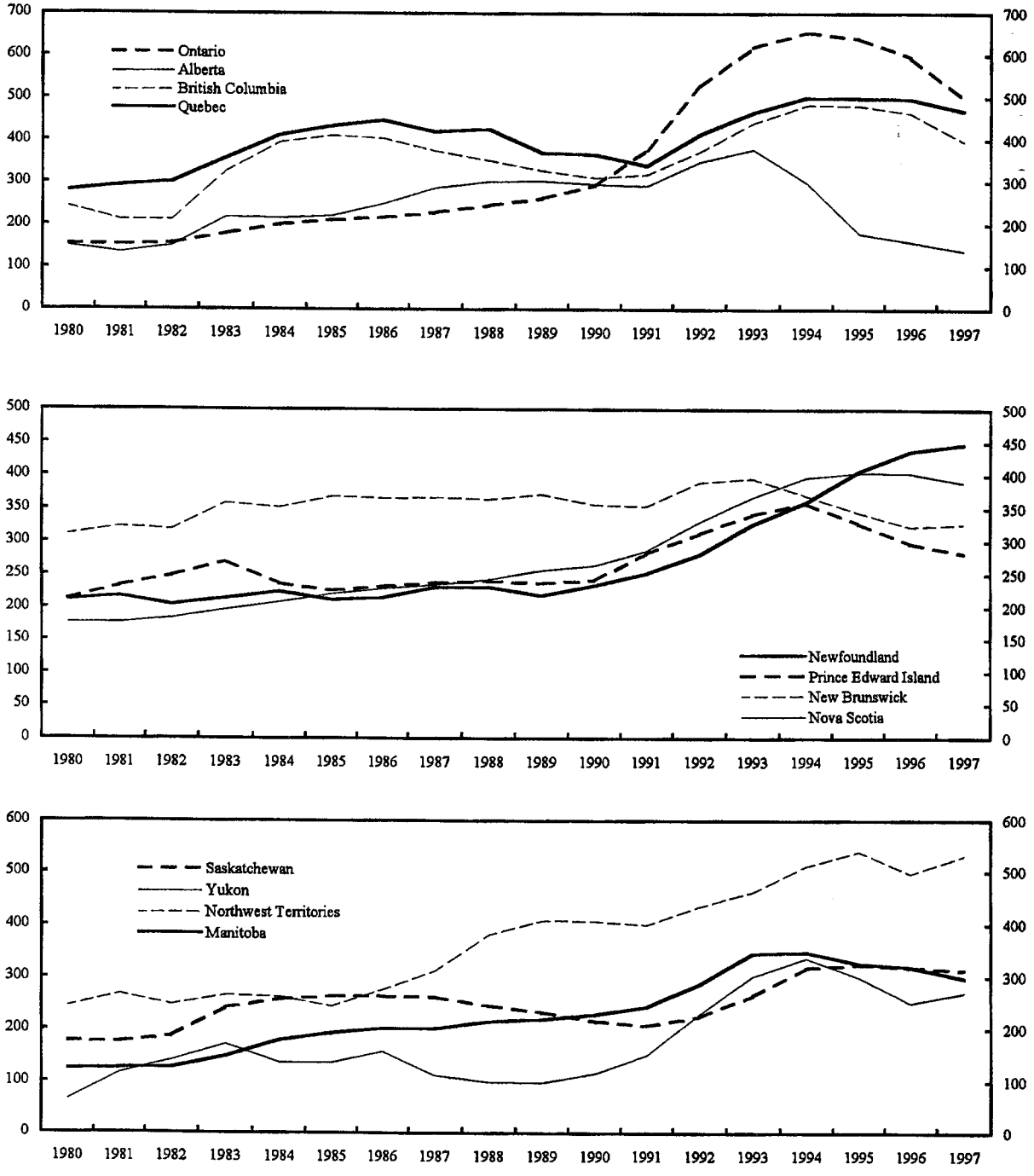
1/ Including dependents.
2/ Fiscal year ending in March.

FIGURE 2

CANADA

REAL PER CAPITA EXPENDITURES ON SOCIAL ASSISTANCE, BY PROVINCE, 1980-97 1/

(in 1997 dollars) 2/



Sources: Human Resources Development Canada; and Fund staff estimates.

1/ Fiscal year ending in March.

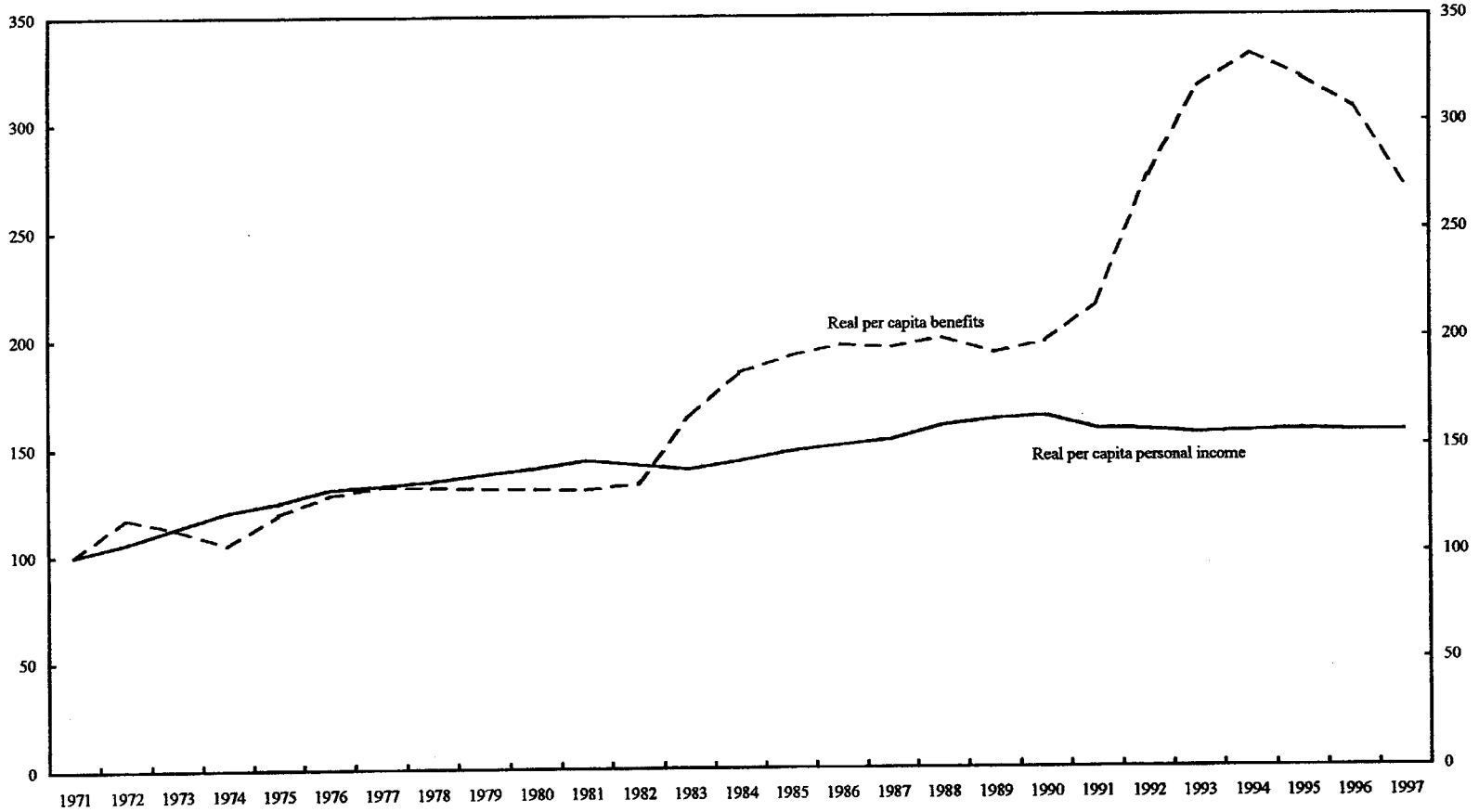
2/ Deflated using consumer price index.

FIGURE 3

CANADA

REAL PER CAPITA SOCIAL ASSISTANCE BENEFITS AND REAL PER CAPITA PERSONAL INCOME, 1971-97

(Index 1971=100)



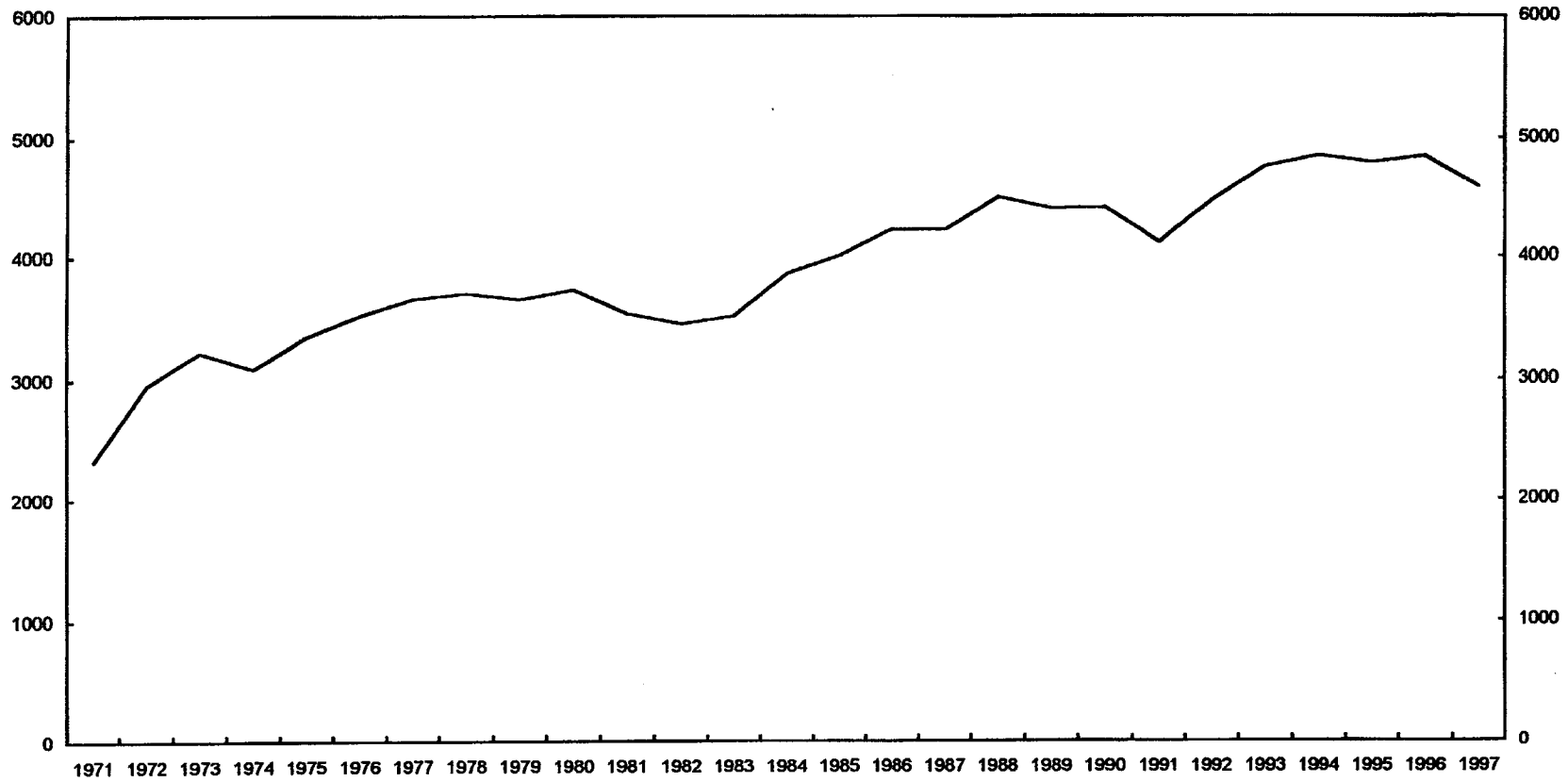
Sources: Statistics Canada.

FIGURE 4

CANADA

REAL SOCIAL ASSISTANCE BENEFITS PER RECIPIENT, 1971-97

(In 1997 dollars per year)



Sources: Statscan; and Fund staff estimates.

VII. CANADA'S FINANCIAL SYSTEM[1]

1. In January 1998, the Royal Bank of Canada and the Bank of Montreal announced their intention to merge. This was followed by a similar announcement by the Canadian Imperial Bank of Commerce and the Toronto-Dominion Bank in April 1998. Coming on the heels of the examination of financial services by the Task Force on the Future of the Canadian Financial Services Sector, these proposals prompted considerable debate and deliberation, culminating in the Minister of Finance's decision in December 1998 not to allow the proposed mergers. This paper discusses the structure of the Canadian financial sector, the forces leading to the proposed bank mergers, and the potential implications of increased concentration in the banking sector in Canada. It also reviews the main recommendations by the Task Force on the Future of the Financial Services Sector in the area of enhancing financial sector competitiveness.

A. Structure of the Financial Sector

2. Historically, the Canadian financial system was based on five principal groups: chartered banks, trust and loan companies, the co-operative credit movement, insurance companies, and securities dealers. The functions of the different kinds of institutions were separated. Chartered banks are incorporated and supervised by the federal government and have been traditionally involved in personal, residential mortgage, and commercial lending. Trust and loan institutions tended to specialize in residential mortgage lending and in term deposits, and they were the only institutions permitted to offer fiduciary services. They can be either federally or provincially incorporated and supervised. The co-operative credit movement (credit unions and caisses populaires) operates almost entirely under provincial jurisdiction. Traditionally, these institutions invested in residential mortgages and personal loans. The majority of insurance companies are federally supervised, but some companies are provincially regulated. The securities dealers have traditionally operated under the supervision of the provincial governments. They have typically engaged in activities associated with the underwriting and selling of bond and stock issues, offering investment advice and trading of securities in the secondary markets.

3. The period since the late 1980s has seen sweeping change in the structure of the financial sector. These changes have been largely the result of legislative actions that have blurred the lines of separation between the different kinds of institutions. Particularly noteworthy are the legislative amendments introduced in 1987 that allowed links between banks and securities dealers. The large chartered banks responded by entering the securities business either by buying existing securities dealers, as most did, or by establishing new

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[1] Prepared by Brenda González-Hermosillo.

dealers. As a result, the largest securities dealers are now all part of broader financial services groups headed by banks.[2]

4. Legislation in 1992 eliminated most of the remaining distinctions between the different financial institutions, allowing them to compete directly with one another by expanding their business powers and by permitting cross-ownership. All the major banks acquired a trust subsidiary, reflecting in part the financial difficulties encountered by trust companies in the early 1990s.[3] In contrast, while some banks have made inroads into the provision of insurance services, this business is still dominated by the old-line insurance companies.

5. Table 1 provides an overview of the current structure of the Canadian financial sector. Chartered banks account for over 50 percent of the total assets of the Canadian financial sector.[4] At the end of 1997, 11 Canadian-owned chartered banks accounted for 93 percent of the total assets of the banking system, while 44 foreign-owned banks accounted for the remaining 7 percent (Table 2).[5] The largest six domestic banks account for 92 percent of the total assets of the banking system.

6. The Canadian banking system is one of the most concentrated in the industrial world (Figure 1). Although nonbank deposit-taking institutions (e.g., trust companies, caisses populaires, and credit unions) are significant players in the market for deposits, the largest six domestic banks account for about 70 percent of the total deposits held by all deposit-taking

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[2] For example, in the government securities market before the 1987 legislative changes, domestic banks had about 15 percent of treasury bill auction winnings and 19 percent of Canada bond auction winnings. In 1996, the comparable numbers for banks and their securities dealer subsidiaries combined were 62 percent and 50 percent, respectively. Banks and their subsidiaries also accounted for 82 percent of the turnover in the secondary market for treasury bills and for 59 percent of the turnover in the secondary market for bonds in 1996 (Freedman (1998)).

[3] With their entry into the trust business, banks became important players in the market for assets under administration, with the six largest domestic banks representing about 80 percent of the total for this market (Freedman (1998)).

[4] Chartered banks are either classified as Schedule I or II. Schedule I banks are domestically owned and are widely held. The widely held rule stipulates that no individual or individual group can own or control more than 10 percent of the bank's equity. Foreign banks are Schedule II banks and are considered to be narrowly held even if they are widely held in their own jurisdiction.

[5] The number of foreign banks in Canada has declined in recent years from a peak of 59 in 1987.

institutions (Figure 2). Foreign banks are small players in the retail deposit market.[6] While Canadians have increasingly placed their savings in mutual funds instead of conventional deposits (Table 3), banks have recently entered into the mutual fund market in a significant way by offering a wide variety of bank-sponsored funds in their branches. Overall, the banks' share of the mutual funds industry is around 25 percent.[7]

7. The six largest Canadian banks also play a predominant role in the markets for consumer credit, residential mortgage credit, and the financing of small and medium-size corporations (Figures 3, 4, and 5). Larger Canadian corporate customers have increasingly tapped capital markets directly for their funding needs, moving away from borrowing from banks. After reaching a peak of over 50 percent in the early 1980s, the portion of business funding derived from bank loans has since declined to around 30 percent (Figure 6). The role of foreign banks in these various markets has been quite limited, accounting for about 7 percent of credit to large businesses and about 2 percent of credit extended to small and medium-sized businesses.[8]

8. Despite its current high degree of concentration, the Canadian financial market seems to function competitively.[9] The moderate decline observed in recent years in the interest spreads charged by the six largest domestic banks suggests that concentration has not led to uncompetitive behavior by domestic banks (Figure 7).

B. Potential Implications of Bank Mergers

9. After reviewing reports from the Competition Bureau with respect to competition concerns, from the Office of the Superintendent of Financial Institutions with respect to prudential issues, and from several parliamentary committees, the Minister of Finance announced on December 14, 1998 that the proposed bank mergers would not be considered until new legislation is in place to enhance competition in the sector and increase consumer

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[6] One notable exception is the Bank of Hong Kong.

[7] The banks' share of the mutual funds market varies among the different segments of that market. The banks' highest market shares are in money market and mortgage mutual funds, where they accounted for 68 percent and 56 percent of the market, respectively, at the end of 1996 (Freedman (1998)).

[8] Task Force on the Future of the Canadian Financial Services Sector (1998).

[9] Competition is not precluded in highly concentrated markets if they are contestable. Markets are said to be "contestable" if potential competitors have unrestricted access to the market. The notion of "contestable markets" was first explored in Baumol (1982) and studies applied to the Canadian financial sector include Nathan and Neave (1989) and Shaffer (1993).

protection. The Minister was of the view that the proposed mergers would lead to an unacceptable concentration of economic power in the hands of fewer, very large banks; a significant reduction of competition; and reduced policy flexibility of the regulatory authorities to address potential future prudential concerns arising from having fewer, very large banks. The Minister emphasized that priority would be given to establishing an appropriate policy framework for the financial sector and that, for that purpose, he would review the recommendations set forth by the Task Force on the Future of the Canadian Financial Services Sector (discussed below) and by parliamentary reports. The objectives of the policy framework will include putting in place a new review process to assess major bank merger proposals, promote competition by allowing the entry of new players (foreign and domestic), enable the financial sector to be at the leading edge of technological innovation, allow for strong Canadian institutions with a solid international presence, and protect consumers. The government would not consider any merger among major banks until the new policy framework is in place. Even then, new merger proposals will need to demonstrate, in light of the circumstances of the day, that they do not unduly concentrate economic power, significantly reduce competition, or restrict the government's flexibility to address prudential concerns.

10. The proposed mergers between the Royal Bank and the Bank of Montreal and the Canadian Imperial Bank of Commerce and the Toronto-Dominion Bank would have further increased concentration in the Canadian financial sector. Post-merger, Canada would effectively have had two mega-banks, one relatively large domestic bank, a few other smaller domestic banks, and several small foreign banks. Even when measured against the full financial industry in which other nonbank financial institutions compete in providing some of the same financial services, the two resulting mega-banks would have constituted a significant force in the overall financial market. The two new mega-banks would have accounted for more than 50 percent of total consumer credit (see Figure 3) and over 40 percent of total residential mortgage credits (see Figure 4) extended in the overall financial sector. The two newly formed banks would have accounted for more than 70 percent of the total assets, loans, and deposits in the banking system.

11. The case for bank mergers is based on the assumption that financial institutions need to be large and diverse to prosper in financial markets that are becoming increasingly globalized. This view rests on the assessment that, given technological requirements, it would be extremely expensive to maintain a competitive infrastructure for delivering financial services efficiently unless an institution is sufficiently large to manage these costs. In particular, economies of scale could be realized only by large financial firms. In addition, a successful financial institution would have to be large enough to take advantage of economies of scope, which may arise when it is more cost effective to produce two or more products jointly in a single production unit than to produce the products in separate specializing firms. Scope economies can arise from the spread of fixed costs over an expanded product base, or

from cost complementarities in producing the different products.[10] In international markets, it is also often asserted that it is essential for banks to be large to compete outside the domestic market.[11]

12. Most of the studies on economies of scale and economies of scope are based on the experience of U.S. banks.[12] This literature has provided little evidence that a bank needs to be a mega-institution to exploit economies of scale. In particular, several studies suggest that only small banks have the potential for scale efficiency gains and that the measured economies are usually relatively small.[13] The fact that the U.S. financial system is much less concentrated than in Canada, and that the proposed mergers were between relatively large Canadian banks, would suggest that there was less likely to be substantial scale economies arising from the proposed mergers.

13. The computation of scope economies is based on comparing the predicted costs of producing a given bundle of financial products by two or more specialized firms with the costs of joint production by a single firm. Because of estimation problems and data availability, it is difficult to draw firm conclusions regarding the existence of scope economies and their potential magnitude. Studies on U.S. banks suggest that the synergies of producing joint products in banking may not be large; however, significant gains are possible in some cases.[14]

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[10] Freedman and Goodlet (1998) discuss some of these propositions, noting that they are plausible on the surface but that they can be challenged to some degree. In particular, they stress that investment in expensive new technologies could be developed jointly, in the absence of mergers, through special arrangements among financial services providers.

[11] Mergers can also potentially reduce costs through managerial efficiency which results when an efficient bank with superior management talent acquires a relatively inefficient bank. Such efficiency gains result from adopting "best practices" where cost is minimized for a given output bundle. For U.S. banks, studies suggest that some banks have costs that can be as much as 25 percent above those of the best-practice banks and, hence, these managerial efficiencies can be significant (see, for example, Berger, Hunter, and Timme (1993)).

[12] Berger and Humphrey (1994) and Clark (1988) provide comprehensive surveys of this literature.

[13] See, for example, Mester (1987), Berger, Hunter, and Timme (1993), Berger, Hanckock, and Humphrey (1993), and Pulley, Berger, and Humphrey (1993).

[14] For example, Pulley and Humphrey (1993) found that large U.S. banks did not experience significant cost complementarities between deposit and loan products but did enjoy relatively small benefits of sharing fixed costs between these products. Using the profit function to evaluate optimal scope economies, Berger, Hancock, and Humphrey (1993) find that joint

(continued...)

C. Task Force on the Future of the Canadian Financial Services Sector

14. In 1996, a Task Force on the Future of the Canadian Financial Services Sector was established, and the Task Force report was released in September 1998. Table 4 summarizes the report's main recommendations with regard to enhancing competition in the financial sector.[15]

15. The Task Force views the establishment and growth of new financial institutions as a critical element in enhancing competition. In particular, it recommends that the criteria for incorporation of financial institutions should be revised to facilitate that process. For example, foreign banks should be able to carry on any banking business in Canada, other than receiving retail deposits (i.e., of less than $150,000), through branches of the foreign parent bank. Foreign banks that wish to take retail deposits in Canada would continue to be required to establish subsidiaries. The Task Force also recommends avenues to expand the powers of all financial institutions, including by extending access to the payments system to nonbanks, by allowing the retail sale of insurance in bank branches and by permitting banks and insurance companies to lease light vehicles.

16. With regard to ownership rules, the Task Force recommends that the widely held ownership policy should remain applicable to the largest financial institutions, permitting in some cases ownership positions in excess of 10 percent and up to 20 percent of equity. Smaller institutions, however, would be subject to a more flexible ownership rule to encourage entry and competition. With regard to the foreign acquisition of widely held large Canadian banks, the report proposes that in "exceptional" cases the Government should have discretion to approve such acquisitions, free from the impact of the widely held rules.[16]

17. The Task Force provides no direct recommendation regarding domestic bank mergers and acquisitions of large Canadian banks, other than to suggest the process and criteria that should be used to assess the mergers. However, it proposes that there should not be a general policy that would prevent large institutions from entering into business combinations with

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[14] (...continued)
production is optimal for most U.S. banks, but that specialization is optimal for others.

[15] Other areas of recommendations made by the Task Force include: (i) empowering consumers (e.g., through ensuring increased disclosure and transparency of services, privacy, elimination of tied selling of products, access to basic banking services, availability of micro-credit, and financing of aboriginal business); and (ii) improving the regulatory framework (e.g., by reducing the regulatory overlap between different levels of government or agencies).

[16] Such transactions would be subject to a similar process for domestic bank merger approvals. The buyer should be a widely held, regulated financial institution and the acquisition should be deemed to be in the interest of the Canadian public.

other large institutions whether by amalgamation, acquisition, or other means. Mergers of large financial institutions could be permitted as long as the Minister of Finance is of the opinion that markets will remain competitive, that there are no material safety and soundness concerns, and that the transaction is in the public interest. The relevant public interest considerations would include: the cost and benefits to individual customers and small and medium-sized business; regional impacts; international competitiveness; employment; the adoption of innovative technologies; and the extent to which the approval may create a precedent.

18. The recommendations of the Task Force, as well as suggestions made by other interested groups on the future of the financial services sector, will be reviewed by the Minister of Finance before new financial sector legislation is introduced.

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Table 1. Canada: Assets of Financial Institutions, 1997

	In Billions of Dollars	Percentage of Total
Chartered banks (Schedule I and II)	897.5	56.1
Trusts (excluding bank subsidiaries)	53.6	3.4
Credit unions and caisses populaires	107.0	6.7
Life insurers	178.3	11.2
Property and casualty insurers	53.6	3.4
Securities dealers (exluding bank subsidiaries)	28.7	1.8
Mutual funds	280.8	17.5
Total	**1,599.5**	**100.0**

Source: Statistics Canada, Cat. No. 61-008.

Table 2. Canada: Bank Assets, 1997

(In millions of dollars)

Bank	Total Assets		Assets in Canada	
	Millions of Dollars	Percent of Total	Millions of Dollars	Percent of Total
Canadian banks	1,229,901	93.0	786,278	89.5
Of which:				
Royal Bank of Canada	262,865	19.9	188,737	21.5
Canadian Imperial Bank of Commerce	277,677	21.0	156,610	17.8
Bank of Montreal	227,752	17.2	126,630	14.4
Bank of Nova Scotia	206,016	15.6	123,813	14.1
Toronto-Dominion Bank	172,974	13.1	117,968	13.4
National Bank	66,981	5.1	56,872	6.5
Laurentian Bank of Canada	12,467	0.9	12,464	1.4
Canadian Western Bank	2,007	0.2	2,022	0.2
Citizens Bank	805	0.1	805	0.1
Manulife Bank of Canada	346	0.0	346	0.0
First Nations Bank	11	0.0	11	0.0
Foreign banks (44 banks in 1997)	92,028	7.0	92,028	10.5
All banks	1,321,929		878,306	

Source: Task Force on the Future of the Canadian Financial Services Sector.

Table 3. Canada: Personal Savings by Type of Institution

	Bank Personal Deposits	Trust Personal Deposits	Credit Union and Caisses Populaires Deposits	Mutual Funds	Total
	(In millions of dollars)				
1991	216.5	114.7	68.4	49.4	449.0
1992	228.7	113.3	73.7	67.3	483.0
1993	263.8	79.5	78.0	114.6	535.9
1994	278.9	68.7	81.9	127.3	556.8
1995	295.9	64.4	87.2	146.2	593.7
1996	292.4	62.9	90.8	211.8	657.9
1997	289.9	48.1	90.9	283.2	712.1
	(In percent of total personal savings)				
1991	48.2	25.5	15.2	11.0	
1992	47.3	23.5	15.3	13.9	
1993	49.2	14.8	14.6	21.4	
1994	50.1	12.3	14.7	22.9	
1995	49.8	10.8	14.7	24.6	
1996	44.4	9.6	13.8	32.2	
1997	40.7	6.8	12.8	39.8	

Sources: Bank of Canada; and Task Force on the Future of the Canadian Financial Services Sector.

Table 4. Canada: Task Force on the Future of the Canadian Financial Services Sector
Main Recommendations in Regard to Enhancing Competitiveness

Facilitating new entrants to the market	• The criteria and process of incorporation of financial institutions should be revised to facilitate the establishment and growth of new financial institutions. In particular, the Minister of Finance should have discretion to allow a new financial institution, including a bank, to incorporate with less than the $10 million in capital currently required. • Foreign banks should be able to carry on any banking business in Canada, other than receiving retail deposits (i.e., of less than $150,000), through branches of the foreign parent bank. Foreign banks that wish to take retail deposits in Canada will continue to require the establishment of subsidiaries of the foreign parent bank to ensure adequate depositor protection.
Equity in consumer insurance plans	In order to promote more effective competition between banks and life insurance companies (e.g., annuities have similar features to retirement savings instruments offered by banks), there should be the same level of support to protect customers of deposit-taking institutions and customers of life insurance companies. In particular, the Task Force recommends that the insurance programs for federally insured deposit-taking institutions and life insurers should be amalgamated.
Expanding business powers: *access to the payments system*	The Canadian Payments Association Act should be amended to permit financial institutions other than deposit-takers (e.g., life insurance companies, securities dealers and money market mutual funds) to become members of the Canadian payments system upon meeting criteria related to their solvency, liquidity, and regulatory frameworks.
Expanding business powers: *access to other networks*	The Minister of Finance should monitor operations of all networks (including Interac) to ensure that they are operated in a manner designed to enhance competition in financial services.
Expanding business powers: *retailing insurance by deposit-taking institutions and light vehicle leasing*	Subject to the appropriate privacy and tied selling regimes, federally regulated deposit-taking institutions should be permitted to retail insurance through their branches. Similarly, federally regulated deposit-taking institutions and life insurance companies should be permitted to lease light vehicles to consumers.
More flexible corporate structures	There should be no restrictions on corporate structures available to financial institutions unless required by safety and soundness considerations. In particular, federally regulated institutions should have the option of being organized as subsidiaries of regulated financial holding companies under a new Financial Holding Companies Act.

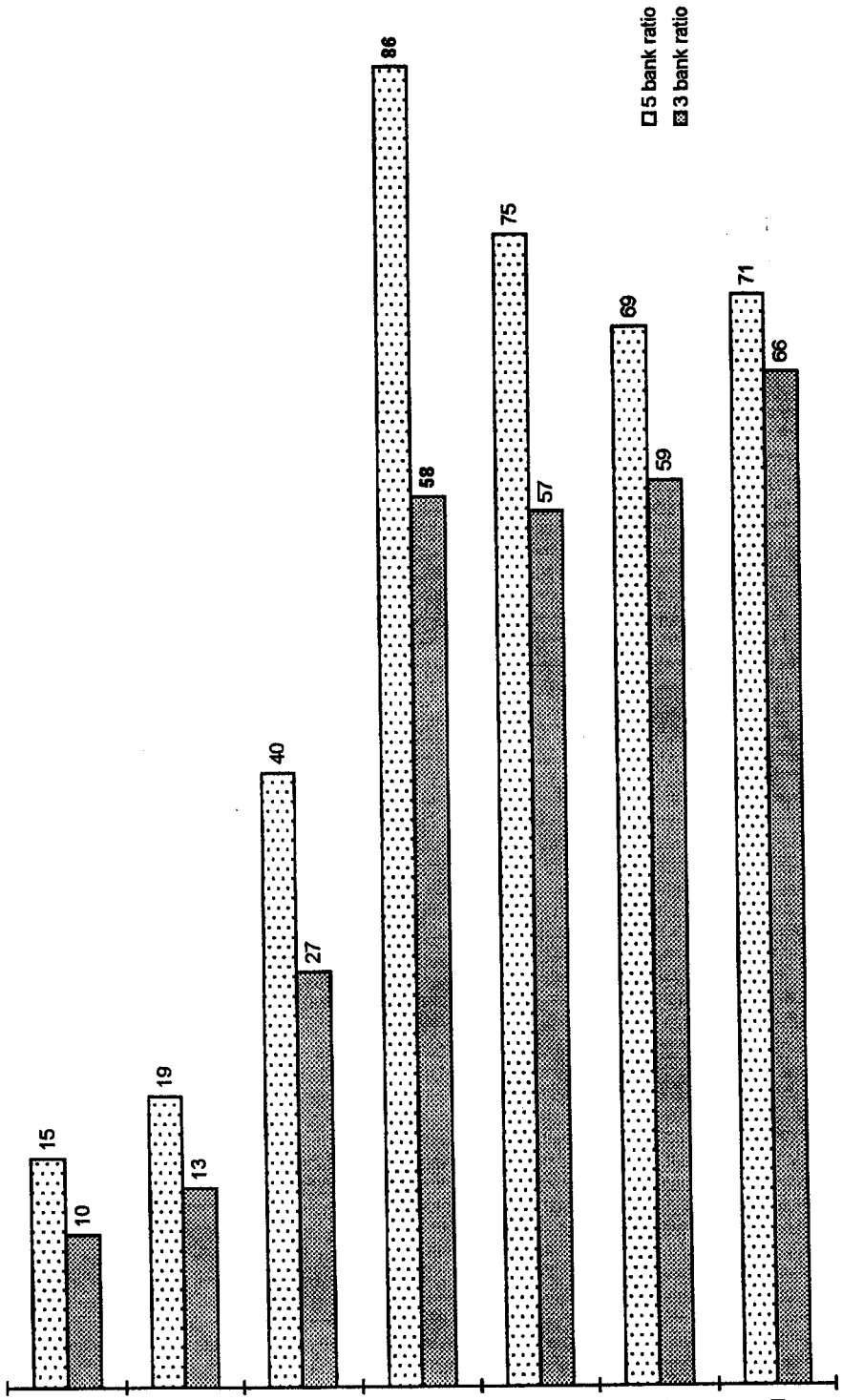
Table 4. Canada: Task Force on the Future of the Canadian Financial Services Sector Main Recommendations in Regard to Enhancing Competitiveness (Concluded)

Ownership rules	• Large financial institutions (i.e., with shareholders' equity in excess of $5 billion), including banks, would continue to be subject to the 10 percent widely held rule (i.e., no person or group of persons acting jointly or in concert is allowed to own or control more than 10 percent of any class of shares) without the approval of the Minister of Finance. However, the Minister of Finance should have the discretion to permit ownership positions in excess of 10 percent and up to 20 percent for large financial institutions. Shareholders permitted to own more than 10 percent should not collectively own or control more than 45 percent of any class of shares. • Financial institutions with more than $1 billion but less than $5 billion in shareholders' equity would be required to have at least 35 percent of their voting participating shares widely held and publicly traded. • In order to foster start-ups and competition, financial institutions with less than $1 billion in equity would be able to be closely held, including ownership by one person or company. • The Government should have the power, to be used only in "exceptional" cases, to approve the acquisition of a large widely held Canadian financial institution by a foreign purchaser, free from the impact of the widely held rules. Any such transaction should be subject to: the completion of the usual process for merger approval (reviewed below); the buyer should be a widely-held, regulated financial institution; and the acquisition should be deemed to be in the interest of the Canadian public by increasing competition, or enhancing the safety and soundness of the Canadian financial system.
Consolidation and mergers	• The Task Force provides no direct recommendation regarding mergers and acquisitions of large domestic banks. However, it proposes that there should not be a general policy which prevents large institutions from entering into business combinations with other large institutions whether by amalgamation, acquisition or other means. The Task Force recommends that mergers should be assessed by the Competition Bureau in respect of competition concerns, OSFI in respect to prudential issues, and the Minister of Finance in respect of general public interest considerations. Mergers of large financial institutions should be permitted as long as the Minister is of the opinion that markets will remain competitive, that there are no material safety and soundness concerns, and that the transaction is in the public interest. • In assessing whether approval for mergers should be given, the relevant public interest considerations would include: the cost and benefits to individual customers and small and medium-sized business; regional impacts; international competitiveness; employment; the adoption of innovative technologies; and the extent to which the approval may create a precedent.

FIGURE 1

CANADA

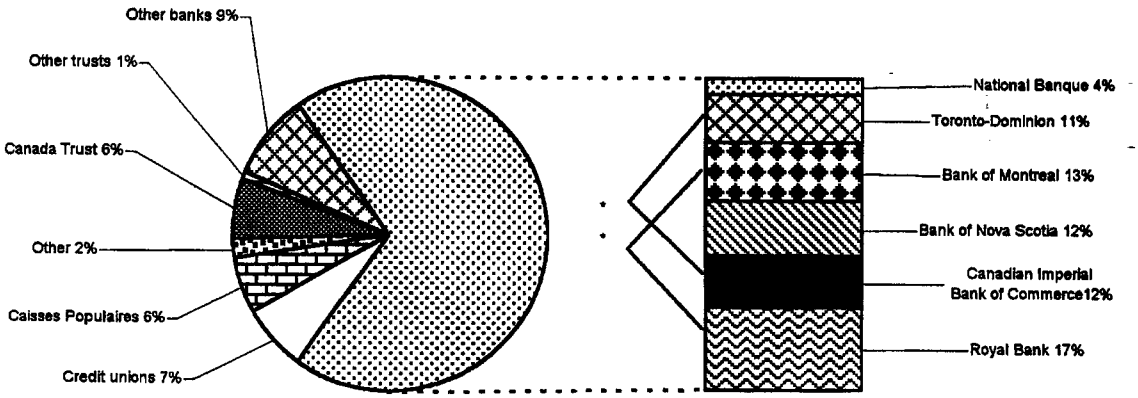
BANKING CONCENTRATION RATIOS
RELATIVE TO TOTAL BANKING SYSTEM ASSETS, 1997
(Percentage)



Source: Task Force on the Canadian Financial Services Sector.

FIGURE 2

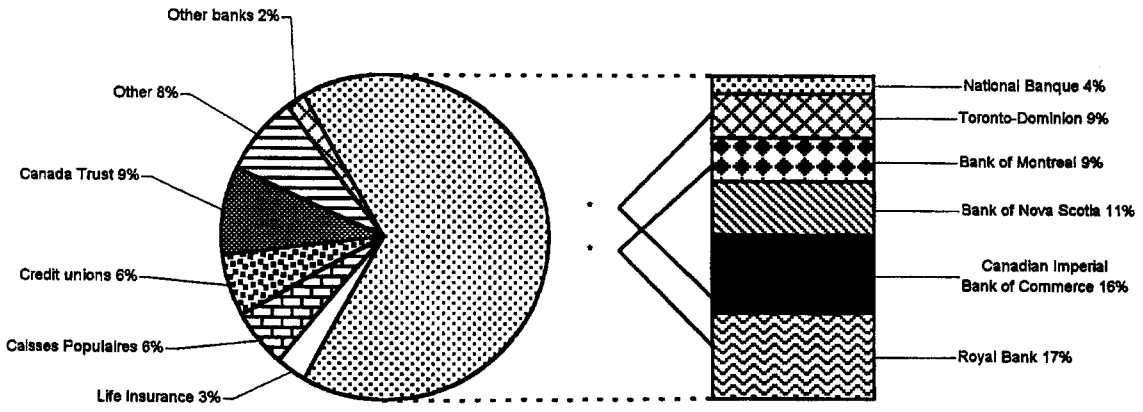
CANADA
DEPOSITS IN CANADA, 1997
$714 billion



Source: Task Force on the Canadian Financial Services Sector.
* Proposed mergers

FIGURE 3

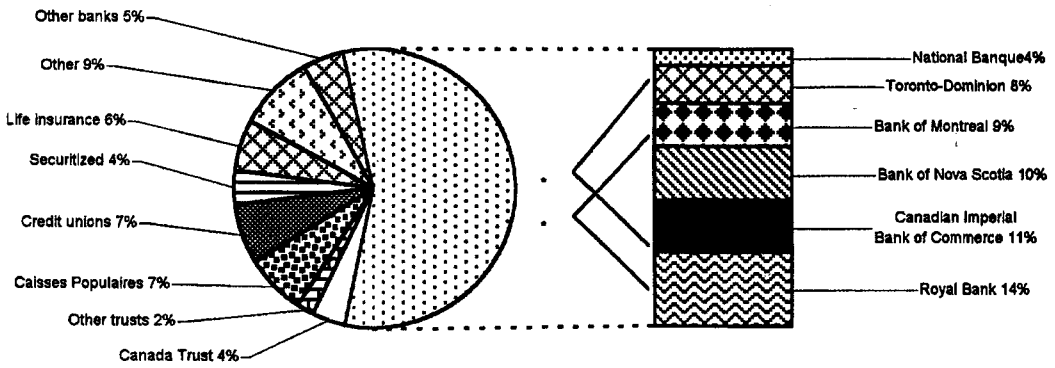
CANADA
CONSUMER CREDIT IN CANADA, 1997
$138 billion



Source: Task Force on the Canadian Financial Services Sector.
* Proposed mergers

FIGURE 4

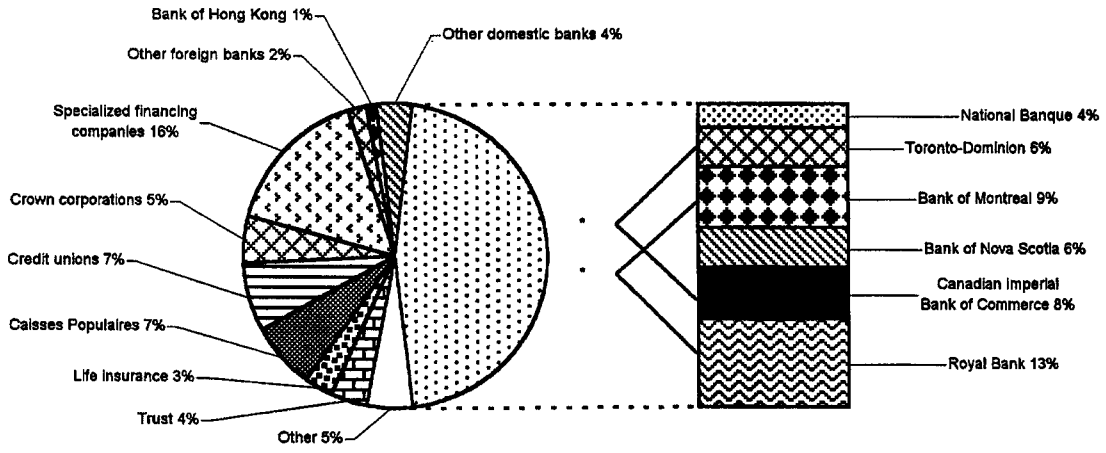
CANADA
RESIDENTIAL MORTGAGE CREDIT IN CANADA, 1997
$373 billion



Source: Task Force on the Canadian Financial Services Sector.
* Proposed mergers

FIGURE 5

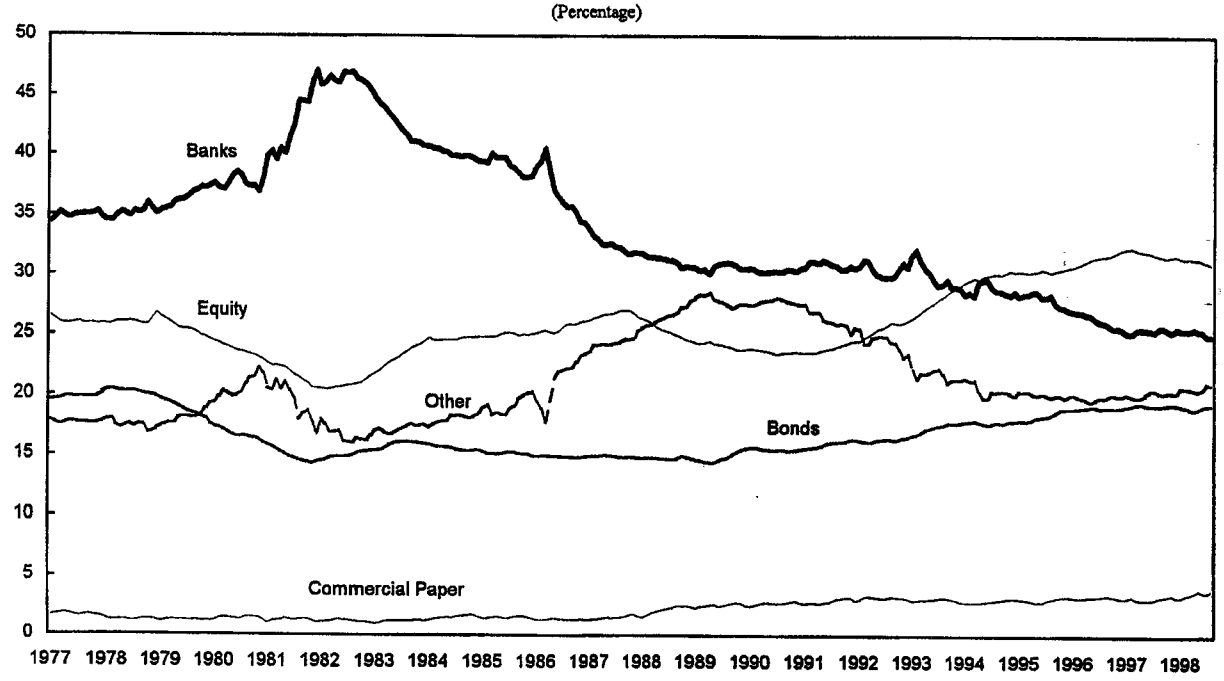
CANADA
FINANCING OF SMALL AND MEDIUM SIZE CORPORATIONS IN CANADA, 1997
$110.9 billion



Source: Task Force on the Canadian Financial Services Sector.
* Proposed mergers

FIGURE 6

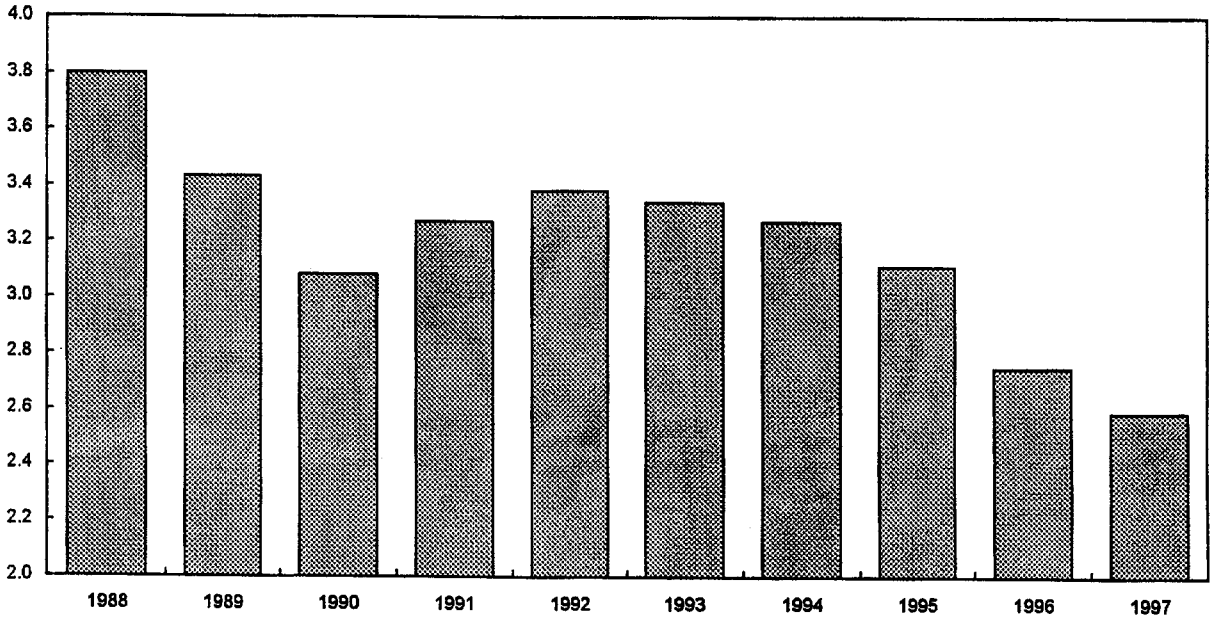
CANADA
BANK SHARE OF BUSINESS CREDIT MARKET
(Percentage)



Sources: Statistics Canada; Fund staff estimates

FIGURE 7

CANADA
INTEREST RATE SPREADS OF SIX LARGEST BANKS
(Percentage of average assets)



Source: Canadian Bankers Association.

VIII. OFFICIAL DEVELOPMENT ASSISTANCE

1. Canada's official development assistance (ODA) to developing countries and multilateral institutions, measured on a Development Assistance Committee basis, totaled 0.36 percent of GNP in 1997 (US$2.2 billion), compared with 0.32 percent in 1996 and 0.46 percent in 1992 (see tabulation below). The Government remains committed to reaching a target for ODA of 0.7 percent of GNP, as its fiscal situation allows, and consistent with its other priorities.

Canada: Official Development Assistance 1/

	1992	1993	1994	1995	1996	1997
	(In billions of U.S. dollars)					
Total	**2.5**	**2.4**	**2.3**	**2.3**	**1.8**	**2.2**
Bilateral	1.7	1.6	1.5	1.6	1.4	1.3
Multilateral	0.8	0.8	0.8	0.7	0.4	0.8
	(In percent of GNP)					
Total	**0.46**	**0.45**	**0.43**	**0.42**	**0.32**	**0.36**
Bilateral	0.31	0.30	0.28	0.29	0.24	0.22
Multilateral	0.15	0.15	0.15	0.13	0.08	0.14
	(In percent of total ODA)					
Total	**100**	**100**	**100**	**100**	**100**	**100**
Bilateral	68	67	65	69	75	61
Multilateral	32	33	35	31	25	39

1/ Includes traditional ODA measured on a DAC basis, and excludes aid programs for transition economies.

2. The overall objective of Canada's ODA is to support sustainable development in developing countries in order to reduce poverty and to contribute to a more secure, equitable, and prosperous world. To this end, Canada's ODA priorities are: (i) basic human needs; (ii) women in development; (iii) infrastructure services; (iv) human rights, democracy, and good governance; (v) private sector development; and (vi) the environment. Canada's ODA targets countries in Africa, Asia, and the Americas, and the majority of ODA is distributed to low-income countries, particularly in Africa. Canada also provides support to countries in Central and Eastern Europe and the former Soviet Union.