






# MONTHLY ECONOMIC INDICATORS

April 1999

## HIGHLIGHTS

-  **Employment falls in March for the first time in nine months, but the unemployment rate holds at 7.8%.**
-  **Output continues to advance in January, bolstered by strong demand at home and in the U.S.**
-  **Rising exports lead to a sharp improvement in Canada's trade surplus.**
-  **The Bank of Canada lowers its key lending rate, helping push Canadian short-term rates below U.S. rates for the first time since August.**
-  **An upturn in the Canadian dollar and domestic stock markets extends into April.**

## Key Monthly Economic Indicators

		% Change since		
		last month	last year	
Real GDP (\$92 B)	730.1	0.2	3.1	Jan
Goods	240.3	0.3	3.5	Jan
Services	489.8	0.1	3.0	Jan
Composite Index	211.1	0.5	3.9	Feb
Employment (000's)	14635	-0.2	2.9	Mar
Full-time	11969	0.1	3.4	Mar
Part-time	2666	-1.6	0.9	Mar
Unemployment* (%)	7.8	7.8	8.4	Mar
Youth*	14.3	14.2	15.4	Mar
Adult*	6.6	6.6	7.1	Mar
CPI inflation*	0.7	0.6	1.0	Feb
Retail Sales (\$M)	21,159	1.7	5.1	Jan
Housing Starts (000's)	148.1	2.7	-4.8	Mar
Trade Balance* (\$B)	2,730	1,550	1,483	Jan
Exports	28,932	2.1	12.7	Jan
Imports	26,202	-2.2	8.3	Jan
M&E	8,678	-4.0	8.7	Jan
3-mth Corp. paper* (%)	4.78	5.04	4.84	Apr 7
Long bond yield* (%)	5.32	5.43	5.70	Apr 7
Canadian dollar* (US¢)	66.58	66.28	70.43	Apr 9

\*Data in levels only – % change not reported.

**This issue's Special Report:  
University Research and the Commercialization of  
Intellectual Property in Canada**

The "Monthly Economic Indicators" (MEI) provides a variety of economic analysis and data in a convenient format. The MEI does not interpret or evaluate government policies, and every attempt is made to present factual information in an informed and balanced manner consistent with generally accepted economic principles. It is available to all employees of Industry Canada in either hard or electronic copy, or can be accessed via the Internet at [http://strategis.ic.gc.ca/sc\\_ecnmy/mera/engdoc/03.html](http://strategis.ic.gc.ca/sc_ecnmy/mera/engdoc/03.html).



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# MONTHLY ECONOMIC April 1999 INDICATORS

## CONTENTS

	Page
<b>The Economy</b>	
<i>Real GDP by Industry</i> .....	3
<i>Consumer Spending and Attitudes</i> .....	4
<i>Business Investment in Plant and Equipment</i> .....	5
<i>Housing</i> .....	6
<i>Trade and Competitiveness</i> .....	7
<b>Labour Market Trends</b>	
<i>Employment and Unemployment</i> .....	8
<i>Industry Overview</i> .....	9
<i>Provincial Overview</i> .....	10
<b>Prices and Financial Markets</b>	
<i>Consumer and Commodity Prices</i> .....	11
<i>Short-term and Long-term Interest Rates</i> .....	12
<i>Exchange Rates and Stock Markets</i> .....	13
<b>The United States Economy</b>	
<i>U.S. Economic Trends</i> .....	14
<b>THIS ISSUE'S SPECIAL REPORT:</b>	
<b>University Research and the Commercialization of Intellectual Property in Canada</b> .....	15
<b>Coming Up...</b>	
<i>Key Future Data Releases/Planned Events</i> .....	18

This report uses data available as of April 9, 1999. It has been prepared by Dave Dupuis, Joseph Macaluso and Karen Smith of the Micro-Economic Analysis Directorate, under the direction of Shane Williamson. The special report in this issue was prepared by Wulong Gu and Lori Whewell. All information is taken from public sources, primarily Statistics Canada, the Bank of Canada and the Canada Mortgage and Housing Corporation. Please address comments to Shane Williamson at 613-954-3494 or through the Internet at [williamson.shane@ic.gc.ca](mailto:williamson.shane@ic.gc.ca).



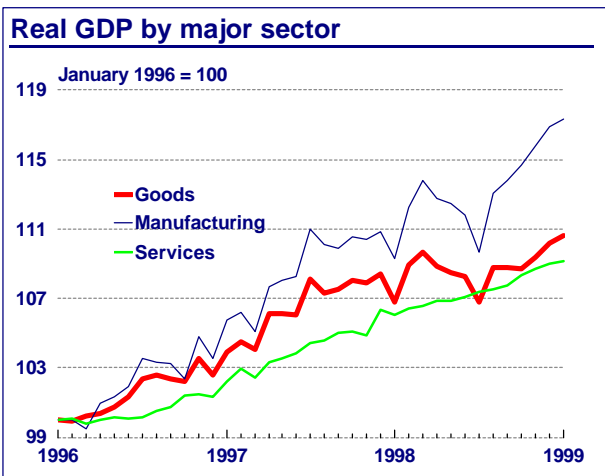
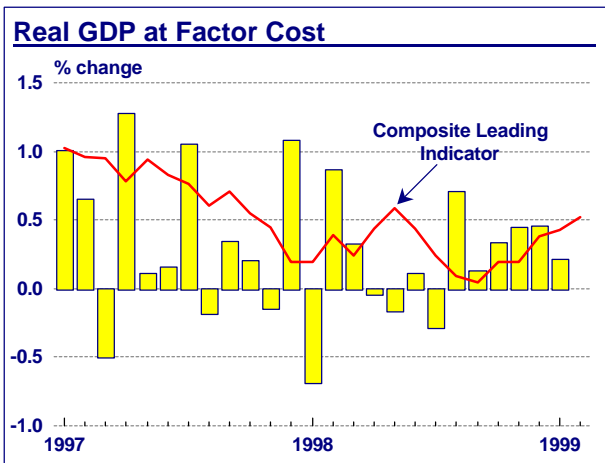
## Real GDP by Industry

### Output continues to advance in January...

- Real GDP rose 0.2% in January, the sixth consecutive monthly increase following a lull in the middle of last year. Unlike previous advances, January's advance was not supported by strike-related rebounds.

### ...led by strong consumer demand, both at home and from the U.S.

- Retail Trade accounted for nearly half of the overall growth in the economy in January, boosted by higher auto sales and a post-holiday consumer spending spree. Elsewhere in the Service sector, output was flat, as strong gains in Communications (due to rapid growth in long-distance and cellular telephone use) and Health & Social Services was offset by declines in Wholesale Trade and Transportation. The drop in wholesaling activity, the first in a year, was due to lower shipments of computers and automobiles.
- In the Goods-producing industries, the Manufacturing sector continued to perform well on the strength of robust demand in the U.S economy. The recovery of the housing sector extended into January, providing for a strong contribution to output growth from the Construction industry. Mining activity was down, however, following modest advances in the previous two months.



### Real GDP at Factor Cost (1992 dollars)

January 1999	\$ millions	monthly change	% Change since last	
			month	year
<b>Total Economy</b>	<b>730,087</b>	<b>1,542</b>	<b>0.2</b>	<b>3.1</b>
<b>Business sector</b>	<b>604,192</b>	<b>1,574</b>	<b>0.3</b>	<b>3.8</b>
<b>Goods</b>	<b>240,267</b>	<b>815</b>	<b>0.3</b>	<b>3.5</b>
Agriculture	11,908	17	0.1	1.7
Fishing & Trapping	660	26	4.1	-11.3
Logging & Forestry	4,881	-33	-0.7	1.6
Mining*	26,488	-95	-0.4	-7.6
Manufacturing	132,961	461	0.3	7.3
Construction	38,997	275	0.7	-0.6
Other Utilities	24,372	164	0.7	6.0
<b>Services</b>	<b>489,820</b>	<b>727</b>	<b>0.1</b>	<b>3.0</b>
Transport & Storage	32,720	-172	-0.5	1.7
Communications	25,590	304	1.2	10.6
Wholesale Trade	44,057	-336	-0.8	8.7
Retail Trade	45,859	734	1.6	4.7
Finance & Insurance	40,276	-146	-0.4	2.4
Real Estate & Ins. Agent	79,601	52	0.1	1.9
Business services	42,604	120	0.3	6.8
Government services	42,807	1	0.0	0.4
Education	39,958	-95	-0.2	-0.7
Health & Social Services	48,620	158	0.3	0.3
Accommodation & Food	18,871	59	0.3	-0.3
Other	28,857	48	0.2	1.2

\*Includes Quarrying and Crude Petroleum & Natural Gas

# THE ECONOMY

## Consumer Spending and Attitudes

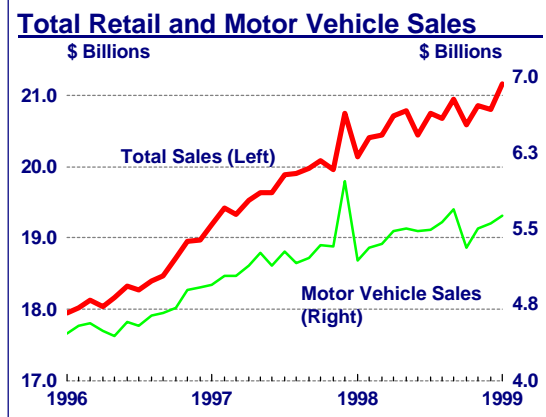


### Consumer spending weakens further in the fourth quarter...

- Growth in real consumer spending slowed to 0.8% (annual rate) in the fourth quarter of 1998, continuing the deceleration witnessed in the previous quarter.
- Purchases of goods fell across all major categories – durables, semi-durables, and non-durables. Spending on services, buoyed by an increase in air travel following a strike in the previous period, was the sole bright spot in the quarter.

### ...but encouraging signs emerge in January

- Following an extended period of weakness, retail sales surged in January. Part of this increase may have been due to bargain-hunting consumers postponing purchases until after the holiday season.
- Generous purchase and leasing incentives also led to a sharp gain in new motor vehicle sales in January. Auto sales have become increasingly responsive to dealer incentives and special promotions.
- An encouraging sign for further increases in consumer spending is the fourth quarter's 3.5% rise in disposable income (annual rate).



### Retail Sales and Consumer Credit

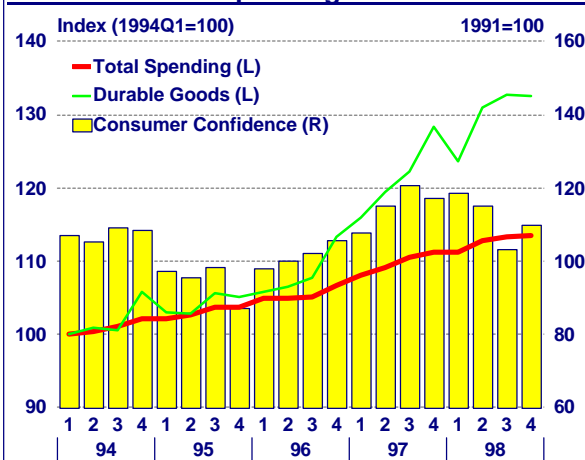
January 1999	\$ millions	% Change since	
		last month	last year
<b>Total Retail Sales</b>	21,159	1.7	5.1
Food	4,880	1.2	2.4
Drug Stores	1,104	3.0	4.0
Clothing	1,172	2.0	3.1
Furniture	1,095	0.2	9.5
Automotive	8,106	0.9	5.7
General Merch. Stores	2,488	4.8	8.2
All other Stores	2,313	2.7	5.0
Total ex. motor vehicles	15,535	1.9	3.9
<b>Consumer Credit</b>	157,915	0.3	6.9

### Real Consumer Spending and Household Finances

	\$ Millions, SAAR (unless otherwise noted)			
	1997	1998	1998 Q3	1998 Q4
<b>Real Consumption (92\$)</b>	471,525	484,434	486,888	487,812
% change	4.1	2.7	1.5	0.8
Durable Goods	61,926	66,224	67,632	67,572
% change	12.2	6.9	5.5	-0.4
Semi-Durable Goods	44,485	46,661	46,784	46,676
% change	4.3	4.9	1.2	-0.9
Non-Durable Goods	118,644	120,250	121,020	120,700
% change	1.5	1.4	2.6	-1.1
Services	246,470	251,299	251,452	252,864
% change	3.4	2.0	0.0	2.3
<b>Disposable Income</b>	529,082	545,585	545,776	550,520
% change	1.9	3.1	1.1	3.5
<b>Saving Rate (%)</b>	2.2	1.2	0.4	0.8
<b>Debt-to-Income Ratio (%)</b>	97.3	99.3	99.9	100.0
<b>Consumer Attitudes*</b>	115.0	111.6	103.2	109.8

\*Conference Board of Canada

### Real Consumer Spending and Confidence



# THE ECONOMY

## Business Investment in Plant and Equipment

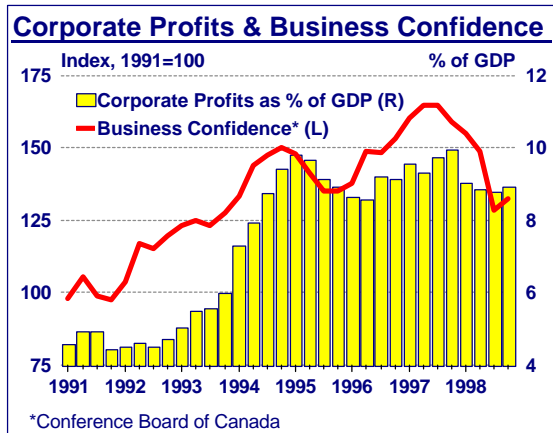
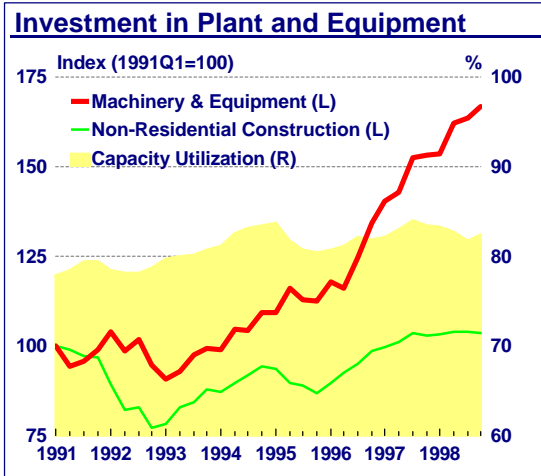


### Investment and profits gain momentum in the fourth quarter...

- Investment in Machinery & Equipment (M&E) picked up considerably in the fourth quarter, fuelled by purchases of computers and other office equipment.
- However, Non-Residential Construction was down in the fourth quarter, the second straight decline. Higher spending on building construction more than offset lower engineering construction.
- Despite a fourth-quarter rebound, corporate operating profits fell 4.8% overall in 1998. Weak commodity prices, in particular the collapse in world oil prices, have been the primary factor affecting profits over the year. Business confidence has fallen in step with lower profits.

### ...but start the new year slowly

- After a strong increase in December, imports of M&E declined 4.0% in January. This was primarily caused by a sharp reduction in purchases of used Aircraft, which fell from a record level in December.
- However, activity in the non-residential building sector picked up in January (+0.9%).



### Business Investment and Corporate Finances

\$ Millions, SAAR (unless otherwise noted)

	1997	1998	1998 Q1	1998 Q2	1998 Q3	1998 Q4
<b>BUSINESS INVESTMENT</b>						
<b>Machinery &amp; Equipment (1992\$)</b>	57,057	62,631	59,556	62,892	63,420	64,656
% change	19.6	9.8	0.9	24.4	3.4	8.0
<b>Non-residential Construction (1992\$)</b>	36,433	37,109	36,988	37,236	37,152	37,060
% change	8.4	1.9	1.4	2.7	-0.9	-1.0
<b>Capacity Utilization (% , Non-farm goods)</b>	83.2	82.6	83.3	82.7	81.8	82.5
Capacity Utilization (Mfg. sector)	83.6	83.8	83.9	83.5	82.7	85.1
<b>CORPORATE FINANCES &amp; ATTITUDES</b>						
<b>Corporate Operating Profits</b>	110,682	105,318	107,816	98,752	99,828	114,876
% change	15.2	-4.8	-25.4	-29.6	4.4	75.4
Profits - Non-financial industries	82,218	77,741	79,676	72,760	74,116	84,412
% change	14.4	-5.4	-21.9	-30.5	7.7	68.3
Profits - Financial industries	28,462	27,576	28,140	25,992	25,708	30,464
% change	17.6	-3.1	-34.3	-27.2	-4.3	97.2
<b>Business Credit</b>	621,420	682,926	663,186	676,193	692,331	699,997
% change	8.8	9.9	9.1	8.1	9.9	4.5
<b>Index of Business Confidence*</b>	162.3	141.2	155.0	148.9	128.6	132.3

\*Conference Board of Canada



## Housing

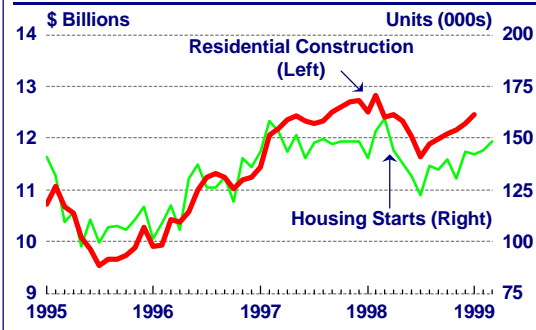
### Spending on new housing rises in the fourth quarter...

- Investment in residential construction rose 2.4% (annual rate) in the final quarter of 1998, the first quarterly advance this year.
- Strong gains in new housing construction and renovation activity were partially offset by lower ownership and transfer costs, which stumbled after strong mid-year growth.

### ...with momentum carrying over into the new year

- The housing market continues to recover from a summer slump, as both homebuilders and renovation firms gradually make up ground lost to strikes and a temporary fall in demand during the summer. With an increase in January, residential construction activity has now risen in each of the past six months, and is up 7.0% from the low reached last July.
- Sales of existing homes increased 11.8% in February, the largest monthly increase in over two years. In addition, the Canada Mortgage and Housing Corporation reports that national housing starts rose 2.7% in March. These results, combined with the latest drop in mortgage rates, suggest that Spring could be an active period in the housing market.

### Housing Activity



### Monthly Housing Indicators

	levels	Change since	
		last month	last year
<b>Residential Construction (1)</b> (\$92M, factor cost basis)	12,445	1.3%	-0.5%
<b>Building Permits, \$M (2)</b>	1,482	2.4%	6.2%
<b>Sales of Existing Homes (2)</b> (# of units)	18,405	1,936	
<b>Housing Starts, # of units (3)</b>	148,100	3,900	-7,500
Newfoundland	2,800	2,200	1,800
Prince Edward Island	100	-600	-400
Nova Scotia	2,100	-2,100	0
New Brunswick	1,900	300	1,300
Quebec	17,900	-3,200	-2,000
Ontario	62,400	2,300	-5,200
Manitoba	2,400	1,000	1,100
Saskatchewan	1,700	500	-700
Alberta	17,100	-3,500	-3,500
British Columbia	18,800	7,000	-1,300

1 - January data; 2 - February data; 3 - March data.  
Sources: Statistics Canada, Canada Mortgage and Housing Corporation, Canadian Real Estate Association

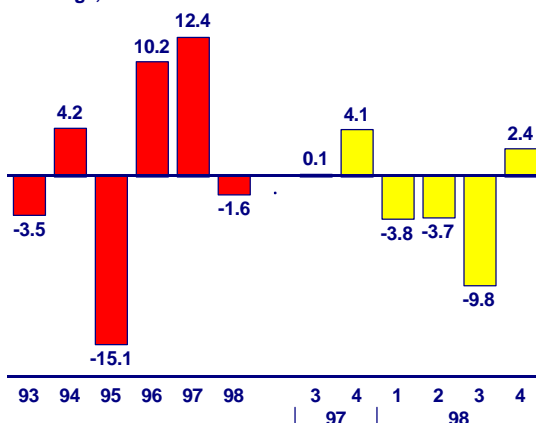
### Real Investment in Residential Structures

\$92 Millions, SAAR (unless otherwise noted)

	1997	1998	1998 Q3	1998 Q4
<b>Residential Construction</b>	42,385	41,703	41,012	41,256
% change	12.3	-1.6	-9.7	2.4
Construction by Business sector	42,229	41,547	40,856	41,100
% change	12.4	-1.6	-9.8	2.4
New Housing	21,383	20,656	19,716	20,368
% change	18.9	-3.4	-20.1	13.9
Alterations & Improvements	13,426	13,806	13,612	13,820
% change	8.1	2.8	-5.9	6.3
Ownership & Transfer Costs	7,576	7,241	7,684	7,068
% change	3.3	-4.4	16.0	-28.4

### Growth in Real Residential Construction

% change, SAAR







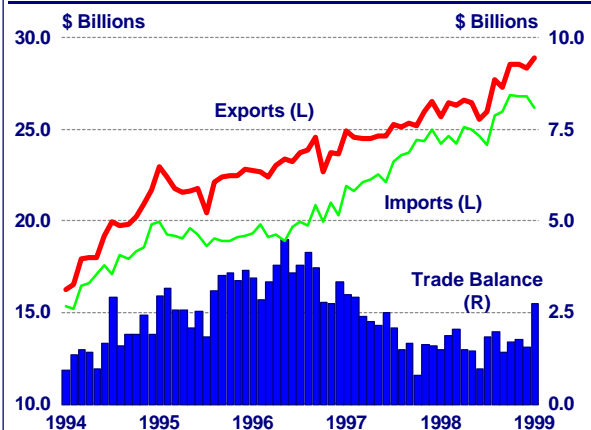
### Rising exports and falling imports...

- Exports surged 2.1% in January, with most sectors reporting gains on the month. The increase was driven to a significant extent by higher exports of M&E (particularly new aircraft to the U.S. and Europe). Exports of Energy Products recovered in January from four consecutive declines, and Automobile exports also rose strongly.
- Imports dropped substantially in January after holding steady since November. All major groups, with the exception of Automotive Products, recorded declines on the month. The sharpest drops were for M&E (mainly used aircraft), Industrial Goods & Materials, and Other Consumer Goods.

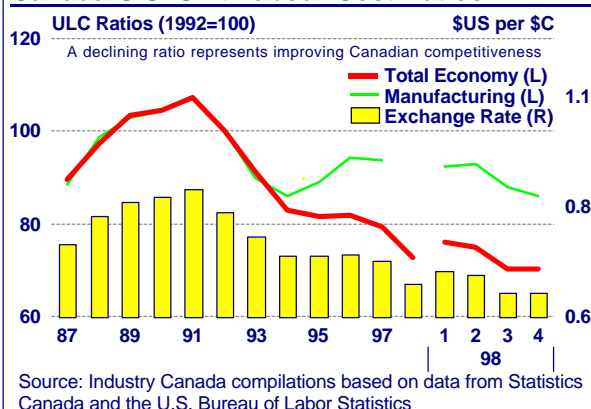
### ...lead to a dramatic rise in Canada's trade surplus in January

- The significant increase in exports, combined with sharply lower imports, raised the trade surplus by \$1.1 billion to \$2.7 billion in January. This is the largest monthly surplus since February 1997.

### Merchandise Trade Flows and Balance



### Canada-U.S. Unit Labour Cost Ratios



### Merchandise Trade

January 1999	Levels (\$ millions)		Year-to-date (\$ millions)		Change (\$M)		% Change	
	1998 December	1999 January	1997 Jan-Dec	1998 Jan-Dec	Dec 1998 to Jan 1999	Dec 1998 to Jan 1999	Jan 98 to Jan 99	
<b>Exports</b>	<b>28,338</b>	<b>28,932</b>	<b>301,100</b>	<b>323,400</b>	<b>594</b>	<b>2.1</b>	<b>12.7</b>	
to United States	24,145	24,752	243,362	270,562	607	2.5	17.8	
<b>Imports</b>	<b>26,788</b>	<b>26,202</b>	<b>276,846</b>	<b>303,984</b>	<b>-586</b>	<b>-2.2</b>	<b>8.3</b>	
from United States	20,876	20,435	210,802	234,178	-441	-2.1	8.7	
<b>Trade Balance</b>	<b>1,550</b>	<b>2,730</b>	<b>24,254</b>	<b>19,416</b>	<b>1,180</b>			
with United States	3,269	4,317	32,560	36,384	1,048			
<b>Exports by Commodity</b>								
Agriculture/Fishing Products	2,153	2,128	24,704	25,190	-25	-1.2	2.5	
Energy Products	1,615	1,780	26,819	23,388	165	10.2	-9.5	
Forestry Products	3,100	3,145	34,887	35,465	45	1.5	9.2	
Industrial Goods & Materials	4,611	4,567	55,602	57,356	-44	-1.0	-5.0	
Machinery & Equipment	6,703	6,907	67,982	78,771	204	3.0	16.2	
Automotive Products	7,984	8,110	70,057	79,246	126	1.6	30.2	
Other Consumer Goods	1,095	1,168	10,649	12,484	73	6.7	26.3	
<b>Imports by Commodity</b>								
Agriculture/Fishing Products	1,493	1,480	15,578	17,263	-13	-0.9	6.9	
Energy Products	645	640	10,603	8,713	-5	-0.8	-21.7	
Forestry Products	226	211	2,374	2,497	-15	-6.6	5.5	
Industrial Goods & Materials	5,140	4,995	54,369	60,296	-145	-2.8	1.3	
Machinery & Equipment	9,042	8,678	91,203	101,601	-364	-4.0	8.7	
Automotive Products	6,167	6,236	60,630	66,753	69	1.1	18.0	
Other Consumer Goods	3,140	3,012	29,591	34,553	-128	-4.1	14.4	

# LABOUR MARKET TRENDS



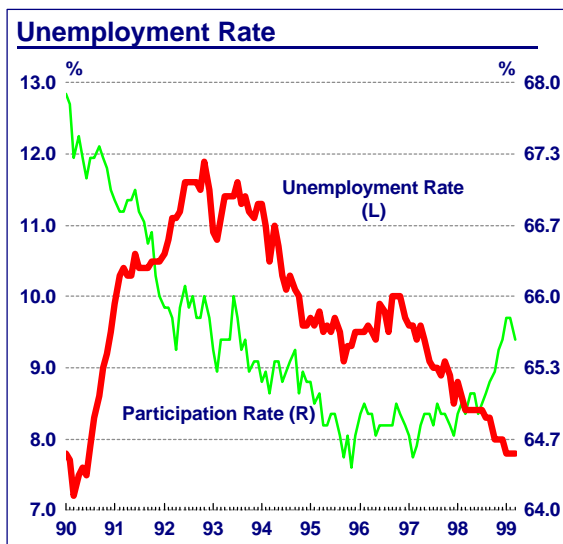
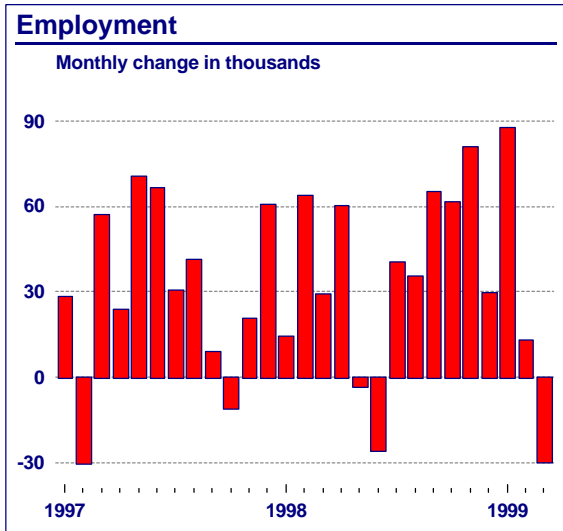
## Employment and Unemployment

### Employment is down in March...

- Employment fell by 29,000 in March, the first drop following strong gains in the previous eight months.
- March job losses were all in part-time work. The impact of 43,000 fewer part-time positions was partly offset by an increase of 14,000 in full-time employment.
- Youth employment fell 22,000 in March, after declining by 25,000 jobs in February. Losses over the past two months have erased the large jump in youth employment in January.
- Adult employment also edged lower in March.

### ...but the unemployment rate holds steady at 7.8%

- Canada's unemployment rate remained at 7.8% for the third straight month in March, as lower employment was offset by a corresponding decline in the labour force.
- Job losses pushed the youth unemployment rate up 0.1 percentage points to 14.3%. The adult employment rate was unchanged at 6.6%.



### Labour Force Trends

(in thousands)	Levels			Change since			% Change since	
	1998 March	1999 February	1999 March	last month	last year	year-to- date	last month	last year
<b>Employment</b>	14,217.8	14,664.0	14,634.8	-29.2	417.0	71.4	-0.2	2.9
<b>Full-time</b>	11,576.3	11,955.2	11,969.3	14.1	393.0	159.6	0.1	3.4
<b>Part-time</b>	2,641.5	2,708.8	2,665.5	-43.3	24.0	-88.2	-1.6	0.9
<b>Youth 15-24</b>	2,061.9	2,199.9	2,178.1	-21.8	116.2	-3.4	-1.0	5.6
<b>Adult 25+</b>	12,155.8	12,464.1	12,456.7	-7.4	300.9	74.8	-0.1	2.5
<b>Self-employed</b>	2,457.6	2,622.9	2,614.9	-8.0	157.3	25.3	-0.3	6.4
<b>Unemployment</b>	1,302.3	1,248.9	1,242.3	-6.6	-60.0	-29.9	-0.5	-4.6
<b>Unemployment Rate</b>	8.4	7.8	7.8	0.0	-0.6	-0.2		
<b>Youth 15-24</b>	15.4	14.2	14.3	0.1	-1.1	-0.1		
<b>Adult 25+</b>	7.1	6.6	6.6	0.0	-0.5	-0.2		
<b>Labour Force</b>	15,520.1	15,912.8	15,877.1	-35.7	357.0	41.5	-0.2	2.3
<b>Participation Rate</b>	64.9	65.8	65.6	-0.2	0.7	0.0		
<b>Employment Rate</b>	59.5	60.7	60.5	-0.2	1.0	0.1		





## Industry Overview

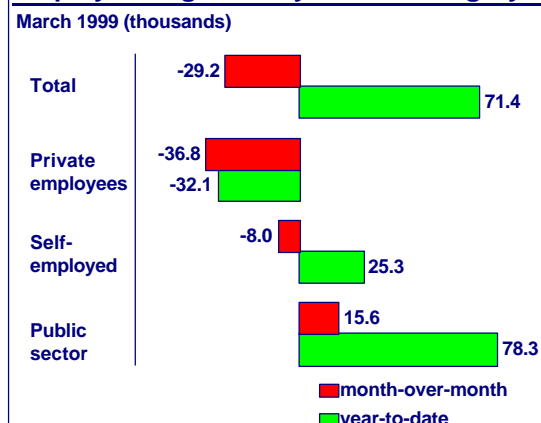
### March job losses are concentrated in resource-based industries and Services....

- Employment rose 5,000 overall in the Goods-producing industries in March. A sharp gain in Manufacturing, which added 35,000 new jobs, helped offset losses in Construction and Forestry, Fishing, Mining, Oil & Gas. The drop in Construction employment represents the first significant monthly decline for this industry in nearly a year.
- The number of jobs in the Service-producing industries decreased by 34,000 in March. Losses were widespread, but relatively small. The largest drops occurred in the Accommodation & Food Services and Information, Culture & Recreation industries.

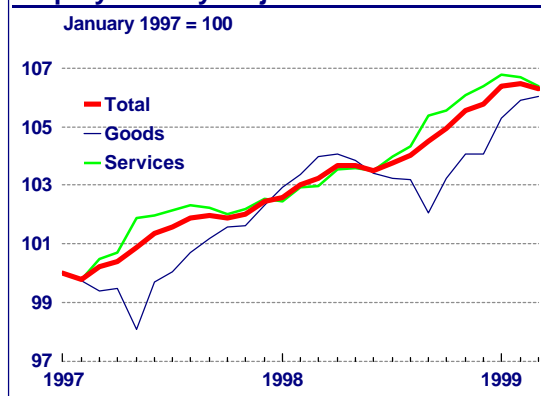
### ...and in the private sector

- The number of paid employees in the private sector fell by 37,000 in March, down for the second consecutive month. Self-employment decreased by 8,000 in March, but is still up strongly on a year-over-year basis.
- Employment in the public sector rose 16,000 in March, the third increase in as many months. So far this year, the public sector has accounted for all net job creation.

### Employment growth by worker category



### Employment by major sector



### Industrial Employment Trends

(in thousands)	Levels			Change since			% Change since	
	1998 March	1999 February	1999 March	last month	last year	year-to- date	last month	last year
<b>Goods-producing</b>	3,760.1	3,828.9	3,833.4	4.5	73.3	71.2	0.1	1.9
Agriculture	424.2	408.3	411.7	3.4	-12.5	-0.5	0.8	-2.9
Other Primary*	306.7	283.8	264.0	-19.8	-42.7	-16.0	-7.0	-13.9
Utilities	120.2	120.3	123.6	3.3	3.4	8.4	2.7	2.8
Construction	728.4	814.1	796.8	-17.3	68.4	-16.3	-2.1	9.4
Manufacturing	2,180.7	2,202.4	2,237.2	34.8	56.5	95.5	1.6	2.6
<b>Service-producing</b>	10,457.7	10,835.0	10,801.4	-33.6	343.7	0.2	-0.3	3.3
Trade	2,159.2	2,278.4	2,275.2	-3.2	116.0	34.1	-0.1	5.4
Transportation	706.7	742.9	744.3	1.4	37.6	13.6	0.2	5.3
FIRE*	830.5	890.7	899.5	8.8	69.0	1.4	1.0	8.3
Professional/Scientific	858.3	931.7	923.1	-8.6	64.8	-13.5	-0.9	7.5
Management/Administrative	483.3	505.8	511.8	6.0	28.5	24.7	1.2	5.9
Educational Services	927.3	950.4	942.4	-8.0	15.1	3.1	-0.8	1.6
Health Care/Social Assistance	1,444.3	1,440.9	1,434.8	-6.1	-9.5	-55.9	-0.4	-0.7
Information/Culture/Recreation	623.2	641.8	630.2	-11.6	7.0	-13.1	-1.8	1.1
Accommodation & Food	933.8	927.2	912.7	-14.5	-21.1	-19.8	-1.6	-2.3
Other Services	700.2	749.5	746.1	-3.4	45.9	14.2	-0.5	6.6
Public Administration	790.7	775.6	781.2	5.6	-9.5	11.3	0.7	-1.2

\*Other Primary: Forestry, Fishing, Mining, Oil & Gas; Transportation includes warehousing; FIRE: Finance, Insurance, Real Estate & Leasing.



## Provincial Overview

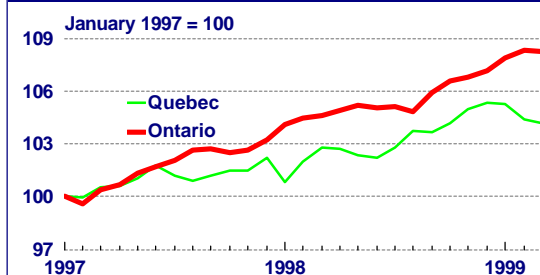
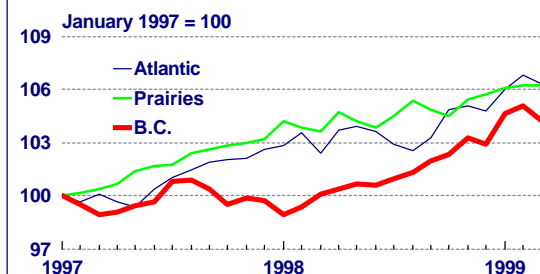
### Most provinces post job losses in March...

- Job losses in March were led by British Columbia, Quebec and Newfoundland. For both British Columbia and Newfoundland, these declines were not enough to offset a strong upward trend in employment over the past year. Employment has fallen in Quebec in each of the first three months of the year.
- Employment edged higher in Manitoba and Prince Edward Island, and was unchanged in Saskatchewan. All other provinces recorded slight losses on the month.

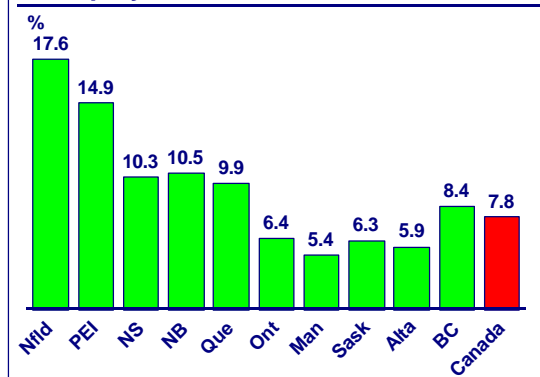
### ...but only Newfoundland, B.C. and Alberta record higher unemployment rates

- Newfoundland's unemployment rate jumped up 2.1 percentage points to 17.6% in March. More modest rises were posted by British Columbia and Alberta.
- Quebec's unemployment rate edged lower due to a large decline in the labour force.
- Unemployment rates were down slightly in most other provinces, as decreases in the labour force tended to more than compensate for job losses. The largest drop was in New Brunswick (-0.8 percentage points to 10.5%).

### Regional employment patterns



### Unemployment Rates -- March 1999



### Provincial Employment and Unemployment Trends

	Employment (thousands)						Unemployment rate (%)		
	Levels	Change since last month		Change since last year		Levels	Change since last month		
	1999 March	(000's)	%	(000's)	%		last month	last year	
Canada	14,634.8	-29.2	-0.2	417.0	2.9	7.8	0.0	-0.6	
Newfoundland	204.9	-4.2	-2.0	10.0	5.1	17.6	2.1	0.4	
P.E.I.	62.2	0.1	0.2	1.2	2.0	14.9	0.0	1.8	
Nova Scotia	408.5	-0.6	-0.1	5.4	1.3	10.3	-0.2	0.7	
New Brunswick	335.8	-0.4	-0.1	20.4	6.5	10.5	-0.8	-2.0	
Quebec	3,359.7	-7.0	-0.2	44.9	1.4	9.9	-0.1	-0.2	
Ontario	5,766.0	-1.0	-0.0	195.2	3.5	6.4	-0.2	-0.9	
Manitoba	552.9	1.0	0.2	8.9	1.6	5.4	-0.2	0.3	
Saskatchewan	477.8	0.0	0.0	-2.1	-0.4	6.3	-0.3	0.9	
Alberta	1,549.1	-1.4	-0.1	57.2	3.8	5.9	0.1	0.2	
B.C.	1,917.9	-15.8	-0.8	76.1	4.1	8.4	0.3	-1.5	



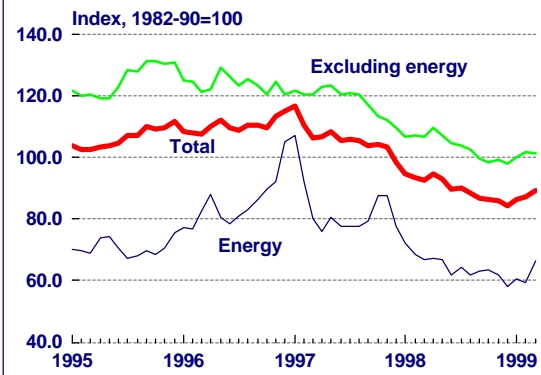
### *Inflation edges up slightly in February...*

- The year-over-year rate of CPI inflation was 0.7% in February, up slightly from 0.6% in the preceding month. As in January, the average price level fell across most of Atlantic Canada.
- Compared to last year, consumers experienced lower prices for telephone services, gasoline and computer equipment in February. This was offset by higher prices for food and higher charges for piped gas, tuition fees and property taxes.
- The "core" inflation rate – excluding the volatile food and energy components as well as the impact of indirect taxes – fell to 0.9% in February, edging below the 1-3% target range set jointly by the Bank of Canada and the Department of Finance.

### *...but remains very low by historical standards*

- Discounting the effects of tobacco tax reductions in 1994, inflation in the first two months of the year has been the lowest since 1962.
- And, inflation should remain low. Although commodity prices gained some momentum in March due to a pickup in Energy prices, they are still down on a year-over-year basis.

### Commodity Prices (\$U.S. basis)



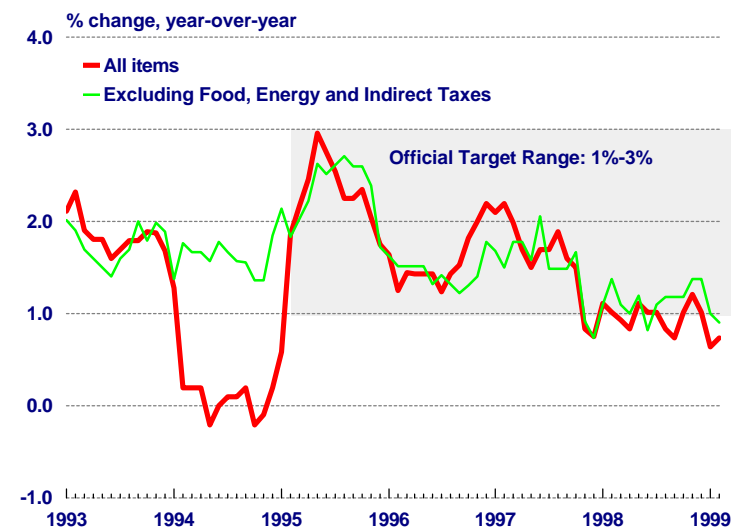
### Consumer Prices

	February 1999		
	Index (1992=100)	% Change since last month	% Change since last year
<b>All items CPI</b>	109.1	0.2	0.7
Food	110.5	-0.5	1.5
Shelter	104.5	0.0	1.3
Household operations	108.5	0.6	-0.2
Clothing & Footwear	104.4	0.7	0.5
Transportation	119.9	-0.2	-0.7
Health & Personal Care	109.2	0.2	2.0
Recreation, Educ. & Reading	116.8	1.1	0.7
Alcohol & Tobacco	93.7	0.0	1.8
<b>Excl. Food/Energy/Indirect Taxes</b>	110.8	0.3	0.9
Energy	102.3	-0.8	-2.4

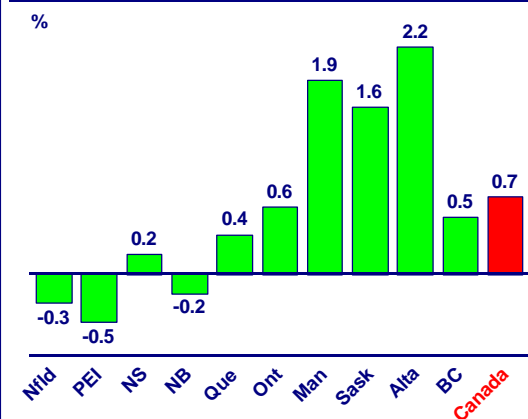
  

Commodity Prices (March)			
Index, 1982-90=100	% Change since last month	% Change since last year	
Index, 1982-90=100	89.1	2.3	-3.9
Excluding Energy	101.2	-0.7	-5.0
Energy	66.4	12.0	-0.6

### Consumer Price Index



### Provincial CPI Inflation -- February 1999



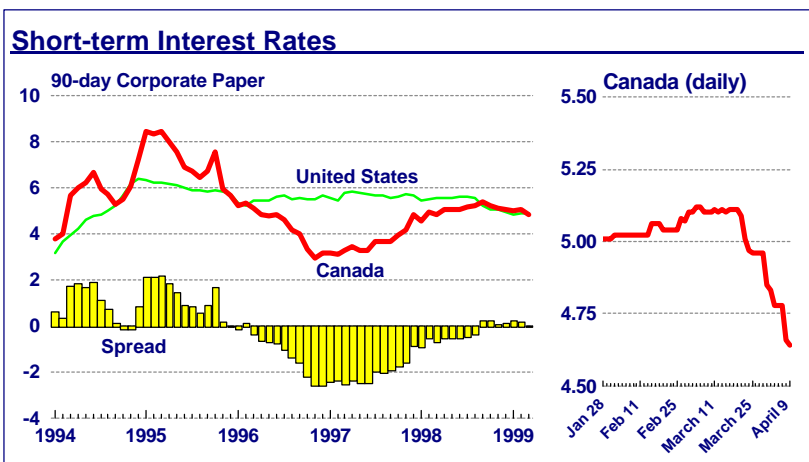


### A cut in the Bank Rate leads to lower short term rates...

- The trend-setting Bank Rate was lowered from 5.25% to 5.0% on March 31 – the first time in two years that the Bank of Canada has lowered rates independently from the U.S. Federal Reserve. With this reduction, the full percentage point increase in the Bank Rate engineered late in August to bolster the Canadian dollar is now completely reversed.
- On April 8, the European Central Bank slashed its key refinancing rate a larger-than-expected 0.5 points, putting further downward pressure on Canadian short-term rates. With low inflation and weak March employment figures, some analysts believe that the Bank of Canada now has room for further easing.

### ...dropping both short-term and long-term rates below U.S. rates

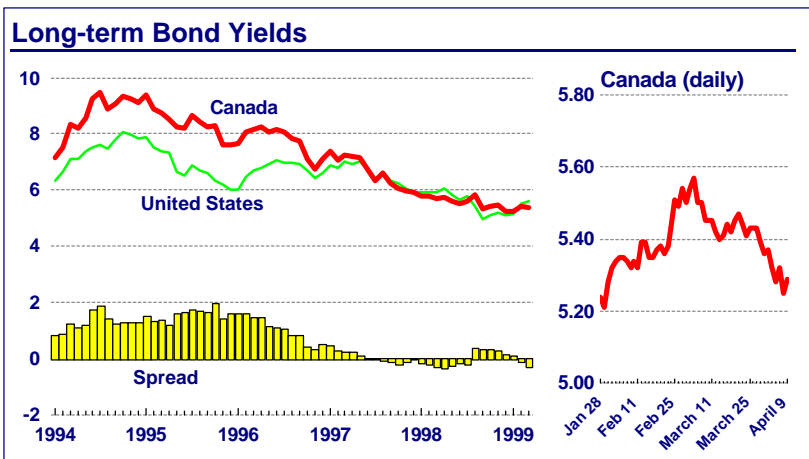
- Lower short-term rates have also helped push down long-term bond yields. Mortgage rates have dropped twice since the Bank's move, with the one-year mortgage rate falling 40 basis points (to 6.20%) and the five-year mortgage rate falling 45 basis points (to 6.70%).
- Long-term rates in Canada fell below U.S. rates in February. With the latest cut by the Bank of Canada, Canadian short-term rates are also below comparable U.S. rates – for the first time since August.



### Key Money Market Rates

(end of period)	90-day Corporate Paper	spread against U.S.	Long Bond Yield	spread against U.S.
1997	4.80	-0.85	5.95	0.02
1998	5.02	0.09	5.23	0.14
1998 Oct	5.22	0.19	5.45	0.32
Nov	5.09	0.02	5.47	0.28
Dec	5.02	0.09	5.23	0.14
1999 Jan	5.01	0.19	5.23	0.09
Feb	5.04	0.16	5.43	-0.08
Mar	4.85	-0.04	5.36	-0.27
April 7	4.78	-0.09	5.32	-0.19

A positive spread indicates that Canadian rates are above their U.S. counterparts.



### Key Lending Rates

(end of period)	Bank Rate	Prime Lending Rate	Mortgage Rate	
			1 year	5 year
1997	4.50	6.00	6.65	7.05
1998	5.25	6.75	6.20	6.60
1998 Oct	5.50	7.00	6.50	6.75
Nov	5.25	6.75	6.40	7.15
Dec	5.25	6.75	6.20	6.60
1999 Jan	5.25	6.75	6.40	6.90
Feb	5.25	6.75	6.40	6.90
Mar	5.00	6.75	6.45	6.95
April 9	5.00	6.50	6.20	6.70

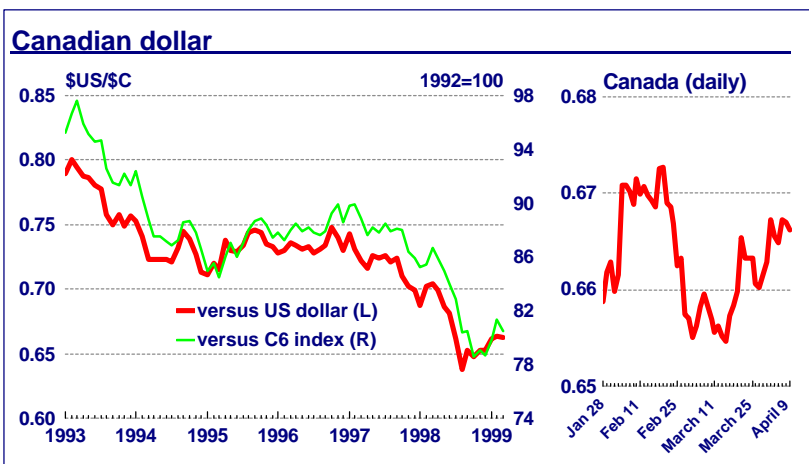


### Lower interest rates spark a stock market rally in April...

- Buoyed by the lower Bank Rate, the TSE 300 gained 0.3% on March 31, ending the month 4.5% higher than February's close. The subsequent rate cut in Europe spearheaded an additional 2.1% gain on April 8.
- The European rate cut also boosted the Dow Jones Industrial Average in the U.S., which had closed above 10,000 for the first time on March 29.

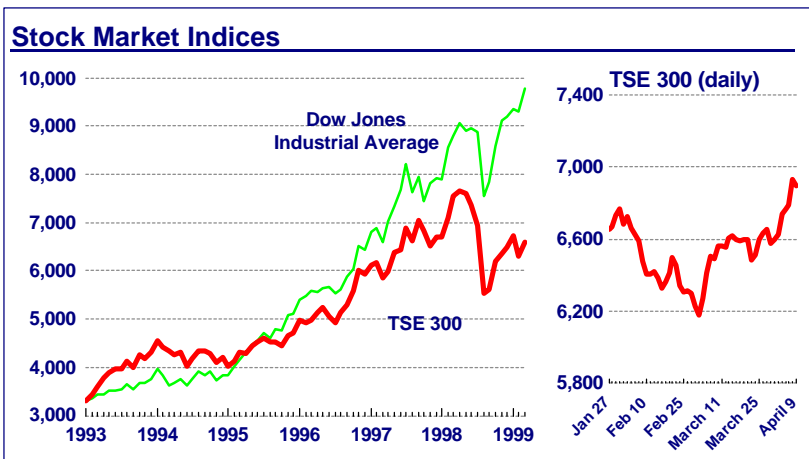
### ...while the Canadian dollar firms

- Although interest rates in Canada were lowered independently from those in the U.S., the Canadian dollar reacted well, climbing 0.13¢ to \$66.28 US on March 31.
- This upward momentum continued into early April, spurred by a modest recovery in commodity prices and an influx of capital from European investors seeking higher returns after European interest rates were cut 50 basis points.



### The Canadian Dollar

(close)	\$US vs. \$Cdn	index vs. C-6 (92=100)	DM vs. \$Cdn	yen vs. \$Cdn
1997	0.6991	85.87	1.247	90.87
1998	0.6522	78.71	1.082	75.91
1998 Oct	0.6481	78.57	1.060	78.10
1998 Nov	0.6523	79.02	1.093	78.17
1998 Dec	0.6522	78.71	1.082	75.91
1999 Jan	0.6618	79.83	1.110	74.58
1999 Feb	0.6632	81.33	1.166	77.81
1999 Mar	0.6628	80.51	1.184	78.71
April 9	0.6658			



### Key Stock Market Indexes

	March Close	% change from	
		last month	last year
<b>TSE 300</b>	<b>6,598</b>	<b>4.5</b>	<b>-12.7</b>
Oil & Gas	4,979	23.0	-24.2
Metals & Minerals	3,138	3.4	-23.7
Utilities	7,922	3.9	2.5
Paper & Forest	3,869	10.7	-21.3
Merchandising	5,616	5.7	-8.4
Financial Services	8,200	1.9	-14.8
Gold	5,188	-2.6	-25.2
Price-Earnings Ratio*	25.9	2.3	-5.7
<b>S&amp;P 500</b>	<b>1,287</b>	<b>3.9</b>	<b>16.8</b>
<b>Dow Jones</b>	<b>9,786</b>	<b>5.2</b>	<b>11.2</b>

\*columns 2 & 3 reflect change in levels



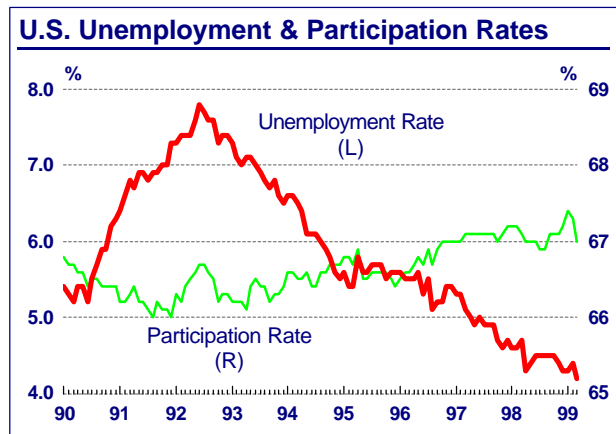
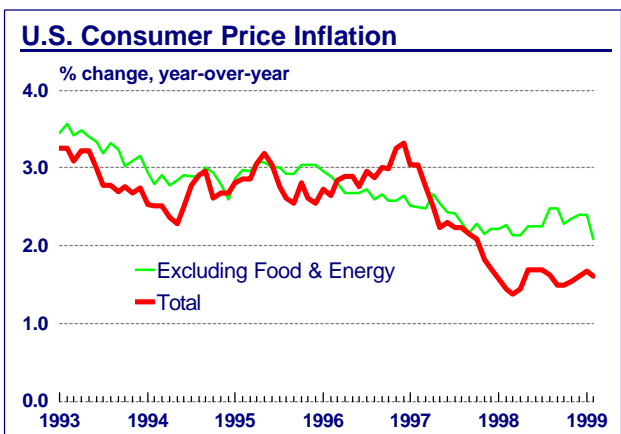
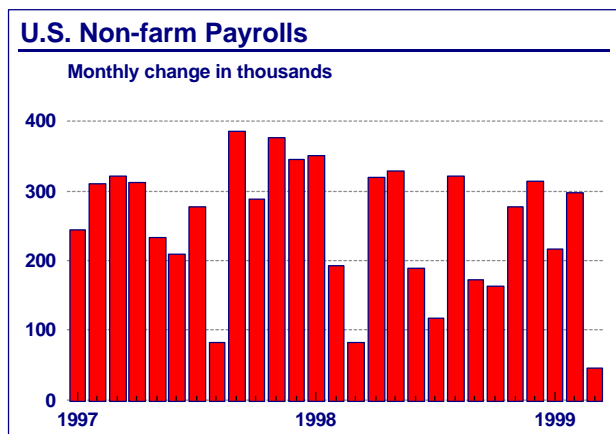
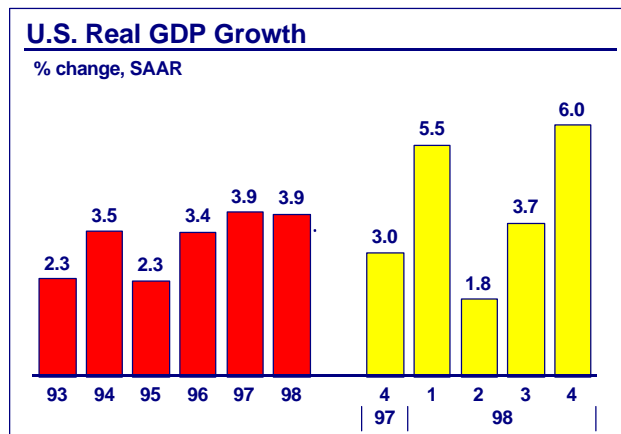
## U.S. Economic Trends

### *The Federal Reserve leaves interest rates unchanged...*

- In a widely anticipated move, the Federal Reserve opted to leave interest rates unchanged at its March 30 meeting. No announcement on the probable direction of future rate changes was made at the conclusion of the meeting, a continuation of the neutral stance adopted by the Fed in November.

### *...as the U.S. economy displays some signs of slowing down*

- A number of factors suggest that the U.S. economy is losing some steam. Only 46,000 non-farm jobs were created in March, compared to a gain of 297,000 in February. Also, the index of aggregate hours worked, a rough leading indicator of GDP, fell 0.5% in March. And finally, after a brief resurgence, the manufacturing sector has resumed its longer-term trend of declining employment. These factors suggest that GDP growth will slow from the very robust 6.0% annualized rate posted in the fourth quarter of last year. Indeed, most analysts forecast GDP growth of just over 3.0% for the first quarter.
- The U.S. unemployment rate fell from 4.4% in February to 4.2% in March – its lowest rate since 1970. However, this drop was due entirely to a reduction in the labour force, as employment (as measured by the household survey) decreased in March.
- Despite tight labour markets, cost pressures remain in check. CPI inflation edged down to 1.6% in February, while average hourly earnings rose just 0.2% in March.





**University Research and the Commercialization of Intellectual Property in Canada**



**Although Canadian universities account for one-fifth of all R&D in Canada...**

- Universities are second only to private industry in terms of R&D performance in Canada. University R&D totalled \$2.9 billion in 1997, accounting for roughly 21% of all R&D. By comparison, the academic sector accounts for only 14% of R&D in the U.S.
- Despite its importance, the share of national R&D performed by Canadian universities has fallen in recent years. This reflects a slight decline in university R&D, but mainly the fast growth of business sector R&D.

**...spending as a share of GDP lags behind most other countries**

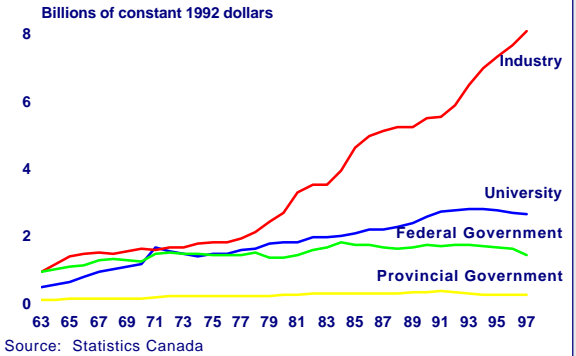
- Universities account for a relatively large share of total R&D in Canada, but from an international perspective their spending levels are nonetheless low relative to the size of the economy. (This reflects Canada's overall R&D gap relative to other countries.)
  - R&D spending by Canadian universities as a share of GDP is second lowest in the G-7 countries at 0.33%. This compares to 0.38% in the U.S.

- However, the Canada-U.S. R&D spending gap is smaller for university R&D than for business sector R&D.

**The share of university R&D financed by industry in Canada is highest among the G-7 countries**

- The federal and provincial governments finance a large proportion of university R&D, through direct funding (28.8% and 11.4% in 1996, respectively) and the provision of general university funds.
- Industry financed close to 12% of Canadian university R&D activities in 1996. And, industry has been the fastest growing source of funds over the last two decades, rising by 14% per year in real terms.
- The contribution of Canadian industry to university R&D is highest among the G-7 countries, suggesting the presence of strong university-industry linkages in Canada compared to other countries.

**R&D Spending by Performing Sector**

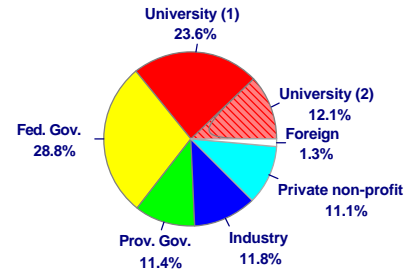


**R&D Spending as a Share of GDP, 1997\***

Country	By performing sector			Total
	Industry	Government	University	
Canada	0.99	0.22	0.33	1.56
France	1.43	0.47	0.39	2.32
Germany	1.52	0.34	0.40	2.26
Italy	0.58	0.23	0.25	1.06
Japan	2.01	0.27	0.42	2.83
U.K.	1.26	0.28	0.38	1.94
U.S.	1.96	0.22	0.38	2.64

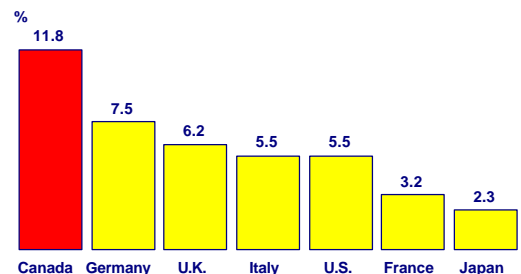
\* Estimates for 1997 or latest year available: 1996 for Japan, France, U.K.  
Source: Based on Statistics Canada and OECD data

**University R&D by Source of Funds, 1996**



\*University-funded R&D: (1) through government transfers; (2) other revenue sources.  
Source: Based on Statistics Canada and OECD data

**University R&D Funded by Industry, 1996\***



\* Data shown for most recent year available: 1996 for Canada, Germany and Italy; 1995 for Japan, the U.K. and the U.S.; and 1994 for France.  
Source: Statistics Canada; National Science Foundation, Science & Engineering Indicators 1998





### **Many Canadian universities are involved in the commercialization of intellectual property...**

- According to Statistics Canada's 1998 *Survey of Intellectual Property Commercialization*, almost two-thirds of Canadian universities participate in managing intellectual property.
- In 1997/98, academic researchers reported 661 new inventions. A total of 379 patent applications were filed by 30 Canadian universities, most relating to the health and agricultural/biological sciences.
  - Canadian universities were granted 143 patents in 1997/98, bringing the total number of patents held to 1,252. More than half of these patents are issued in the U.S.
- In 1997/98, 243 new licenses were executed with other organizations. The total number of active licenses was 788, with royalties of \$15.6 million.

### **...and activity is rising...**

- The annual Association of University Technology Managers (AUTM) Survey shows that the commercialization activities of major Canadian universities have been increasing over time.
- Participating Canadian institutions reported that invention disclosures and patent applications more than doubled between 1991 and 1997. Almost five times as many licenses were executed in 1997 as in the early 1990s, providing an increasing stream of license income.

### **...but there is still considerable room for improvement**

- Thirty of Canada's 81 universities and colleges have yet to establish central offices to manage their intellectual property.
- Formal requirements to disclose inventions exist in only 26 of 81 Canadian universities.

### **Commercialization Activities in Canadian Universities, 1997/98**

Activity	Universities	Number
Universities with central IP office	50	67
Invention disclosures	24	661
New patent applications	30	379
New licenses	26	243
Active licenses	26	788
Royalties from licensing	26	\$15.6 million

Source: Statistics Canada's *Survey of Intellectual Property 1997/98*.

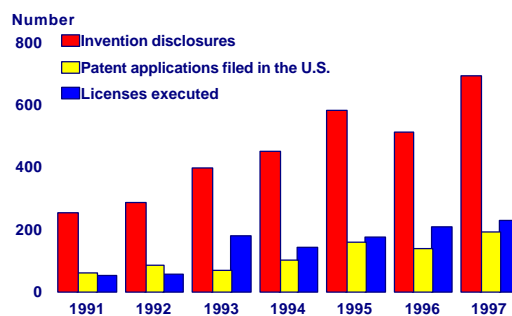
### **Patenting Activities by Field of Research**

Field of Research	New Patent Apps. Filed 1997-98	Patents issued in:		
		Canada	U.S.	Total
Agr./Bio. Sci.	66	5	7	x
Eng. & Appl. Sci.	40	8	10	x
Health Sciences	91	10	34	61
Math & Phys. Sci.	12	x	x	5
<b>Total</b>	<b>379</b>	<b>35</b>	<b>82</b>	<b>143</b>
Total held in 1998	--	264	635	1,252

Note: "x" denotes figures that are suppressed to maintain confidentiality. Fields of research with many "x"'s are not shown, thus rows don't sum to total.

Source: Statistics Canada's *Survey of Intellectual Property 1997/98*.

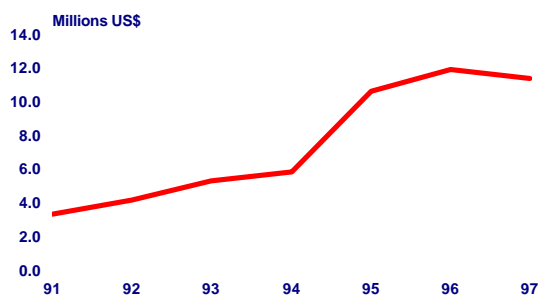
### **Commercialization Activities of Major Canadian Universities\*, 1991-97**



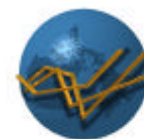
\* Includes two research institutes

Source: Association of University Technology Managers (AUTM) Survey, 1991-97. Sample of 10-16 Canadian institutions annually.

### **Gross License Income Received\***



\* License income is not adjusted for royalties paid to other institutions. Source: AUTM Surveys, 1991-97



## University Research and the Commercialization of Intellectual Property in Canada

### *Universities can create spin-off companies to bring new technologies to market...*

- Universities are more likely to create a spin-off company to commercialize new technology when there is a lack of industrial receptor capacity, especially in the local economy.
- According to the AUTM survey, 31% of licenses and options executed by major Canadian universities in 1997 were with spin-off companies. This compares to only 11% for U.S. universities.
  - This may suggest that the lack of receptor capabilities is more pronounced in Canada than in the U.S.
- According to Statistics Canada's *Survey of Intellectual Property*, Canadian universities have created a total of 366 spin-off companies. Most of these companies have been created in the 1990s.

### *...or license technology to existing companies*

- An alternative to creating a start-up company is to license technologies to existing firms.
- Among licenses granted to existing firms, a slightly higher percentage are granted to SMEs than to large companies, both in Canada and the U.S. For example, 36% of all licenses or options executed by major Canadian universities were signed with existing small and medium-sized firms, while 33% were signed with larger firms.

### How Universities Commercialize New Technologies

	Licenses & Options Executed to:	FY 1996		FY 1997	
		Number	%	Number	%
Canadian Universities*	Start-ups	53	28	62	31
	Existing SMEs	74	38	70	36
	Existing large companies	54	34	66	33
	Total	192	100	198	100
U.S. Universities	Start-ups	219	11	255	11
	Existing SMEs	1,109	55	1,135	48
	Existing large companies	691	34	976	41
	Total	2,009	100	2,366	100
U.S. Hospitals & Research Institutes	Start-ups	21	9	23	7
	Existing SMEs	111	46	163	53
	Existing large companies	107	45	122	40
	Total	239	100	308	100

\* Includes two research institutes  
Source: AUTM Surveys, 1996 and 1997

### Year of Incorporation of Spin-Off Companies

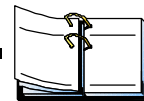
Incorp. Year	Before 1980	1980 to 1989	1990 to 1998	Unknown	Total
Number	22	92	230	22	366
%	6	25	62	7	100

Source: Statistics Canada's *Survey of Intellectual Property 1997/98*.

This special report is based on "*University Research and the Commercialization of Intellectual Property in Canada*", a report prepared by Wulong Gu and Lori Whewell for the consideration of the Expert Panel on the Commercialization of University Research of the Advisory Council on Science and Technology.

## COMING UP

### Key Future Data Releases and Planned Events



#### CANADA

Survey of Manufacturing – February .....	April 19
International Trade – February .....	April 20
Consumer Price Index – March .....	April 21
GDP at factor cost – February .....	April 30
Business Conditions Survey – April .....	May 4
Labour Force Survey – April .....	May 7
Financial Statistics For Enterprises – 1st Quarter 1999 .....	May 26
Capacity Utilization Rates – 1st Quarter 1999 .....	June 7
National Economic & Financial Accounts – 1st Quarter 1999 .....	June 10
Balance of International Payments – 1st Quarter 1999 .....	June 10

#### UNITED STATES

Consumer Price Index – March .....	April 13
International Trade – February .....	April 20
GDP – 1st Quarter 1999, Advance .....	April 30
Employment Situation – April ... ..	May 7
Federal Open Market Committee meeting .....	May 18

Note: the April MEI uses data available as of April 9, 1999