

Auto Premium Inflation: How StatsCan Rocked the Bank of Canada

Introduction

Statistics Canada (StatsCan) appears to have mismeasured auto insurance premiums from March 1996 to March 2002, if not generally outside that time range.

This six-year period was marked by long periods where the statistical agency's price indices of provincial auto insurance premiums were unchanged, suggesting that the agency had no primary survey data.

Table 1 and figures 1, 2, and 3 show the dates when price indices were constant or saw negligible change. The problem seems to have been centred on provinces with private sector insurance systems, though BC also had a four-year continuous period with absolutely no change in premiums. Given that there are over 16 million insured vehicles in Canada, with staggered policy renewal dates through the year, it is literally impossible to see no change in prices every month over such a prolonged period.

At other times in the past few years, changes meant to adjust for quality factors were apparently done in an inconsistent way.



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Main Conclusions

- **Statistics Canada mismeasured auto insurance premiums from 1996 to 2002, squeezing several years of increases into one twelve-month period.**
- **The resulting exaggerated inflation rate had two direct impacts: The Bank of Canada raised interest rates twice on false information and the New Brunswick electorate was inflamed by exaggerated insurance increases.**
- **The Bank of Canada rate hikes have since been rescinded, but the Canadian dollar has taken a step-jump higher ...**
- **... and the political fallout from the mismeasured premiums has spread across Canada.**
- **More accurately measured insurance premiums show a steadier increase —and an eight percent drop in New Brunswick in the past four months.**
- **There is also evidence that the actual price of auto insurance has not increased in recent years, as the value of insurance has risen as fast or faster than premiums.**

For example, most of the 6.2 percent premium increase in December 2002 was attributed to a change in model year for the agency's chosen four-year-old insured vehicle.¹ There is no sign of a similar adjustment any other year between January 1996 and January 2002, suggesting that the objective of keeping the age of the representative vehicle constant in StatsCan's consumer expenditure basket was not met.

There are also examples where price adjustments were made in seemingly contradictory directions.

In particular, the Ontario government initiated insurance reforms in December 1996 that led to a "10 to 15 percent reduction in the average price paid for auto insurance"² by reducing third party liability coverage and limiting access to tort through a modified no-fault system. Yet, at the announcement time, the price index for Ontario

increased by 19.3 percent in November, as StatsCan deemed the change a reduction in the insurance service at a fixed cost to the consumer. The subsequent price reduction never appeared in the price index for Ontario.

Other Problems

There are other issues with the StatsCan price indices for auto insurance.

Figure 4 shows annualized monthly growth in the Canadian auto insurance price index and The Fraser Institute's estimate of national average premium inflation.³ The institute's estimate, a calculation of total premiums scaled by number of vehicles, drivers, and policies, places an upper bound on the price index, since it includes both price and quantity changes. Average premiums changed annually for every province between 1996 and 2002.

Table 1: Statistics Canada Auto Premium Price Indices

Province	Continuous Months with		
	No Change	Starting	Ending
NB	72	March 1996	March 2002
NF	58	April 1997	Feb 2002
ON *	58	Nov 1996	Sept 2001
PEI	51	Dec 1997	March 2002
BC	51	June 1996	Sept 2000
NS **	46	May 1998	March 2002
PQ	33	March 1999	Dec 2001
AB	26	Oct 1999	Dec 2001

* Negligible amount of change: less than 0.1% per year.

** Changed in only one month by less than 0.2%.

Figure 1: StatsCan Auto Insurance Price Indices

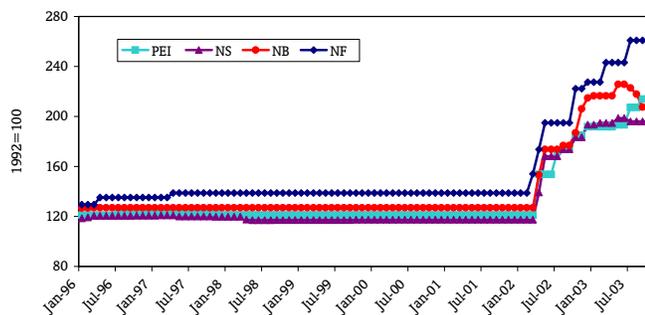


Figure 2: StatsCan Auto Insurance Price Indices

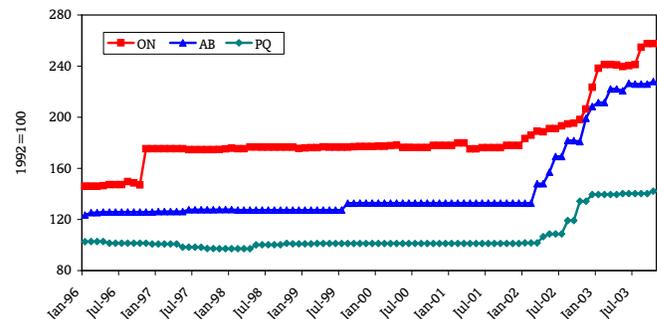


Figure 3: StatsCan Auto Insurance Price Indices

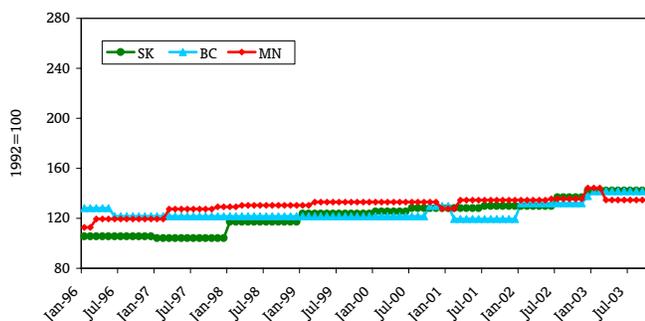
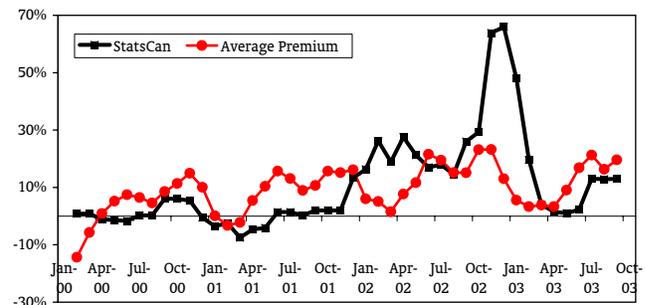


Figure 4: Premium Inflation-- 3 Month Average Annualized Rates



The main point to take from figure 4 is the inflation distortion in the StatsCan index between early 2002 and early 2003, as six years of deferred measurement of price changes played into one twelve-month period.⁴

It is also difficult to reconcile the two lines in this figure for two additional reasons.

First, the latest StatsCan rates of price increase are unrealistically high, typified by the New Brunswick annual rate of 70 percent in the first quarter of 2003. Such cost increases, with auto insurance amounting to about 3 percent of consumer expenditures, would have reduced other consumer spending by more than 2 percent. This magnitude of purchasing power redistribution has not to our knowledge been noted in other economic statistics this year.

Second, it is not technically possible to have a price index of insurance growing faster than an expenditure index (such as an average premium), unless the value of the insurance service is falling.

That this is not the case comes from examining total claims costs, one way of measuring the value of insurance products. This *Alert* estimates that total national claims costs rose by 35 percent from 1996 to 2002—and average claims costs, adjusted for the rise in numbers of vehicles, drivers and insurance policies, rose by approximately 20 percent over that period.⁵

Since The Fraser Institute's estimated average Canadian premium increased 17 percent over the six years, and the value of insurance as measured by average claims rose by slightly more (20 percent), the true price of auto insurance may actually have fallen over the six years.

In contrast, the StatsCan price index records an increase of 22 percent from 1996 to 2002. The logic used to alter prices in Ontario for legislative changes in 1996 (discussed above), that the value of insurance services had changed, should have prompted StatsCan to lower its price index over time.

Political and Policy Impacts

These price measurement issues would be of limited interest if it were not for their significant impact on provincial public policies and national monetary policy.

Table 2 shows the source of public disquiet concerning auto premium prices. These prices have apparently seen the third largest increase of any consumer expenditure since 1992, the base year for the price index. It is again worth stressing the analysis above concerning insurance value, however, as it suggests that this doubling of price in ten years is dramatically overstated.

Table 2: Largest CPI Component Increases

	% Increase Since 1992
Tuition fees	130
Natural gas	113
Automotive vehicle insurance premiums	102
Air transportation	97
Travel tours	78
Cablevision (including pay TV)	77
Spectator entertainment (excluding cablevision)	62
Rail, bus, and other inter-city transportation	58
Homeowners' insurance premiums	56
Oranges	53
Sugar and confectionery	53
Magazines and periodicals	51
City bus and subway transportation	50

Source: Statistics Canada

Table 3: Premium Inflation Search Results

Hits by Province	Inflation Rate for 2002 & 2003	
	Peak	Average
NB	115	1
NS	53	0
PEI	20	0
ON	13	0
NF	5	0
AB	5	0

Note: Search terms were "province", "auto insurance," "rate," or "premium", and "x percent" where X is the monthly year-over-year rate for the province.

Source: Google.com; and author's calculations.

That such prices can have an impact on public debate is seen in table 3. A *Google.com* search by provinces that have private-sector auto insurance systems shows that most of the commentary has been focused on New Brunswick, not coincidentally the province with the highest peak rate of price increase (at 70 percent, according to StatsCan). The two columns show searches on the highest published monthly inflation rate and the annual averages for 2002 and 2003. Sensational news of exceedingly large and rapid price increases appears to attract the most attention from public commentators, at least as measured by this search engine on the internet.

The most recent election in New Brunswick was called last May 10 and held on June 9, 2003. Auto insurance featured as a key, perhaps pivotal, issue. It has been placed on the reform agenda for all provinces since then and will feature again in New Brunswick early in 2004 with the release of the Select Committee report on public insurance options.

StatsCan, for its part, first mentioned auto insurance as a factor motivating inflation in its CPI release in April 2002, upgraded the

component to a main influence on inflation in June 2002, and mentioned New Brunswick premiums specifically in December 2002. The highest 70 percent rates of premium inflation for New Brunswick were published by StatsCan between February and April 2003, just prior to the election call.

Core Inflation Impact

The effect of StatsCan's mis-measured premiums went well beyond the political and policy realms. In fact, it directly led the Bank of Canada to inappropriately hike interest rates twice this year.

Such a result stems from the Bank of Canada's responsibility to keep Canada's inflation rate low and stable. Its most important measure of inflation is the core rate, a variant of the consumer price index that excludes eight volatile components and the effect of changes in indirect taxes.⁶

It is quite clear that the StatsCan mismeasurement of auto insurance premiums has distorted the core inflation index. Table 4 shows annual rates of growth for the core CPI and an adjusted version using this *Alert's* average premium estimates rather than the StatsCan auto insurance price index. The reader is cautioned again that the improvement to the value of insur-

ance through rising claims costs means that both of these measures overstate the actual price inflation.

The table shows that StatsCan significantly overstated the core rate in 1997 and 2003 and understated the rate in 2001. Figure 5 shows the year-over-year differential in the core and adjusted core rates and compares this against the bank's key policy interest rate, the target for the overnight rate.

The underestimate of core inflation in 2001 is quite apparent, as is the even greater overestimate in 2003. The close convergence of core and adjusted core inflation rates in 2002 is an averaging of underestimated core in the first half of the year and an overestimate in the latter half of the year.

The greatest overestimate of the core rate started building up in early 2002 and peaked in the first quarter of 2003. The published core rate actually went above the bank's 3 percent target range between November 2002 and February 2003 and averaged 3.1 percent in the first quarter of this year. The adjusted rate stayed below the ceiling and averaged 2.5 percent in that quarter. Better measurement of premium prices would have sent a much less alarming message on inflation pressures to the Bank of Canada.

Financial Markets Impact

Table 5 focuses in on this crucial time by showing the core inflation differential on an annualized quarterly basis through 2002 and 2003.

The bank tightened monetary policy in April, June, and July 2002 by a total of 75 basis points. According to table 5, these moves were well supported by both measures of the core rate, each showing inflation above the top range of the target at that time. The bank's decision to keep rates unchanged through the fourth quarter of 2002 is also consistent with the drop in the core rates then, especially after adjustment.

However, the annualized overestimate of the core rate by 62 basis points in the fourth quarter of 2002 was more than doubled in the first quarter of 2003. The distorted core CPI breached the ceiling of the target, while the adjusted figure remained below the mid-point at 1.9 percent. In fact, the adjusted core CPI rate has been under the inflation target mid-point since autumn 2002, thus calling for no change at all in monetary policy.

It is not difficult to imagine that this mismeasured acceleration of core inflation was at the heart of the two monetary policy tightening moves last March and April.

Table 4: Core Inflation Adjusted for Auto Premiums

	Core CPI	Adjusted	Basis Point Difference
1996	1.7%	1.6%	8
1997	1.9%	1.6%	31
1998	1.3%	1.2%	4
1999	1.4%	1.4%	1
2000	1.2%	1.3%	-5
2001	2.1%	2.4%	-32
2002	2.4%	2.3%	5
2003	2.2%	1.8%	45

Source: Bank of Canada and author's calculations.

Figure 5: Core Inflation Difference and Interest Rates

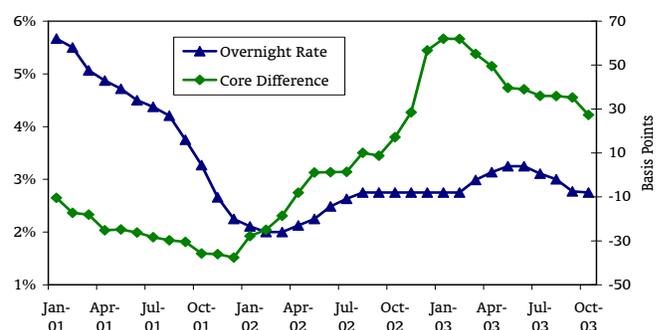


Table 5: Core Inflation Adjusted for Auto Premiums

	Core CPI	Adjusted	Basis Point Difference
2002: Q1	2.1%	1.7%	32
Q2	4.7%	4.2%	49
Q3	3.4%	3.5%	-7
Q4	1.1%	0.5%	62
2003: Q1	3.2%	1.9%	134
Q2	1.0%	1.2%	-18
Q3	1.3%	1.7%	-34

Source: Bank of Canada and author's calculations.

The deceleration of both core rates later in 2003—and the two monetary easing moves in July and September that reversed this 50 basis point tightening—are also consistent with this explanation.

Finally, figure 6 shows that the Canadian dollar broke out of a tight trading range at the time of these inappropriate interest rate increases. With the added impetus of a US drop in administered interest rates in June, the currency has never looked back. The currency appreciation, even with the interest rate decreases in July and September, has tightened monetary conditions appreciably since the spring. This can only have a dampening effect on the Canadian economy in 2004.

Recommendations

StatsCan should improve its method of measuring auto insurance premiums, possibly moving from the current survey method to a more encompassing approach that uses the universe of private sector policies collected at the Insurance Bureau of Canada and the detailed (but completely confidential) information held by the monopoly public insurers.

The agency should also improve its methods of discriminating between price changes and product changes for insurance, possibly taking into account claims

costs, the full impact of legislative changes, legal and health system changes that affect the value of insurance policies, and even a more sophisticated approach that estimates the contingent option value of insurance. This will only become more important, as we are currently in a rather busy and likely prolonged time of auto insurance reform and restructuring in many provinces.

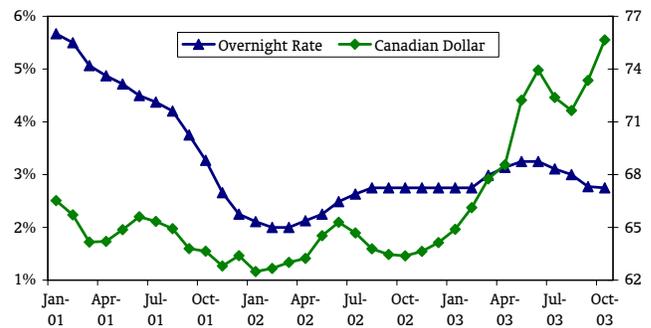
Optimal public policy and a correctly educated public rely on quality information. The myths surrounding auto insurance—that prices are rising without reason, that premium inflation is incomprehensibly rapid, that premiums are too high relative to payouts, that governments can better competitive market outcomes, and many others—are long-standing and pervasive. Only accurate information can dispel these false notions. This paper makes a start in that direction and also outlines the rather considerable costs of relying instead on misinformation.

Want to Know More?

Other relevant resources:

- www.ibr.ca
- www.statcan.ca
- www.bankofcanada.ca
- www.fraserinstitute.ca

Figure 6: Canadian Dollar and Interest Rates



Notes

- ¹ Statistics Canada, “Consumer Price Index,” *The Daily*, January 22, 2003.
- ² Insurance Bureau of Canada (IBC), *Road Signs*, 1(1), December 2003.
- ³ This estimate is based on premium calculations from “Two Hundred Bucks More: The Premium Cost of Public Auto Insurance,” *Fraser Alert*, Fraser Institute, November 2003 and data sourced from the IBC and public insurance monopolies. The study found that public insurance province premiums, especially for BC, are more expensive on average than private insurance system provinces. Annex C of *The New Brunswick Model for Public-Private Partnership in Automobile Insurance*, a submission by the IBC to the New Brunswick Select Committee on Public Automobile Insurance in November 2003, has a useful discussion of StatsCan’s insurance price measurement methodology.
- ⁴ The monthly growth in the national index is not exactly constant because at least one individual province, usually Ontario, had a measured price change for most of the six-year period. It is also possible to see that the StatsCan measure lags average premium growth by one to two months. As evidence of this, the simple correlation between the two lines is 38%. Using average premium inflation this month, compared to StatsCan’s price index two month’s later, the correlation is 57%. This timing issue may be caused by the placement of quarterly information in the selected months used by StatsCan.
- ⁵ These estimates are based on data from the IBC and the public monopoly insurers.
- ⁶ The importance of this measure is highlighted by its use as “the operational target of monetary policy” in an ongoing effort to keep overall inflation between 1 to 3 percent now and close to the 2 percent target midpoint over a six to eight quarter future horizon. See Bank of Canada, *Annual Report 2000*. Available digitally at <http://www.bankofcanada.ca/en/annual/2000>.