# Special Report:
## Calculating Cost of Living Increases in the TPP

### ARE BC RETIREES FALLING BEHIND? A DETAILED ANALYSIS.

The Pension and Benefits Committee was asked by delegates to the 2018 BCRTA AGM to examine the way the Cost of Living Allowance (COLA) is calculated and applied to our pensions. The concern was that perhaps our pensions' purchasing power was falling behind because the BC Teachers' Plan Pension Board of Trustees uses the Canada Consumer Prince Index (CPI), and that might not reflect the actual rising costs here in BC.

The committee has looked at various alternatives including using the BC Consumer Price Index, the Vancouver or Victoria CPI or an alternative calculation.

Thanks to the research by Al Cornes, there is a clear explanation of the history of how we first achieved cost of living adjustments, which is particularly interesting.

The key question we looked at was, "Would we have higher pensions if we moved to using an alternative CPI?" If you look only at the 2017 increase to our pensions the answer would be yes. In January 2018 our pensions increased by 1.6% which was the increase in the Canada Consumer Price Index, recorded in September, over the previous year. The BC CPI for the same period of time was 2%. This looks like the value of our pensions has fallen.

However, there is danger in looking at only a one year time frame and forming a conclusion. Quite a different picture emerges if you look at the data over a longer period of time. We discovered that using the Canada CPI rather than the BC CPI had the effect of increasing our pensions by almost 5% in the past 10 years – a gain of .465% each year. And looking over an even longer 30 year period we found that using the Canada CPI gave us a very significant 10% increase in our pensions compared to using the BC CPI. This is because the rates of inflation in some provinces, Ontario and Alberta specifically, have been much higher than the rate in BC with the result of lifting the Canada CPI's average, to the benefit of our BC pensions.

The committee did not feel it was appropriate for the Pension Trustees to use a particular city's CPI for several reasons. City-specific indices are more volatile and are not a reliable indicator of inflation for a larger area; they can be dependant on a specific economic condition such as the gain or loss of a large employer. Nevertheless, we found the same advantage; using the Canada CPI over the past 15 years increased our pensions by 3% over the Vancouver CPI and 7% over the Victoria CPI.

The committee did not find another inflation measuring instrument that met the test of independence, accuracy and a long history of use. These criteria are all met by the respected Canadian Consumer Price Index. Therefore, the Committee is recommending that we do not advocate for changes to the current practice.

The full report is presented on the following pages.

On behalf of the Pensions and Benefits Committee,

***Gerry Tiede***
***President***

**Memo to:** BCRTA Board of Directors
**Date:** November 14, 2018
**From:** Gerry Tiede, Chair, BCRTA Pension & Benefits Committee

**Subject: Report & Recommendation on AGM Resolution on TPP Pension Indexation**

**RECOMMENDATION**

M/S/C THAT the Pension and Benefits Committee recommend to the Board that, based on a review and analysis of the cost of living in the provinces with the four largest economies in the country as well as the cost of living of the country as a whole, it is the conclusion of the BCRTA Pension and Benefits Committee that the Canada Cost of Living Index ("Canada CPI") represents a sophisticated, objective and rigorous reflection of the Canadian cost of living and its underlying economy and, therefore, would recommend that there be no changes in its use in the calculation of benefits within the BC Teachers' Pension Plan.

# INTRODUCTION

The 2018 Annual General Meeting of the BCRTA, held on September 22, carried the following resolution with respect to the Teachers' Pension Plan:

**Motion #11 Eagle/Pawlett**

THAT the Pensions Committee examine the way in which the COLA is calculated with a view to having the calculation reflect accurately the actual increase in the cost of living to those in receipt of a pension from the BC Teachers' Pension Plan.

**Rationale:** *(provided by movers of the resolution)*

*A cost of living adjustment, calculated in September of each year, is an increase to a retired member's Monthly pension payment. Cost of living adjustment are not a guaranteed benefit of the plan. Adjustments are currently made in January each year and are based on changes in the cost of living, as measured by the Canadian Consumver Price Index (CPI) and the financial health of the plan's inflation ]adjustment account. Once a cost of living adjustment is granted, it becomes part of a member's guaranteed basic lifetime pension. If there is deflation (i.e., the CPI declines from one year to the next), the pension amount remains the same-it does not decrease.*

*You will see that there was a 1.6% cost of living adjustment (COLA) to your pension effective January 1, 2018. The National Consumer Price Index (CPI) was unchanged at 1.5% in the 12 months to September 2017. The British Columbia Consumer Price Index at September 2017 was 2.0%, for Vancouver 2%, and for Victoria 2.0%.*

*Those in receipt of a BC Teachers' pension received 80% of what is necessary to maintain their standard of living.*

## I. CONSUMER PRICE INDEX AND THE INDEXING OF BC TEACHERS' PENSION

The Consumer Price Index (CPI) is an indicator of changes in consumer prices experienced by Canadians. It is obtained by comparing, over time, the cost of a fixed basket of goods and services purchased by consumers. Since the basket contains goods and services of unchanging or equivalent quantity and quality, the index reflects only pure price change.

The CPI is widely used as an indicator of the change in the general level of consumer prices or the rate

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*CPI continued*

of inflation. Since the purchasing power of money is affected by changes in prices, the CPI is useful to virtually all Canadians. Consumers can compare movements in the CPI to changes in their personal income to monitor and evaluate changes in their financial situation.

It is used to escalate a given dollar value, over time, to preserve the purchasing power of that value. Thus, the CPI is widely used to adjust contracted payments, such as wages, rents, leases and child or spousal support allowances. Private and public pension programs (Old Age Security and the Canada Pension Plan), personal income tax deductions, and some government social payments are also escalated using the CPI.

It is also used in the BC Teachers' Pension Plan.

## HOW DOES THE INDEX WORK? (SHORT ANSWER)

Price movements of the goods and services represented in the CPI are weighted according to the relative importance of goods and services in the total expenditures of consumers. Each good or service is considered to be an element in a basket representative of consumer spending, and price movements are assigned a basket share with the proportion of total consumption expenditure they account for. For example, Canadians as a whole spend a much larger share of their total expenditures on rent than on milk. As a result, a 10% price increase in rental rates will have a greater impact on the All-items CPI than a 10% increase in the price of milk. The CPI basket shares are updated at two year intervals; the data to specify them are obtained primarily from the Survey of Household Spending conducted by Statistics Canada.

See Statistics Canada http://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&Id=490783

## II. HOW IS THE INDEX USED IN THE TEACHERS' PENSION PLAN?

The Consumer Price Index ("CPI") is used as a reliable and appropriate indexing tool within the Teachers' Pension Plan rules for the determination of benefits before the granting of a pension. For example, CPI indexation is used to ensure that part time teachers are not penalized in the determination of the calculation of the highest 50 months of FTE salary in the case of part-time teachers where the salary is older than 50 months.

It is also used for those teachers who have been accepted on LTD, they continue to accumulate pensionable and contributory service in the pension plan as if they were still working, and their highest average salary, which is used to calculate their pension, will be indexed to keep pace with the cost of living. [Teachers' Plan Employer Instruction Manual April 3, 2018 page 6-6].

It is also used as a indexation tool in post-retirement pensions to ensure that there is no erosion of the purchasing power due to increases in the cost of living.

Indexation of teacher pension provisions, as they relate to retired in receipt of a TPP pension, are found in Part 8 of the Teachers' Pension Plan Rules [current to March 13, 2018 page 32] as follows:

***RELEVANT RULES SECTIONS:***

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> *73 (4) The amount of a cost of living benefit granted to a retired member on any January 1 must not exceed the amount obtained by multiplying*
> *(a) the percentage increase in the consumer price index over the 12 months ending on the immediately preceding September 30 by*
> *(b) the portion of the retired member's pension eligible for adjustment on that January 1.*

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*CPI continued*

*(4.1) In determining the percentage change in the value of the consumer price index for the purposes of subsection (4) (a), the value of the consumer price index on any September 30 is deemed to be the greater of (a)the actual value of the consumer price index on that date, or (b) the highest value of the consumer price index on any preceding September 30.*

*73 (6) The total capitalized value of all cost of living benefits granted on any January 1 under this section must not exceed the amount the plan administrative agent determines is in the inflation adjustment account on the preceding September 30.*

Rule 73 is made operative through the application Rule 96 (page 44) which is found in Part 13-Definitions and Plan Interpretation and reads:

*"consumer price index" means the Consumer Price Index for Canada, as published by Statistics Canada under the authority of the Statistics Act (Canada), used for calculating the amount of any benefit payable under this Plan and, if the Consumer Price Index for Canada is adjusted to reflect a new time basis or a new content basis, includes a corresponding percentage adjustment in the consumer price index;*

## III. HOW DOES IT WORK?

Looking backward and relying on Rule 73 (4), the Teachers Pension Plan always compares the Canada Consumer Price Index (CPI) from the most recent September to the CPI from the previous September using CPI as determined by Statistics Canada and reported by the Bank of Canada at http://www.bankofcanada.ca/rates/price-indexes/cpi/?page_moved=1.

To illustrate, in September of 2017, the Canada CPI index was 130.8 and in September 2016, the CPI index was 128.8, thus the Cost of Living increase for the one year period in question was 1.6%.

As the Cost of Living adjustment is not guaranteed, the Pension Plan determined that the increase of 1.6% increase was affordable under the provisions of Rule 73(6) and, on that basis, the increase was applied to the January 2018 pension payment.

## WHAT IS THE HISTORY OF INDEXATION (TPP)?

BC teachers' pensions were not always indexed annually, in fact, for a good portion of our pension history, there was no indexation at all. Pensions were increased as a result of petitions, lobbying and, ultimately, a one-day provincial strike in 1971.

Starting on July 1, 1975 and thereafter pensions already adjusted and pensions granted on or after January 1, 1975 were adjusted upward each quarter based on the quarterly changes in the Canada CPI.

The quarterly indexing of pensions ceased and was replaced, effective January 1, 1981 by an annual increase based on the available funds in the Inflation Adjustment Account, with the increase not to exceed the annual increase in the Canada CPI.

Aside from the change from quarterly to annual adjustments, the major effect of this change was to remove the cost of living benefit from a "funded" or guaranteed status to a "conditional " or what the fund can afford status.

Both the active members and the retirees lobbied and protested against the change to the indexing provision but the legislation was enacted.

It should be noted that despite the fact that the indexation benefit is conditional, the TPP has paid the full CPI amount every year since the introduction of the change in 1981.

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## IV. "CANADA" CONSUMER PRICE INDEX OR NOT?

The Consumer Price index referred to in [Part 8] of the Plan rules, then, is the "Canada Consumer Price Index".

In addition to the Canada CPI, Statistics Canada produces one for each of the provinces and territories. As well, Indexes are also produced for 14 Canadian cities.

The local resolution, approved by the AGM, invites consideration of other indices, either British Columbia or one of the 14 cities in the country that Statistics Canada produces indices. The two British Columbia cities that have indices are Vancouver and Victoria.

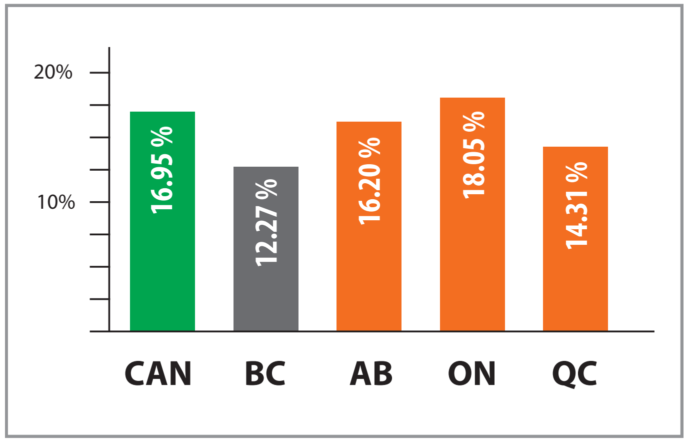
***Would we have higher pensions if we moved to using the BC CPI?***

As with many things in life there are no guarantees. It is difficult to forecast the future. We can only look at the past to inform us of both the short, medium and long-term patterns.

In addition, this review has gone a step farther and looked at Canada, BC, Alberta, Ontario and Quebec to allow us to better understand both the strengths and weaknesses of using provincial CPIs as compared to the Canada CPI.

The following figures and tables describe the impact of using the five indices over a 10 year, 20 year and 30 year period.

**FIGURE A:**
**Canada CPI vs BC CPI vs Other Provincial CPIs**
**10 Years 2007-2017**




What would have happened to $100 of your teachers' monthly pension depending on which index we used over the 10 year period?

**Table 1:**
**Canada CPI vs BC CPI vs Other Provincial CPIs**
**10 Years 2007-2017**

| Inflation 2007-2017 | Canada CPI | BC CPI | Alberta CPI | Ontario CPI | Quebec CPI |
|---|---|---|---|---|---|
| Total Inflation | 16.95% | 12.27% | 16.20% | 18.05% | 14.31% |
| Annual Inflation | 1.58% | 1.16% | 1.51% | 1.67% | 1.35% |
| Starting Value | $100 | $100 | $100 | $100 | $100 |
| Ending Value | $116.95 | $112.27 | $116.20 | $118.05 | $114.31 |

**Source:** Statistics Canada Calculators (http://www.inflationcalculator.ca)

**Table 1B: Ranking: Highest to Lowest Inflation By Index Jurisdiction 10 Years 2007-2017**

| Ranking | Index Juris-diction | % Inflation 10 yrs | Starting Value 2007 | Value in 2017 after 10 yrs |
|---|---|---|---|---|
| #1 | Ontario | 18.05% | $100 | $118.05 |
| **#2** | **Canada** | **16.95%** | **$100** | **$116.95** |
| #3 | Alberta | 16.20% | $100 | $116.20 |
| #4 | Quebec | 14.41% | $100 | $114.31 |
| **#5** | **BC** | **12.27%** | **$100** | **$112.27** |

**Source:** Statistics Canada Calculators (http://www.inflationcalculator.ca)

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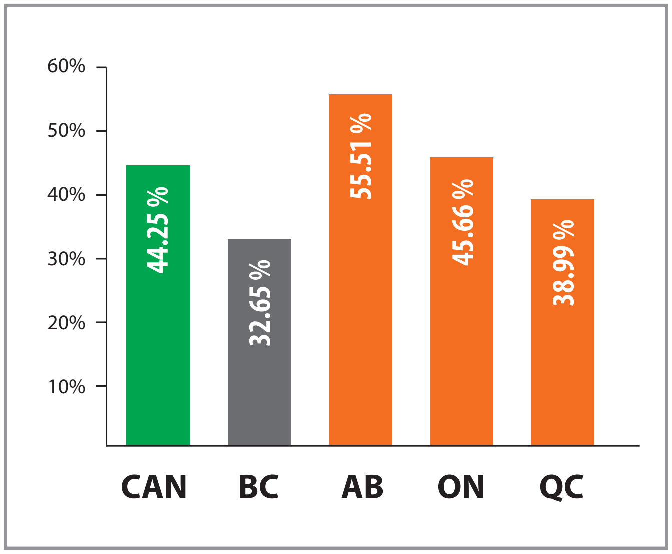
**Figure B:**
**Canada CPI vs BC CPI vs Other Provincial CPIs**
**20 Years 1997-2017**




What would have happened to $100 of your teachers' monthly pension depending on which index we used over the 20 year period?

**Table 2:**
**Canada CPI vs BC CPI vs Other Provincial CPIs**
**20 Years 1997-2017**

| Inflation 1997-2017 | Canada CPI | BC CPI | Alberta CPI | Ontario CPI | Quebec CPI |
|---|---|---|---|---|---|
| Total Inflation | 44.25% | 32.65% | 55.51% | 45.66% | 38.99% |
| Annual Inflation | 1.85% | 1.42% | 2.23% | 1.90% | 1.66% |
| Starting Value | $100 | $100 | $100 | $100 | $100 |
| Ending Value | $144.25 | $132.60 | $155.51 | $145.66 | $138.99 |

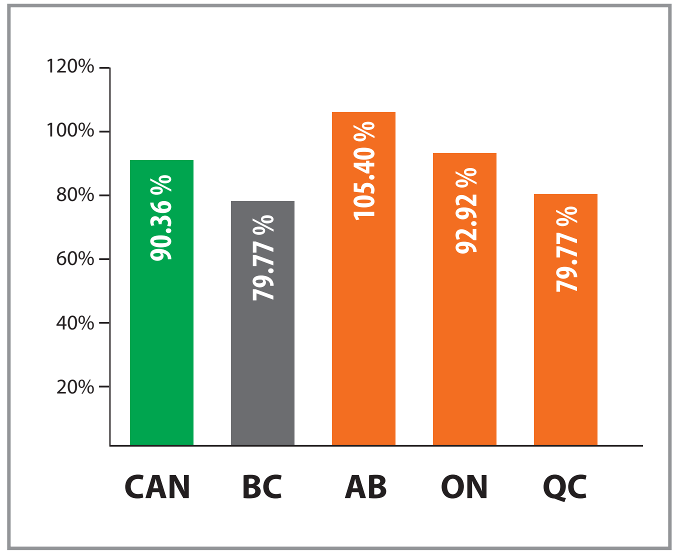
**Source:** Statistics Canada Calculators (http://www.inflationcalculator.ca)

**Table 2B:**
**Ranking: Highest to Lowest Inflation**
**By Index Jurisdiction 20 Years 1997-2017**

| Ranking | Index Juris-diction | % Inflation 10 yrs | Starting Value 1997 | Value in 2017 after 20 yrs |
|---|---|---|---|---|
| #1 | Alberta | 55.51% | $100 | $155.51 |
| #2 | Ontario | 45.66% | $100 | $145.66 |
| **#3** | **Canada** | **44.25%** | **$100** | **$144.25** |
| #4 | Quebec | 38.99% | $100 | $138.99 |
| **#5** | **BC** | **32.65%** | **$100** | **$132.60** |

**Source:** Statistics Canada Calculators (http://www.inflationcalculator.ca)

**Figure C:**
**Canada CPI vs BC CPI vs Other Provincial CPIs**
**30 Years 1987-2017**




What would have happened to $100 of your teachers' monthly pension depending on which index we used over the 30 year period?

**Table 3:**
**Canada CPI vs BC CPI vs Other Provincial CPIs**
**30 years 1987-2017**

| Inflation 1987-2017 | Canada CPI | BC CPI | Alberta CPI | Ontario CPI | Quebec CPI |
|---|---|---|---|---|---|
| Total Inflation | 90.36% | 79.77% | 105.40% | 92.92% | 79.77% |
| Annual Inflation | 2.17% | 1.97% | 2.43% | 2.21% | 1.97% |
| Starting Value | $100 | $100 | $100 | $100 | $100 |
| Ending Value | $190.36 | $179.77 | $205.40 | $192.92 | $179.77 |

**Source:** Statistics Canada Calculators (http://www.inflationcalculator.ca)

**Table 3B:**
**Highest to Lowest Amounts of Inflation**
**By Index Jurisdiction 30 Years 1987-2017**

| Ranking | Index Juris-diction | % Inflation 30 yrs | Starting Value 1987 | Value in 2017 after 30 yrs |
|---|---|---|---|---|
| #1 | Alberta | 105.40% | $100 | $205.40 |
| #2 | Ontario | 92.92% | $100 | $192.92 |
| **#3** | **Canada** | **90.36%** | **$100** | **$190.36** |
| **#4** | **BC** | **79.77%** | **$100** | **$179.77** |
| #4 | Quebec | 79.77% | $100 | $179.77 |

**Source:** Statistics Canada Calculators (http://www.inflationcalculator.ca)

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## CONSIDERATION OF VICTORIA OR VANCOUVER

Consideration of city-specific indices are not seen as reliable indicators of the overall provincial or national cost of living and are subject to greater volatility as a result of their greater dependence on specific economic sectors and industries.

Setting aside the reliability and appropriateness of utilizing a single city index to represent an entire province, a quick review of Canada, BC, Vancouver and Victoria, a 15 year profile looks something like this:

**Table 4:**
**Canada CPI vs BC CPI vs Vancouver vs Victoria**

| Inflation rate 2002-2017 | Canada CPI | BC CPI | Van CPI | Victoria CPI |
|---|---|---|---|---|
| Inflation rate 2002-2017 | 30.4% | **25.0%** | 27.3% | 23.0% |
| Average Annual Inflation Rate | 2.0% | 1.6% | 1.8% | 1.5% |
| Starting Value 2002 | $100 | $100 | $100 | $100 |
| Value 2017 | **$130.40** | **$125.00** | **$127.30** | **$123.00** |

**Source:** Statistics Canada Calculators (http://www.inflationcalculator.ca)

**Table 4b:**
**Highest to Lowest Amounts of Inflation By Index Jurisdiction 15 Years 2002-2017**
**Canada vs. British Columbia vs. Vancouver vs. Victoria**

| Ranking | Index Juris-diction | % Inflation 15 yrs | Starting Value 2002 | Value in 2017 after 15 yrs |
|---|---|---|---|---|
| #1 | Canada | 30.4% | $100 | $130.40 |
| #2 | Vancouver | 27.3% | $100 | $127.30 |
| **#3** | **British Columbia** | **25%** | **$100** | **$125.00** |
| #4 | Victoria | 23% | $100 | $123.00 |

**Source: Statistics Canada Cansim Table 326-0021 Produced by BC Stats (Government of British Columbia, January 2018) https://www2.gov.bc.ca/gov/content/data/statistics/economy/consumer-price-index**

## SUMMARY AND ANALYSIS

**Table 5:**
**Ranking British Columbia vs. Canada**

| Ranking Period | Dates | BC Rank | Canada Rank |
|---|---|---|---|
| 10 years | 2007-2017 | #5 | #2 |
| 20 years | 1997-2017 | #5 | #3 |
| 30 years | 1987-2017 | #4 | #3 |
| 15 years | **2002-2017** | #3 | #1 |

**Note:** #1 rank has highest inflation, #5 has lowest.

1. Throughout the examination of the 30 year period 1987 to 2017, the cost of living for Canada was, in total, 10% higher than that of British Columbia;
2. Across the country, the regional economies of Alberta and Ontario experienced higher levels in the cost of living than British Columbia in the 10 year, 20 year and 30 year reviews;
3. British Columbia's cost of living ranked 5th, within the five groups referenced, in both the 10 year and 20 year comparisons and 4th in the 30 year comparison;
4. Alberta had the highest cost of living in both the 20 and 30 year comparisons and ranked #3 in the 10 year comparison;
5. Over the 15 year period between 2002-2017, Vancouver's cost of living was higher than that of either British Columbia or Victoria.
6. Examining the 10 year period from 2007 to 2017, indexing pensions by the Canada CPI provides an additional cushion of 0.468% per year to their pensions over applying the BC CPI.

## CONCLUSION

Based on a review and analysis of the cost of living in provinces with the four largest economies in the country as well as the cost of living of the country as a whole, it is the conclusion of the BCRTA Pensions and Benefits Committee that the Canada CPI represents a sophisticated, objective and rigorous reflection of the Canadian cost of living and its underlying economy and, therefore, would recommend that there be no changes in its use in the calculation of benefits within the BC Teachers' Pension Plan.