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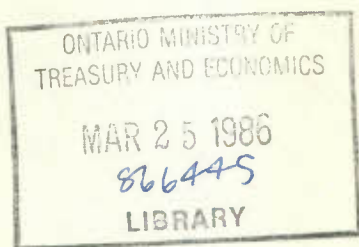# Conseil économique du Canada
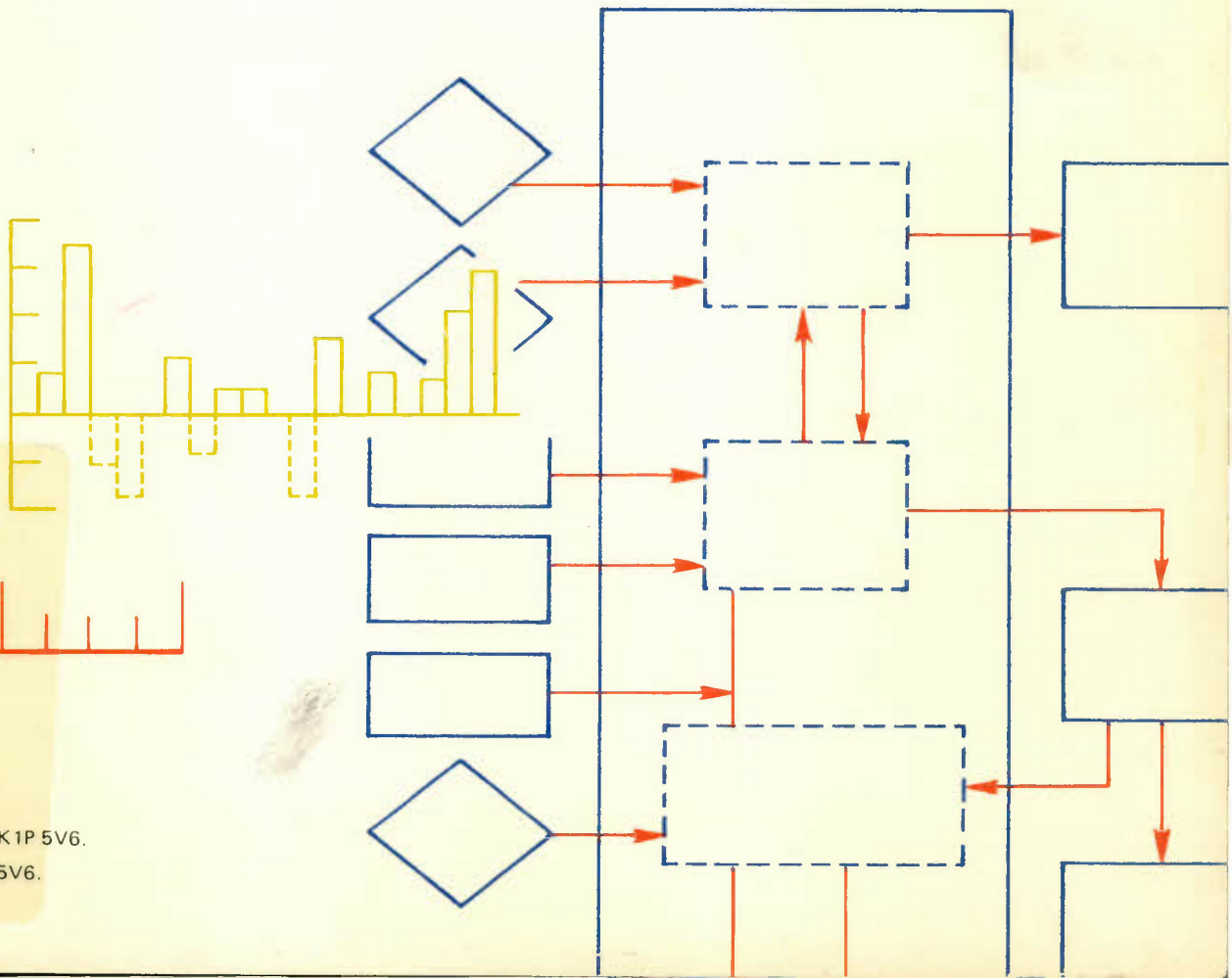
DISCUSSION PAPER NO. 165

An Analysis of Canadian
Wage Contracts with Cost-
of-Living Allowance Clauses

by

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prepared for

The Centre for the Study of
Inflation and Productivity

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This Paper was prepared as part of the research program
undertaken by the Centre for the Study of Inflation and
Productivity (CSIP). It has benefited from comments by
independent outside experts who were asked to referee an
earlier version of the manuscript, and is being made
available in limited numbers and in the language of
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March 1980

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TABLE OF CONTENTS

TABLE OF CONTENTS

CHARTS

TABLES

RÉSUMÉ

La présente étude a pour but d'offrir une analyse exploratoire des accords salariaux avec clause d'indexation signés au Canada au cours de la période 1968-1975. Parmi les 1 405 grandes conventions collectives signées durant cette période, 358 d'entre elles contenaient des dispositions d'indexation. Même si ce chiffre ne représente que 25 % des contrats négociés au cours de toute la période observée, il n'en indique pas moins une nette tendance à la hausse du nombre de tels contrats. En 1975, 62 % de tous les travailleurs ayant signé de nouvelles conventions collectives étaient protégés par l'indexation, par comparaison à 16 % seulement en 1968. Comme l'analyse de la Section II de ce document le montre, la très forte augmentation de l'incidence de l'indexation peut être attribuée à la hausse imprévue du taux de l'inflation en 1973 et 1974.

La Section III du document décrit et résume les caractéristiques distinctives des clauses d'indexation. Même si toutes les formules d'indexation traduisent une hausse de l'indice des prix à la consommation en un relèvement automatique du taux de salaire, plus de 94 % de toutes les formules sont exprimées en termes "absolus", c'est-à-dire qu'une hausse "absolue" de l'indice des prix vaut à tous les travailleurs d'un groupement négociateur un relèvement de "tant" de cents du salaire horaire. Outre la nature absolue de la plupart des formules d'indexation, trois autres caractérisques courantes limitent nettement la protection contre l'inflation assurée par de nombreuses clauses d'indexation : (i) dans 36 % des conventions collectives, l'indexation était limitée à une somme maximale donnée, (ii) dans 27 % des conventions, l'indexation n'entrait en vigueur qu'après un taux minimum d'inflation, et (iii) dans 60 % des conventions, les clauses d'indexation ne couvraient pas toute la durée du contrat. Seulement 21 % des conventions avec clause d'indexation ne comportaient pas d'éléments restrictifs ou contraignants.

Afin d'évaluer le degré de protection contre l'inflation assurée par l'indexation, nous avons calculé une mesure "d'élasticité" pour chaque contrat de travail comportant l'indexation. Le concept d'élasticité compare, pour la durée du contrat, les variations observées en pourcentage (ex post) du taux de salaire de base directement attribuables à l'indexation aux variations en pourcentage du taux de l'inflation des prix au cours de la période du contrat. Pour la période 1968-1975, les élasticités de l'indexation qui se situent entre 0,2 et 1,0 ont à peu près le même degré de probabilité et l'élasticité moyenne de l'indexation de tous les contrats avec indexation du secteur privé ne s'élève qu'à 47 %. Comme le montre l'analyse de la Section IV, ces élasticités relativement faibles peuvent être imputées dans une large mesure à l'existence de divers types de contraintes (maximums et conditions draconiennes) incorporées dans la formule d'indexation. Dans le cas de clauses d'indexation, sans contrainte, l'élasticité moyenne n'est que légèrement inférieure à l'unité. La dernière partie de la Section IV analyse l'ampleur du biais à la hausse de l'élasticité

de l'indexation, qui se manifeste lorsque les données sur le taux de salaire de base sont utilisées dans le cadre d'une formule d'indexation "absolue".

Malgré que la vaste majorité des clauses d'indexation au Canada n'assure pas une protection de 100 % contre l'inflation future des prix, l'indexation ne représente qu'un élément du contrat salarial. Les variations salariales annuelles globales en ce qui concerne les contrats avec indexation (c'est-à-dire des augmentations salariales directement négociées, et la valeur des relèvements assurés par l'indexation) sont présentées dans la Section V et comparées aux augmentations annuelles moyennes en pourcentage négociées dans des contrats sans indexation. Les employés couverts par des conventions collectives avec indexation ont reçu des relèvements salaire globaux beaucoup plus considérables que les autres employés, les différences atteignant souvent 3 points de pourcentage par année. Le résultat le plus étonnant peut-être de la Section V a trait aux augmentations salariales très fortes non liées à l'indexation dans les conventions collectives prévoyant l'indexation.

SUMMARY

The objective of this study has been to provide an exploratory analysis of Canadian wage contracts which contain cost-of-living allowance clauses signed during the 1968-1975 period. Of the 1405 major collective agreements signed during this period, 358 wage contracts contained a COLA clause. While this represents only 25 per cent of negotiated contracts over the entire sample period, there has been a clear upward trend in COLA clause incidence. By 1975, 62 per cent of all workers signing new contracts had COLA clause protection, compared to only 16 per cent in 1968. As discussed in Section II of this report, this dramatic increase in COLA clause incidence can be attributed to the unexpected increase in the inflation rate in 1973 and 1974.

Section III of this report describes and summarizes the distinctive features of COLA clauses. While all COLA formulas translate a movement in the consumer price index into an automatic adjustment in the wage rate, over 94 per cent of all COLA formulas are stated in 'absolute' terms, i.e. an 'absolute' change in the price index is worth a 'given' cents per hour wage adjustment for all workers within the bargaining unit. Besides the absolute nature of most COLA clause formulas, three other common features seriously limit the inflation protection provided by many COLA clauses: (i) in 36 per cent of the agreements with COLA clauses, the clauses were 'capped' or limited to a certain maximum amount, (ii) in 27 per cent of the agreements, the COLA clauses were 'triggered' only after some minimum amount of inflation, and (iii) in 60 per cent of the agreements the COLA clauses did not cover the entire contract period. In only 21 per cent of these agreements were the COLA clause formulas free of restrictive or constraining features.

To evaluate the degree of inflation protection afforded by COLA clauses, an 'elasticity' measure is computed for each COLA wage contract. The elasticity concept compares the actual (ex post) percentage change in the base wage rate during the life of the contract which is directly attributable to the COLA clause to the percentage change in the rate of price inflation over the contract period. During the 1968-1975 period, COLA elasticities between .2 and 1.0 are almost equally probable and the average COLA elasticity for all private sector COLA clause contracts is only 47 per cent. As discussed in Section IV, these relatively low COLA elasticities can largely be attributed to the existence of various kinds of constraints (e.g. caps and triggers) within the COLA formula. For COLA clauses which are unconstrained, the average elasticity is only slightly less than unity. The final part of Section IV analyzes the magnitude of the upward bias in the COLA elasticity which arises when base wage rate data are employed within an 'absolute' COLA formula.

Even though the vast majority of Canadian COLA clauses do not provide 100 per cent protection against future price inflation, the COLA clause represents only one element of the wage contract. Total annual percentage wage changes for COLA clause contracts (i.e. the directly negotiated wage increments plus the value of the COLA wage adjustments)

are presented in Section V and compared to average annual percentage
increases negotiated in non-indexed wage contracts. Employees covered
by indexed wage contracts have received considerably larger total wage
adjustments than employees who signed non-indexed wage contracts, with
the differences frequently exceeding 3 percentage points per annum.
Perhaps the most surprising result of Section V concerns the very
substantial size of non-COLA wage increments negotiated in COLA clause
wage contracts.

Foreword and Acknowledgement

This study attempts to analyze in a non-technical manner the structure and policy implications of wage inflation in Canada. While the approach taken is deliberately non-econometric, the presentation draws heavily on two earlier econometric studies. The first part of Chapter Four summarizes much of the institutional and econometric material presented in an Economic Council of Canada volume, co-authored by J.C.R. Rowley, entitled The Determination of Wage Change Relationships (1977). Chapters Five and Six review the theoretical arguments and econometric results presented in a 1979 Anti-Inflation Board monograph entitled The Determinants of Negotiated Wage Settlements in Canada, (1966-1975), co-authored by D.A.L. Auld, L. N. Christofides and R. Swidinsky. I would like to thank my co-authors of these two earlier books for their implicit contribution to this study. In addition, a number of economists have read this monograph and I would like to thank J. Crow, D. Dodge, P. Grady, C. Freedman, J. Sargent, B. Scarth, J. Vanderkamp and several anonymous referees for their valuable comments and suggestions. Finally, research assistance provided by J. Arnott is much appreciated.

I. INTRODUCTION

The objective of this study is to provide an exploratory analysis of Canadian wage contracts which contain cost of living allowance clauses signed during the decade immediately preceding the imposition of the Anti-Inflation Board. While a considerable literature has evolved on the wage inflation process and the structure of wage determination,[1] the phenomenon of wage escalators or cost-of-living allowance (COLA) clauses in wage contracts has received much less attention.[2] Despite the undisputed relevance of COLA clause wage contracts,[3] little is actually known about the degree of inflation protection provided by these COLA contracts. For example, most COLA clauses do not provide 100 per cent coverage against future inflation as a wide variety of COLA features (such as 'caps' and 'triggers') seriously limit the inflation protection of many COLA clauses.

Even though theoretical analyses of wage inflation have largely failed to acknowledge the existence of COLA clauses, the role of price inflation has not been ignored. All models or explanations of the wage determination process known to this author include a measure of price inflation as a key causal factor. Phillips (1958), the 'father' of the 'Phillips curve', speculated rather informally about the significance of price level changes for the wage determination process and all subsequent Phillips curve wage studies explicitly recognize the important role of price inflation. While the precise mechanism through which price changes feed into wage rates was never discussed at great length, most arguments for including a price change variable centred around the notion that

> "While the maximum awareness may be of the money
> size of a paycheck, there is also considerable
> sensitivity to how much the paycheck will buy."

Perry (1966). p. 26

It was not until the two important papers by Phelps (1967) and Friedman (1968) that a more precise theoretical role for price changes within a wage determination model was provided. Both authors argue that firms and workers make labour market decisions in terms of the real wage rate, i.e. the money wage rate adjusted to reflect its purchasing power, and that the relevant price consideration to determine the real wage is the expected value of future prices. In a world in which the value of money is constantly changing, buyers and sellers of labour market services must incorporate into their labour market decisions an "estimate" of future inflation. Thus in the Phelps-Friedman theoretical model, workers are assumed to judge a prospective wage rate for the next contract period vis-à-vis the expected price level of goods which will be purchased. If workers expect inflation rates to rise in the future, then workers will demand (and obtain) higher current wage settlements to compensate them for this higher expected inflation rate. Firms will be willing to pay higher wage rates since they also expect their product prices to rise. Consequently, the price variable in the wage determination model not only reflects the expected rate of inflation over the

next contract period, this variable should theoretically have a coefficient exactly equal to unity (to maintain the real wage rate). In short, the Phelps-Friedman theoretical model asserts that 100 per cent of expected inflation will be incorporated into wage rates ex ante, i.e. before the inflation actually occurs!

More recently, a number of wage analysts have investigaged the phenomenon of unexpected inflation and the importance of 'price catchup' within the wage determination process.[4] To illustrate the potential role of price catchup, consider a three year contract signed in 1972. Based on a 'reasonable' estimate of price expectations, in the 4 to 5 per cent range, employees would have suffered an unexpected 15 per cent loss in potential real wages over this three-year period of unexpected inflation. It would be naive to assume that during the 1975 contract negotiations, labour would bargain as if this loss did not occur and make wage demands only in terms of the expected inflation rate during 1975-78 (i.e. to accept this unexpected loss in perpetuity). The fact that inflation is unexpected is hardly a sufficient reason to dismiss it from the bargaining table.[5]

In summary, the professional wage determination literature has clearly acknowledged the important role of price inflation within the wage determination process. However, this literature has tended to view the temporal impact of price inflation on wage rates as either occurring ex ante (the 'expectations' theory) or ex post (the 'catchup') argument. In a world of long-term wage contracts between labour and the firm, a third option exists. Rather than compensating for past inflation or future expected inflation, wage contracts can be negotiated which compensate for present (or current) inflation. Thus, COLA clause wage contracts provide an important additional mechanism for labour to protect itself against unexpected inflation.

In this context, one would predict that if inflation rates become less predictable, then labour's insistence on COLA clauses in long term contracts will likely intensify. However, since firms are typically unable to establish similar escalator clauses for their products with their clients, employers may strongly resist the inclusion of a COLA clause within the wage contract. Such employer resistance would be particularly strong for firms whose product prices are not closely geared to aggregate price movements. Consequently, one would not expect that COLA clauses will exist throughout the labour market, nor would one expect that all COLA clauses will necessarily provide 100 per cent protection against inflation.

The purpose of this study is to investigate the incidence and characteristics of COLA clause wage contracts negotiated within the Canadian private sector. The underlying wage contract data set employed in this study was obtained from Labour Canada and covers all major collective agreements within the private sector (excluding the construc- tion sector) with 500 or more employees. A necessary prerequisite for the analysis of this report is a compilation and summary of the many diverse features of COLA clauses in a manner which permits the precise calculation of the degree of inflation protection provided by each particular COLA clause. Having computed wage-price elasticities for

328 different COLA clause contracts, the total wage increase including COLA can be calculated for each contract and compared to 'similar' wage contracts which did not include a COLA clause.

Our analysis of COLA clause wage contracts within the Canadian private sector has been organized into four major sections:

(i)   the incidence of COLA clause wage contracts

(ii) the specific features of COLA clauses

(iii) COLA clause wage-price elasticities

(iv) a comparative analysis of the size of wage changes
      for COLA and non-COLA wage contracts

A summary and conclusions section completes this report.

Much of the analysis of this report is contained in 9 tables which contain almost 1000 pieces of information. Since this tabular information is largely self-explanatory, the verbal commentary will be restricted to the most obvious features and trends of the data. Finally, a data appendix provides details of the underlying information and basic characteristics of each COLA clause wage contract (which are summarized and discussed in aggregate form within the text).

II. THE INCIDENCE OF COLA CLAUSE WAGE CONTRACTS

During the period from 1968 until the imposition of the A.I.B. in October 1975, Labour Canada records information on 1405 individual wage settlements for private sector bargaining units with 500 or more employees. Of this total set of major collective agreements, only 358 wage contracts (or 25 per cent) included a COLA clause. However, this rather low percentage of wage contracts containing a COLA clause masks an important upward trend in COLA clause incidence. Subdividing this time period between 1972 and 1973, one finds that COLA clause incidence has more than tripled. While only 13 per cent of all wage contracts included COLA clauses in the 1968-72 period, 45 per cent of all contracts signed during the 1973-75 period included a COLA clause. As illustrated in Table 1, the proportion of workers signing new contracts which included a COLA clause has streadily increased, reaching 62 per cent in 1975.

This dramatic increase in the incidence of COLA clauses during the 1972 to 1974 period can undoubtedly be attributed to two inter-related factors. First the stability and predictability of the inflation rate was abruptly interrupted in 1973. More or less stable inflation rates of 3 to 4 per cent during the 1960's gave way to completely unexpected double digit inflation in 1974 and 1975. Not only did inflation rates become more uncertain during the 1970's, the upward trend of inflation rates seriously eroded the wage gains obtained by workers who had signed long term contracts without COLA clauses during the tranquil early 1970's. Given this unexpected inflation erosion of wage rates during 1973 and 1974, it is predictable that labour would bargain vigorously for a 'catchup' wage settlement[6] as well as take steps to prevent a similar recurrence of the consequences of an 'unexpected' inflation. The two most obvious ways to minimize the potential losses (to labour) attributable to an unexpected future inflation are either to include a COLA clause in the wage contract or to bargain more frequently (i.e. to shorten the length of the contract).[7]

The explanation of the increased incidence of COLA clause contracts during 1974-75 in terms of increased inflation uncertainty and past unexpected inflation also suggests an important interdependence between COLA clause incidence and contract length. Since a COLA clause reduces the consequences (to labour) of unexpected inflation,[8] one would expect COLA clause wage contracts to be longer than non-indexed wage contracts.

Table 2 provides annual data which highlight the positive relationship between COLA incidence and contract length. With the exception of the year 1974, there is overwhelming evidence that COLA clause contracts tend to be much longer than non-COLA contracts (e.g. a 28.4 month average for COLA contracts compared to a 19.6 month average for non-COLA contracts in 1975). The vast majority of long contracts contain COLA clauses. For the year 1975, 91.5 per cent of all three year contracts (31 months or longer) have COLA clauses and 58.7 per cent of all two year contracts have COLA clauses.

TABLE 1

INCIDENCE OF COLA CLAUSES
WITHIN THE TOTAL CANADIAN PRIVATE SECTOR

	1968	1969	1970	1971	1972	1973	1974	1975
Number of New Contracts Signed	185	164	182	165	160	165	228	156
Employees Covered (000's)	440.9	335.7	381.9	334.3	301.9	302.3	520.3	243.8
Number of New Contracts Signed with COLA Clauses	17	15	21	33	25	42	121	84
Employees Covered (000's)	70.0	45.3	69.4	63.8	66.1	114.7	291.6	151.1
Percentage of New Contracts with COLA Clauses	9.2	9.2	11.5	20.0	15.6	25.5	53.1	53.9
Percentage of Employees Covered with COLA Clauses	15.9	13.5	18.2	19.1	21.9	37.9	56.1	62.0
Percentage Change in the Consumer Price Index	4.1%	4.5%	3.4%	2.8%	4.8%	7.6%	10.9%	10.8%

TABLE 2

COLA CLAUSE INCIDENCE AND CONTRACT LENGTH

	1968	1969	1970	1971	1972	1973	1974	1975
Average Contract Length (months)								
Contracts Without a COLA Clause	23.7	26.6	26.3	25.3	24.3	25.2	22.4	19.6
Contracts With a COLA Clause	34.1	33.1	30.9	34.3	33.4	35.0	19.8	28.4
Number of New Contracts Signed With Cola Clauses								
Contract Length								
1-18 months	1	2	2	3	0	1	22	8
19-30 months	3	2	5	2	3	9	66	54
31 and over months	13	11	14	28	22	32	33	22
Number of Employees Covered by COLA Clause Contracts (000's)								
Contract Length								
1-18 months	1.3	1.8	1.5	3.7	0	.7	149.2	7.6
19-30 months	1.7	1.4	24.2	3.4	13.7	8.2	99.2	88.5
31 and over months	67.0	42.2	43.6	56.8	52.5	105.7	43.2	55.0
Percentage of New Contracts With COLA Clause								
Contract Length								
1-18 months	5.3	11.8	11.8	17.7	0	6.3	50.0	20.0
19-30 months	3.0	2.4	5.0	2.4	3.5	10.5	48.2	58.7
31 and over months	19.7	17.2	21.5	43.8	37.3	50.8	70.2	91.7
Percentage of Employees Covered by COLA Clause Contracts								
Contract Length								
1-18 months	1.6	4.3	3.2	9.7	0	1.9	76.6	17.1
19-30 months	.8	.9	11.6	1.8	8.5	6.9	36.6	63.0
31 and over months	49.5	30.5	34.6	53.8	52.7	72.2	78.6	93.4

On the other hand, 80 per cent of all one year contracts do not have
COLA clauses (again for the year 1975). Clearly, the inclusion of a
COLA clause in the contract tends to substantially increase the length
of the contract.

III.   FEATURES OF COLA CLAUSES

In this section of the report, the distinctive features of
COLA clauses will be described and summarized. In general, a COLA
clause simply translates a movement of the consumer price index into an
automatic adjustment to the wage rate. During the life of the existing
contract, these COLA wage adjustments allow the actual wage rate to
'float' above its negotiated level. At the time of the next contract
signing, this 'float' is typically 'folded' into the (legal) wage
rate.[9]

The most typical formula for a COLA wage adjustment relates an
absolute movement in a consumer price index[10] to an absolute change
in the wage rate. For example, a one point increase in the consumer
price index might be worth a 2.5¢ per hour wage increase to all workers
within the bargaining unit.[11] Since the same absolute COLA wage
adjustment is given to all workers within the bargaining unit regardless
of their wage rate, such absolute COLA wage adjustments will provide
relatively less inflation protection for workers who are paid more than
the base rate. In our sample of 328 COLA clause wage contracts for
which complete information on the specific COLA clause formula could be
obtained, only 20 of the COLA formulas were stated in percentage terms.
In other words, only 5.6 per cent of all COLA clauses provide equal
relative protection against inflation to all workers within the
bargaining unit regardless of wage level. Given the overwhelming
prevalence of absolute (versus percentage) COLA formulas, our analysis
of the degree of inflation protection provided by COLA clauses (in the
next section of the report) must consider not only the base wage rate
but also the average wage rate.

Besides the 'absolute' nature of most COLA formulas, three
other features seriously limit the inflation protection provided by many
COLA clauses. First, many COLA clauses are limited to (or 'capped' at)
a certain maximum COLA wage adjustment during the life of the contract.
For example, the bargaining unit might receive a COLA wage adjustment
for only the first six point increase in the consumer price index. In
our sample of 328 COLA contracts, 118 (or 36 per cent) contained
specific 'caps' which (potentially) limited the inflation protection
provided by the COLA clause. Second, a number of COLA clauses did not
become operative (or become 'triggered') until the inflation rate had
reached a certain minimum value (27 per cent of the COLA contracts
signed during the 1968-75 period were triggered). Finally, the COLA
formula often did not cover the entire contract period, but rather was
frequently limited to only part of the contract (e.g. the second year of
a two year contract). In fact, 60 per cent of all COLA clauses in our
sample were operative for only part of the contract period.[12]

Thus, most COLA clauses contained in major collective
agreements signed in the 1968-75 period were constrained in their
inflation protection, often consisting of several restrictive elements
(e.g. triggered in the second year of the contract). Only 68 (or 21 per
cent) of all COLA clauses were free of all restrictive elements and
provided unconstrained inflation protection over the life of the

contract.[13] As shown in Table 3, for the two key inflationary years
of 1974 and 1975, only 8.4 per cent and 14.4 per cent of all workers
covered by COLA clauses actually had unconstrained inflation protection.
Almost three quarters of all workers signing new contracts in 1974-75
with COLA clauses had inflation protection for only part of the contract
period, not to mention caps and triggers.[14] The prevalance of these
various restrictive elements within the COLA clause formula will be of
major significance when the degree of inflation protection provided by
COLA clauses is computed and analyzed in the next section.

TABLE 3

FEATURES OF COLA CLAUSES WITHIN THE CANADIAN PRIVATE SECTOR

	1968	1969	1970	1971	1972	1973	1974	1975
Unconstrained COLA Protection								
Number of New COLA Contracts Signed with Unconstrained COLA Protection	0	2	1	6	6	13	17	23
Employees Covered (000's)		1.1	0.6	12.4	7.6	17.8	24.1	20.9
Percentage of All New COLA Contracts with Unconstrained COLA Protection		16.7	4.8	20.0	27.3	35.1	14.8	29.5
Percentage of Employees Covered		2.5	0.9	20.0	12.2	17.4	8.4	14.4
COLA Clauses with a Cap								
Number of New COLA Contracts Signed with a Cap	11	8	9	6	11	15	36	22
Employees Covered (000's)	64.5	40.5	10.5	6.4	43.5	15.1	61.0	42.6
Percentage of All New COLA Contracts with a Cap	84.6	66.7	42.9	20.0	50.0	40.5	31.3	28.2
Percentage of Employees Covered	97.6	94.3	15.1	10.4	69.6	14.7	21.2	29.3
COLA Clauses with a Trigger								
Number of New COLA Contracts Signed with a Trigger	0	2	5	3	0	4	48	26
Employees Covered (000's)		1.4	40.2	4.2		26.4	156.3	52.0
Percentage of All New COLA Contracts with a Trigger		16.7	23.8	10.0		10.8	41.7	33.3
Percentage of Employees Covered		3.2	57.9	6.7		25.7	54.5	35.8
COLA Clauses Which Do Not Cover the Entire Contract Period								
Number of New COLA Contracts Signed with Partial Coverage	3	8	17	21	9	20	76	42
Employees Covered (000's)	2.2	38.9	42.3	46.8	33.8	71.0	217.9	105.3
Percentage of All New COLA Contracts with Partial Coverage	23.1	66.7	81.0	70.0	40.9	54.1	66.1	53.9
Percentage of Employees Covered	3.3	90.6	60.9	75.7	54.1	69.3	75.9	72.6

TABLE 4

FEATURES OF COLA CLAUSES WITHIN THE MANUFACTURING SECTOR

	1968	1969	1970	1971	1972	1973	1974	1975
Unconstrained COLA Protection								
Number of New COLA Contracts Signed with Unconstrained COLA Protection	0	1	1	5	4	13	14	13
Employees Covered (000's)		0.6	0.6	5.3	6.0	17.8	14.4	9.8
Percentage of All New COLA Contracts with Unconstrained COLA Protection		14.3	6.3	17.2	25.0	46.4	20.3	28.3
Percentage of Employees Covered		2.7	1.2	9.7	14.3	22.8	11.8	16.6
COLA Clauses with a Cap								
Number of New COLA Contracts Signed with a Cap	10	4	6	6	8	10	19	18
Employees Covered (000's)	55.0	18.8	5.0	6.4	25.2	7.3	24.4	19.6
Percentage of All New COLA Contracts with a Cap	83.3	57.1	37.5	20.7	50.0	35.7	27.5	39.1
Percentage of Employees Covered	97.1	90.8	9.5	11.7	59.9	9.3	20.0	33.2
COLA Clauses with a Trigger								
Number of New COLA Contracts Signed with a Trigger	0	2	4	3	0	2	19	13
Employees Covered (000's)		1.4	29.7	4.2		11.8	24.6	14.7
Percentage of All New COLA Contracts with a Trigger		28.6	25.0	10.3		7.1	27.5	28.3
Percentage of Employees Covered		6.5	56.7	7.6		15.1	20.1	24.9
COLA Clauses Which Do Not Cover the Entire Contract Period								
Number of New COLA Contracts Signed with Partial Coverage	3	5	12	21	6	11	47	28
Employees Covered (000's)	2.2	19.6	25.3	46.8	15.5	46.6	100.3	45.5
Percentage of All New COLA Contracts with Partial Coverage	25.0	71.4	75.0	72.4	37.5	39.3	68.1	60.9
Percentage of Employees Covered	3.8	94.7	48.2	85.4	36.8	59.7	82.1	77.3

IV. COLA ELASTICITIES

To evaluate the degree of inflation protection afforded by the existence of a COLA clause, an 'elasticity' measure has been computed for each wage contract with a COLA clause. The denominator of the elasticity is simply the percentage change in the consumer price index during the life of the wage contract. The percentage change in the base wage rate directly attributable to the COLA forms the numerator of this elasticity. To calculate this latter COLA wage adjustment, the actual change in the (relevant) consumer price index and the precise COLA formula including caps, triggers, etc. for each contract has been utilized.[15] Thus, our elasticity measure records the ex post inflation protection provided by the COLA clause during the life of the (given) wage contract. To the extent that this computed elasticity is less than unity, the percentage change in the base wage rate directly attributable to the COLA clause will not completely compensate employees paid the base wage rate for the actual inflation rate which existed during the life of the contract.[16]

In Chart 1, a frequency distribution of the 328 computed elasticities for the entire set of COLA contracts is presented. The most striking feature of this chart is the preponderance of low elasticities. Almost 30 per cent of the elasticities (93 cases) are less than .2 whereas only 19 per cent of the computed elasticities equal or exceed unity in value. In fact, elasticities between .2 and unity are almost equally probable. The average elasticity for the entire set of COLA contracts is only .47, i.e., only 47 per cent (on average) of the movement in the inflation rate during the life of the contract is translated into an equal proportionate COLA wage adjustment. In summary, Canadian COLA clauses have typically provided only partial protection against inflation and the existence of a COLA clause in a specific wage contract is no guarantee that the base wage rate within the bargaining unit will automatically escalate proportionately with the inflation rate.

Part of the explanation for these low, widely distributed COLA elasticities can undoubtedly be attributed to the diversity of features which have been incorporated into Canadian COLA formulas. As discussed in the previous section, the majority of COLA clauses contain constraints of various kinds which limit the inflation protection provided by the specific COLA formula.

To illustrate this point, a frequency distribution of the computed elasticities for the 68 COLA clause contracts which have no constraints is presented in Chart II. More than half of these 'unconstrained' COLA clauses elasticities fall in the narrow interval of .9 to 1.2. Compared to an average elasticity for all COLA contracts of less than one half, the average elasticity of the unconstrained COLA clauses is almost unity (93 per cent).

CHART 1

Frequency Distribution of COLA Elasticities
for All COLA Contracts Within the
Canadian Private Sector
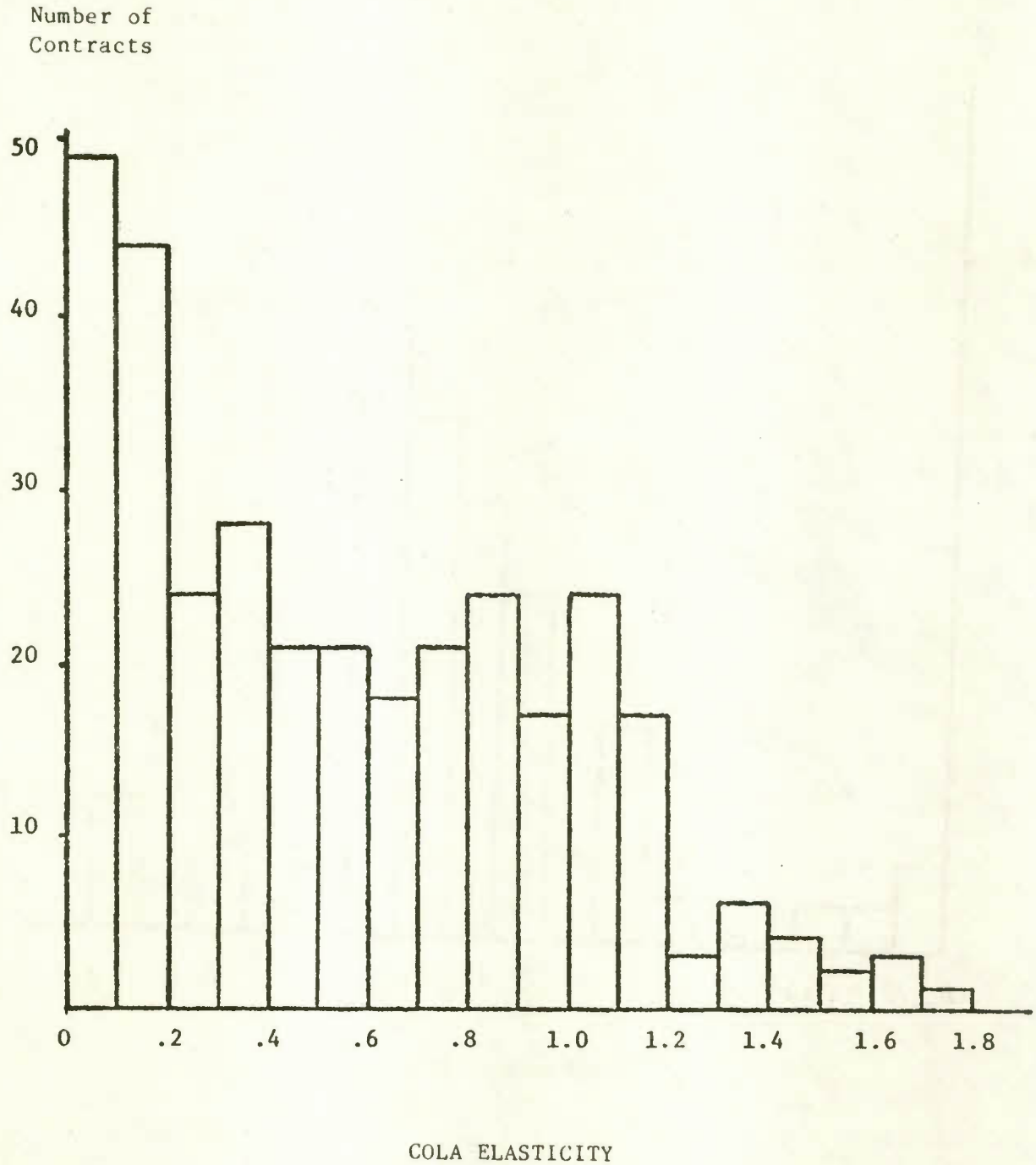

Number of
Contracts

COLA ELASTICITY

CHART 2

Frequency Distribution of COLA Elasticities
for 'Unconstrained' COLA Formulas
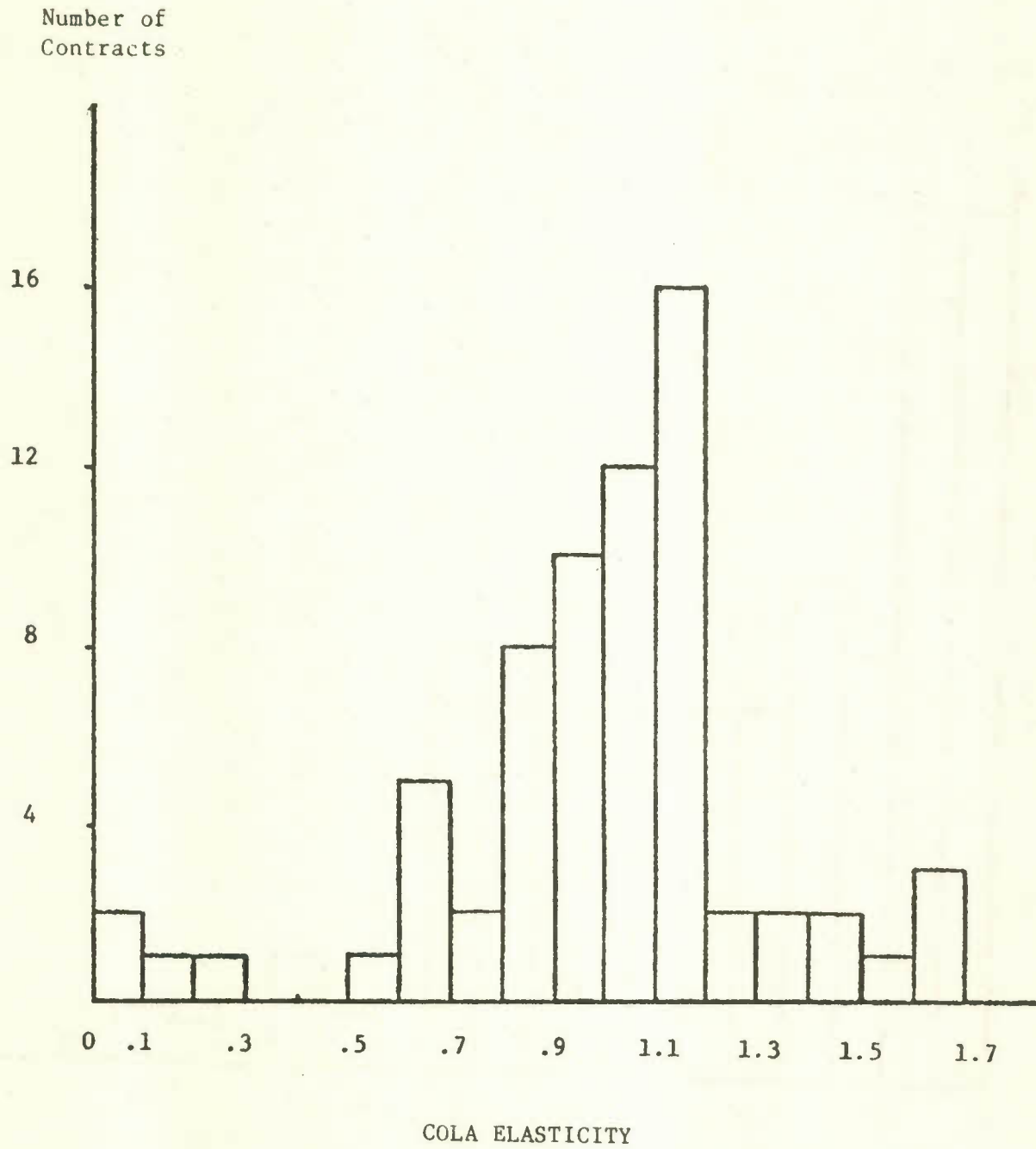
Table 5 provides additional annual information on average COLA elasticities by type of COLA formula. Unlike the 'unconstrained' COLA formulas which have average elasticities hovering around unity, elasticities for COLA formulas with constraints are substantially lower. For the entire sample period, average elasticities for 'capped' and 'triggered' COLA clauses are only .48 and .45 respectively. COLA clause formulas which do not cover the entire contract period have an average elasticity of 56 per cent. COLA clause contracts with multiple constraints included in the formula (e.g. both a 'cap' and 'trigger') have average elasticities which are even lower (.21 to .33). Clearly, the existence of various kinds of constraints to the basic COLA formula has systematically lowered the degree of inflation protection provided by such COLA clauses.

Another source of (related) variation in COLA elasticities can be attributed to the introduction of a COLA clause for a specific bargaining unit. In the two years 1974 and 1975, 136 different bargaining units negotiated a COLA clause for the first time (this represents 42 per cent of the entire sample of COLA clauses analyzed in this report). In many instances, labour was only able to negotiate the principle of a COLA clause and had to settle for a COLA clause which was not fully operative in the initial contract period. For example, if one compares 'first time' COLA clauses with 'existing' COLA clauses, the incidence of a COLA trigger is 38 per cent and 13 per cent respectively. In addition, 71 per cent of 'first time' COLA clauses do not cover the entire contract period, compared to 45 per cent for 'existing' COLA clauses. Given the greater prevalence of constraints in 'first time' COLA clauses, it is not surprising that the average COLA elasticity is almost twice as large for 'existing' COLA clauses than it is for 'first time' COLA clauses (.61 versus .34).[17] In summary, new COLA clauses typically offer only modest inflation protection in the initial contract period, but appear to be substantially 'sweetened' in subsequent negotiations.

As discussed in the previous section, approximately 95 per cent of all COLA formulas are expressed in absolute terms, i.e. the same absolute COLA wage adjustment is provided for all workers within the bargaining unit regardless of their wage level. Under an absolute COLA formula, workers who are paid a wage rate above the base rate will receive proportionately less inflation protection than workers receiving the base wage rate and the elasticities reported above will overstate the degree of inflation protection provided for the average worker (unless all workers are paid the base wage rate).

To examine the potential upward bias in the elasticities reported above, all elasticities within the manufacturing industry have been recomputed using average hourly earnings data rather than the base wage rate data. Unfortunately, there is no available data on the average wage rate within the bargaining unit and we had to resort to average hourly earnings data. Since average hourly earnings data can only be obtained at the '3 digit' industry level, it does not measure the average wage rate within the specific bargaining unit. However, it should provide a good first-order approximation to the average wage rate within the bargaining unit[18] and permit us to assess the potential upward bias in COLA elasticities derived from base wage rate data.

TABLE 5

AVERAGE COLA ELASTICITIES IN THE
CANADIAN PRIVATE SECTOR 1968-75

(Number of Contracts in Parenthesis)

All COLA Contracts	.47	(328)
CAPPED COLA Contracts	.48	(37)
Triggered COLA Contracts	.45	(20)
COLA Contracts (Which Only Cover Part of Contract Period)	.56	(78)
COLA Contracts with both a CAP and a Trigger	.33	(6)
COLA Contracts with a CAP and Which Cover Only Part of Contract Period	.25	(56)
COLA Contracts with a Trigger and Which Cover Only Part of Contract Period	.21	(43)
Contracts Which are Fully Constrained (Capped, Triggered, Covering Part of Contract Period)	.20	(19)
Unconstrained COLA Contracts	.93	(69)

Table 6 presents average annual COLA elasticities for the manufacturing sector derived from both base wage rate and average hourly earnings data. For the entire set of COLA contracts, the average elasticitiy of .58 for base wage rate data over 1968-75 compares with a figure of .49 for average hourly earnings data. Over the same period, the average elasticity for unconstrained COLA contracts derived from average hourly earnings is now less than unity (.91), compared to 1.06 for base wage rate data. In general, it would appear that the use of base wage rate data generates an upward bias of approximately 10-15 per cent in the computed COLA elasticity for the average worker.[19]

TABLE 6

AVERAGE COLA ELASTICITIES WITHIN THE MANUFACTURING SECTOR

(Number of Contracts in Parentheses)

	1968	1969	1970	1971	1972	1973	1974	1975	Average 1968-75
All COLA Contracts									
Base Wage Rate	.64	.22	.58	.67	.36	.80	.46	.68	.58
Average Hourly Earnings	.55 (12)	.16 (7)	.49 (16)	.60 (29)	.30 (16)	.68 (28)	.41 (69)	.51 (46)	.49 (223)
Unconstrained COLA Contracts									
Base Wage Rate	-	.66	1.04	1.16	1.08	1.09	.99	1.11	1.06
Average Hourly Earnings	- (0)	.51 (1)	.83 (1)	1.05 (5)	.89 (4)	.98 (13)	.86 (14)	.89 (13)	.91 (51)

V. WAGE CHANGES IN COLA AND NON COLA CONTRACTS

Even though the vast majority of COLA clauses do not provide 100 per cent protection against price inflation, such evidence does not necessarily imply that workers who have indexed wage contracts have suffered during the 1970's. A COLA clause is only one element of the wage contract and other components of the wage package may more than compensate the worker for any short-fall in inflation protection arising from constraints within the COLA formula. In particular, the negotiated wage changes in the contract other than the COLA adjustments must also be considered in an overall evaluation of COLA clause wage contracts.

In this final analytical section of the report, the total average annual (compound) percentage change in base wage rates is computed for all COLA contracts. The directly negotiated wage increments are combined with actual COLA adjustments which materialized during the life of the contract to generate the total ex post percentage wage change in each COLA clause contract. Annual averages for total ex post wage compensation within COLA clause contracts are then compared to average wage changes negotiated in non-indexed wage contracts. Such annual comparisons between COLA and non-COLA wage contracts will, however, be somewhat imprecise during a period of unexpected inflation. Under such circum-stances, workers who signed non-indexed wage contracts will likely negotiate 'catchup' wage increments in subsequent contracts. Thus, the existence of long term contracts and the 'temporal' aspects of inflation compensation may distort annual wage change comparisons between COLA and non-COLA wage contracts.[20]

With this caveat firmly in mind, we now turn to Table 7 which provides annual average wage changes for COLA and non-COLA contracts signed within the Canadian private sector. The average annual percentage increase for non-indexed contracts consistently falls below the total annual ex post wage increase obtained in COLA clause wage contracts. For most years, this difference in average annual wage change between COLA and non-COLA wage contracts is substantial. Comparing new contracts signed in 1973 and 1974, total annual wage increases within COLA contracts exceeded wage increases in non-indexed contracts by 3.5 per cent and 2.8 percentage points per annum. Even in 1975 (a year of substantial wage catchup for workers who previously had signed non-COLA wage contracts), non-indexed wage contracts exceed wage contracts with COLA clauses by only .1 percent-age point per annum. Clearly, workers with indexed wage contracts have received considerably larger total wage adjustments than workers who were not covered by COLA clauses.[21]

Perhaps the most intriguing result found in Table 7 concerns the very large annual increases negotiated in indexed contracts which are not attributable to the COLA formula. Since part of this non-COLA wage adjust-ment within these COLA contracts can be attributed to the incompleteness of the COLA formula, COLA wage contracts have been further disaggregated into two groups: (i) contracts where the COLA formula is constrained by a cap, trigger, etc. and (ii) contracts where the COLA formula is unconstrained.

TABLE 7

ANNUAL PERCENTAGE CHANGES IN NEGOTIATED WAGE CONTRACTS
WITHIN THE CANADIAN PRIVATE SECTOR

(Number of Contracts in Parentheses)

	1968	1969	1970	1971	1972	1973	1974	1975
Wage Contracts Without a COLA Clause	7.2 (168)	8.0 (149)	8.3 (161)	8.1 (132)	9.6 (135)	11.1 (123)	14.6 (107)	17.7 (72)
All Contracts With COLA Clause								
COLA Wage Adjustment	2.2	.8	2.5	4.0	2.7	6.8	3.2	5.1
Other Wage Increments	10.2	10.1	7.6	7.3	7.3	7.8	14.2	12.5
Total Wage Change	12.4	10.9	10.1	11.3	10.0	14.6	17.4	17.6
	(13)	(12)	(21)	(30)	(22)	(37)	(115)	(78)
Contracts With Unconstrained COLA Clauses								
COLA Wage Adjustment	-	2.1	4.3	3.5	9.4	10.7	8.1	8.6
Other Wage Increments		20.7	8.1	9.7	8.2	10.8	8.8	13.6
Total Wage Change		22.8	12.4	13.2	17.6	21.5	16.9	22.2
		(2)	(1)	(6)	(6)	(13)	(17)	(23)
Contracts With Constrained COLA Clauses								
COLA Wage Adjustment	2.2	.8	2.5	4.2	1.8	6.0	2.7	4.5
Other Wage Increments	10.2	9.8	7.6	6.6	7.1	7.1	14.7	12.3
Total Wage Change	12.4	10.6	10.1	10.8	8.9	13.1	17.4	16.8
	(13)	(10)	(20)	(24)	(16)	(24)	(98)	(55)

TABLE 8

ANNUAL PERCENTAGE CHANGES IN NEGOTIATED WAGE CONTRACTS
WITHIN THE MANUFACTURING SECTOR

(Number of Contracts in Parentheses)

	1968	1969	1970	1971	1972	1973	1974	1975
Wage Contracts Without a								
COLA Clause	7.1	8.2	8.6	8.4	9.5	11.9	16.2	17.4
	(102)	(71)	(103)	(58)	(67)	(71)	(51)	(28)
All Contracts With COLA Clause								
COLA Wage Adjustment	2.5	.8	3.1	4.4	3.3	7.7	4.4	5.8
Other Wage Increments	10.0	9.0	7.2	6.6	7.2	6.5	12.2	12.2
Total Wage Change	12.5	9.8	10.3	11.0	10.5	14.2	16.6	18.0
	(12)	(7)	(16)	(29)	(16)	(28)	(69)	(46)
Contracts With Unconstrained								
COLA Clauses								
COLA Wage Adjustment	–	2.5	4.3	6.6	10.4	10.7	9.1	9.8
Other Wage Increments		6.9	8.1	6.5	7.3	10.8	7.3	11.9
Total Wage Change		9.4	12.4	13.1	17.7	21.5	16.4	21.7
		(1)	(1)	(5)	(4)	(13)	(14)	(13)
Contracts With Constrained								
COLA Clauses								
COLA Wage Adjustment	2.5	.8	3.0	4.2	2.1	6.8	3.8	5.0
Other Wage Increments	10.0	9.1	7.2	6.6	7.2	5.2	12.8	12.3
Total Wage Change	12.5	9.9	10.2	10.8	9.3	12.0	16.6	17.3
	(12)	(6)	(15)	(24)	(12)	(15)	(55)	(33)

As discussed in the previous section, the average COLA elasticity associated with unconstrained COLA formulas is only slightly less than unity. As expected, the annual COLA adjustments are substantially larger for the unconstrained COLA clause contracts than for the constrained COLA clause contracts. However, the evidence is mixed for the non-COLA wage adjustments negotiated in these two types of COLA contracts. For the year 1974 (which has the greatest number of COLA clause contract signings), the negotiated non-COLA wage increments are substantially larger in constrained COLA clause contracts than in unconstrained COLA clause contracts (14.7 per annum versus 8.8 per annum). On the other hand, in every other year, unconstrained COLA clause contracts have larger non-COLA wage adjustments than constrained COLA clause contracts.

Finally, Table 9 presents average annual wage change data for COLA contracts which are disaggregated into 'first time' COLA clauses and 'existing' COLA clauses. As expected (i) the COLA wage adjustment for 'existing' COLA clauses nearly always exceeds that provided by 'first time' COLA clauses (1972 is the only exception) and (ii) the non-COLA wage adjustment is always larger in 'first time' COLA clause contracts. Such results are compatible with the lower COLA elasticities found within 'first time' COLA clauses and the need for greater wage catchup arising from unexpected inflation during the last contract period in the case of 'first time' COLA clause contracts. Again, the non-COLA wage adjustments are very substantial. For contracts with existing COLA clauses, directly negotiated wage increments excluding COLA adjustments average at least 7 per cent per annum throughout the entire sample period.

TABLE 9

A COMPARISON OF ANNUAL PERCENTAGE CHANGES FOR WAGE
CONTRACTS WITH A 'FIRST TIME' COLA CLAUSE AND WITH
AN 'EXISTING' COLA CLAUSE

(Number of Contracts in Parentheses)

	1968	1969	1970	1971	1972	1973	1974	1975
Contract With a 'First Time' COLA Clause								
COLA Wage Adjustment	1.0	.8	1.6	3.6	6.7	5.8	2.7	3.9
Other Wage Increments	10.5	10.2	8.2	8.6	10.7	11.4	15.4	14.6
Total Wage Change	11.5	11.0	9.8	12.2	17.4	17.2	18.1	18.5
	(4)	(8)	(16)	(7)	(4)	(11)	(86)	(50)
Contracts With an 'Existing' COLA Clause								
COLA Wage Adjustment	2.5	1.0	3.4	4.1	2.5	7.0	5.3	6.8
Other Wage Increments	10.1	8.4	7.0	7.0	7.1	7.2	9.2	9.5
Total Wage Change	12.6	9.4	10.4	11.1	9.6	14.2	14.5	16.3
	(9)	(4)	(5)	(23)	(18)	(26)	(29)	(28)
Wage Contracts Without a COLA Clause	7.2	8.0	8.3	8.1	9.6	11.1	14.6	17.7
	(168)	(149)	(161)	(132)	(135)	(123)	(107)	(72)

VI. SUMMARY AND CONCLUSIONS

The objective of this study has been to provide an exploratory analysis of Canadian wage contracts which contain cost-of-living allowance clauses signed during the 1968-75 period. Of the 1405 major collective agreements signed during this period, 358 wage contracts contained a COLA clause. While this represents only 25 per cent of negotiated contracts over the entire sample period, there has been a clear upward trend in COLA clause incidence. By 1975, 62 per cent of all workers signing new contracts had COLA clause protection, compared to only 16 per cent in 1968. As discussed in Section II of this report, this dramatic increase in COLA clause incidence can be attributed to the unexpected increase in the inflation rate in 1973 and 1974. Not surprisingly, wage contracts which contained a COLA clause were also found to be systematically longer in duration than contracts which did not contain a COLA clause.

Section III of this report describes and summarizes the distinctive features of COLA clauses. While all COLA formulas translate a movement in a consumer price index into an automatic adjustment in the wage rate, nearly all COLA formulas are stated in 'absolute' terms, i.e. an 'absolute' change in the price index is worth a 'given cents' per hour wage adjustment for all workers within the bargaining unit. Only 5.6 per cent of the COLA formulas were stated in 'percentage' terms and would thereby provide equal 'relative' protection against inflation for all workers within the bargaining group regardless of their respective wage level.

Besides the 'absolute' nature of most COLA clause formulas, three other common features seriously limit the inflation protection provided by many COLA clauses. First, 36 per cent of all COLA clauses were 'capped' or limited to a certain maximum amount. Second, 27 per cent of all COLA clauses were 'triggered' only after some minimum amount of inflation. Finally, 60 per cent of all COLA clauses did not cover the entire contract period. Only 21 per cent of all COLA clause formulas were free of all restrictive or constraining features.

To evaluate the degree of inflation protection afforded by COLA clauses, an 'elasticity' measure has been computed for each COLA wage contract. This elasticity concept compares the actual (ex post) percentage change in the base wage rate during the life of the contract which is directly attributable to the COLA clause to the percentage change in the rate of price inflation over the contract period. During the 1968-75 period, COLA elasticities between .2 and 1.0 are almost equally probable and the average COLA elasticity for all private sector COLA clause contracts is only 47 per cent. Thus, Canadian COLA clauses have typically provided only partial protection against inflation, and the existence of a COLA clause is no guarantee that the base wage rate within the bargaining unit will automatically escalate proportionately with the inflation rate.

As discussed in Section IV, these relatively low COLA elasticities can largely be attributed to the existence of various kinds of constraints (e.g. caps and triggers) within the COLA formula. For COLA clauses which are unconstrained, the average elasticity is only slightly less than unity. Also, 'first time' COLA clauses have much lower COLA elasticities than found for COLA clauses which had existed in the previous wage contract.

As stated above, 95 per cent of all COLA formulas are expressed in absolute, not relative terms. The final part of Section IV analyzes the magnitude of the upward bias in COLA elasticity which arises when base wage rate data are employed within an absolute COLA formula. Using average hourly earnings data as a proxy for the average wage rate within the bargaining unit, the average COLA elasticity fell by approximately 10-15 per cent over the corresponding elasticity computed from base wage rate data. For example, the average elasticity for 'unconstrained' COLA clauses in manufacturing using average hourly earnings is 91 per cent, compared to 106 per cent for base wage rate data.

Even though the vast majority of Canadian COLA clauses do not provide 100 per cent protection against future price inflation, the COLA clause represents only one element of the wage contract. An overall evaluation of COLA clause wage contracts must consider the size of the directly negotiated wage increments as well as the value of the (ex post) COLA wage adjustments. Total annual percentage wage changes for COLA clause contracts are presented in Section V and compared to average annual percentage increases negotiated in non-indexed wage contracts. Employees covered by indexed wage contracts have received considerably larger total (ex post) wage adjustments than employees who signed non-indexed wage contracts, with the differences frequently exceeding 3 percentage points per annum.

Perhaps the most surprising result of Section V concerns the very substantial size of non-COLA wage increments negotiated in COLA clause wage contracts. Part of the explanation for these large non-COLA wage increments within COLA clause contracts can be attributed to the various constraints incorporated into COLA formulas and the 'first time' property of many of these COLA clauses (and the need to 'catchup' for past unexpected inflation). Nonetheless, these non-COLA wage increments contained in COLA wage contracts are very substantial and obviously exceed average productivity increases during this period.

FOOTNOTES

1   The classic Canadian study in this area is the Economic Council of Canada monograph co-authored by Bodkin, Bond, Reuber and Robinson (1966). Also, see Cousineau and Lacroix (1977) and my own three monographs: Rowley and Wilton (1977); Auld, Christofides, Swidinsky and Wilton (1979); and Wilton (1979).

2   Exceptions to this general statement would include the studies by Marcil (1975) and Cousineau-Lacroix (1977).

3   For example, almost two thirds of employees signing new wage contracts in the manufacturing sector during the year 1975 had COLA clause protection against future inflation.

4   See, for example, Turnovsky (1972), Johnston and Timbrell (1973), de Menil and Bhalla (1975), Cousineau and Lacroix (1977), Wilton (1977) and Auld et. al. (1979).

5   As discussed in Christofides, Swidinsky and Wilton (1980), a price catchup variable can also be rationalized as a proxy for latent, firm-specific, excess labour demand.

6   As reported in Table 7, new wage settlements in 1974 and 1975 averaged approximately 17 per cent per annum.

7   If inflation rates are not easily predicted, then bargaining more frequently will likely reduce the size of the forecast error. At minimum, shorter contract length permits more frequent 'catch-up' adjustments for unexpected inflation. Alternatively, labour might bargain for a 're-opener' clause in the wage contract. Unfortunately, we are unable to obtain reliable information pertaining to the incidence (and exercise) of such re-opener clauses.

8   Since most COLA clauses do not provide 100 per cent protection against inflation (see Section III), COLA clauses only reduce (not eliminate) the consequences of inflation uncertainty.

9   As such, the 'fold-in' formalizes the COLA adjustments of the past contract and should not be counted as part of the negotiated wage increment of the next contract.

10 While most formulas use the aggregate Canadian C.P.I., some formulas rely on the C.P.I. for a particular city (e.g. Vancouver). Probably the most complicated formula is found in the automobile industry where a weighted average of Canadian and United States C.P.I.'s is utilized.

11 The parameters of the COLA clause vary from firm to firm.

12 Specific information on caps, triggers, partial coverage, etc. for each COLA contract can be found in the Data Appendix to this report.

13 Again the reader is reminded that the vast majority of the
    unconstrained COLA formulas are in absolute terms, not relative
    terms.

14 Similar results are found in the manufacturing sector (see Table 4).
    Since a given wage contract might contain both a "cap" and a
    "trigger", there will exist some double counting in the lower three
    sections of Tables 3 and 4.

15 Micro data for the numerator and denominator of this elasticity
    measure are provided in the Data Appendix.

16 The actual timing of the COLA adjustments has been ignored. Thus,
    even if the COLA elasticity were unity, workers may still suffer a
    slight loss as they may have to wait 3 or 6 months for the COLA
    adjustment. We have also ignored all fringe benefits (because of
    lack of data) which may not be indexed to the same degree as wage
    rates.

17 For the two inflationary years of 1974 and 1975, 'first-time' COLA
    clauses elasticities average only .28 and .49, compared to average
    elasticities of .57 and .80 for 'existing' COLA clauses.

18 Since average hourly earnings also include some overtime premiums,
    it will likely overstate the average straight-time wage rate within
    the industry.

19 Again to the extent that average hourly earnings overstate the
    average wage rate (because of overtime premiums), the bias
    calculation is itself biased upwards.

20 In addition, if a different rate of inflation had materialized, then
    our comparisons would also be affected.

21 Similar results are found for the manufacturing sector (see
    Table 8). It is a moot point whether this wage differential should
    be entirely attributed to the existence of a COLA clause. One might
    argue that only the 'powerful' unions are able to negotiate COLA
    clauses and would have received these larger wage increments even if
    they did not have a COLA clause.

DATA APPENDIX

The following information pertaining to each of the 328 COLA clause wage contracts analyzed in this report is summarized below:

    i) Standard Industrial Classification (SIC)

    ii) Number of employees in the bargaining unit (EMPL)

    iii) Signing date of the contract

    iv) Contract length in months (L)

    v) Specific features of the COLA clause:

        a) Capped (C)

        b) Triggered (T)

        c) Only covers part of the contract period (P)

        d) Formula is in percentage terms (%)

    vi) Annual percentage change in the base wage rate attributable to the COLA clause (COLA) and to the non-COLA increments (OTHER).

    vii) Annual percentage change in the Consumer Price Index over the life of the contract.

To compute the elasticity concept discussed in the text, the COLA wage change is divided by the price change.

NAME OF COMPANY	SIC	EMPL.	SIGNING DATE	L	FEATURES		WAGE CHANGE COLA %	WAGE CHANGE OTHER %	PRICE CHANGE %
ABITIBI PAPER CO., IROQUOIS FALLS, ONT.	31	1395	DEC. 1/74	24		P	7.52	19.22	8.99
BOWATERS NEWFOUNDLAND, CORNERBROOK, NFLD.	31	1000	APR. 1/75	24			10.58	18.82	7.93
GREAT LAKES PAPER CO., THUNDER BAY, ONT.	31	1200	NOV. 27/74	24			9.96	19.22	8.99
KIMBERLY-CLARK OF CAN., LONGLAC, ONT.	31	500	DEC. 3/74	24			9.96	19.22	8.99
LABRADOR LINERBOARD, VAR. PLACES, NFLD.	31	680	AUG. 26/75	24			9.36	19.15	7.93
PRICE (NFLD) PULP & PAPER, GRAND FALLS, NFLD.	31	1200	MAY 6/75	24			10.10	18.82	7.93
SPRUCE FALLS PULP & PAPER, KAPUSKASING, ONT.	31	600	DEC. 12/74	24		P	7.52	19.22	8.99
COMINCO LIMITED, PINE POINT' N.W.T.	52	500	SEPT. 9/75	30		P	4.08	9.03	7.85
NORANDA MINES & OTHERS, VAR. PLACES, ONT.	52	665	MAY 30/74	18		P	4.61	26.39	5.89
PAMOUR PORCUPINE MINES, SCHUMAKER, ONT.	52	540	MAY 26/74	18		P	6.09	30.40	11.18
ALGOMA ORE DIV -- WAWA, ONT.	58	500	OCT. 31/69	36		P	0.76	9.03	4.00
ALGOMA ORE PROPERTIES, WAWA, ONT.	58	500	AUG. 11/72	36	C		1.37	7.53	11.01
ALGOMA ORE PROPERTIES, WAWA, ONT.	58	500	AUG. 6/75	36	C		7.17	9.04	9.04
IRON ORE CO. OF CAN., CAROL LAKE, NFLD.	58	3850	MAR. 25/75	36	C	P	1.36	6.68	8.86
QUEBEC CARTIER MINING, VAR. PLACES, QUE.	58	2000	APR. 22/75	36		T	8.79	6.68	8.86
QUEBEC CARTIER MINING, PRT CARTIER, QUE.	58	1000	AUG. 28/72	36			7.66	11.53	9.88
WABUSH MINES, POINTE NOIRE, QUE.	58	500	JULY 11/72	36		P	6.23	11.53	6.55
WABUSH MINES & LAKE RLWY, LABRAD., NFLD.	58	600	AUG. 25/72	36			2.48	11.53	9.88
WABUSH MINES & LAKE RLWY, LABRAD., NFLD.	58	580	SEPT.15/75	36			9.09	6.67	9.42
WABUSH MINES & OTHERS, POINTE NOIRE, QUE.	58	525	MAR. 26/75	36		T	8.79	6.68	8.86
FALCONBRIDGE NICKEL, FALCONBRIDGE, ONT.	59	3600	AUG. 21/72	36	C	P	0.96	6.83	11.11
FALCONBRIDGE NICKEL MINES, ONT.	59	520	MAY 25/73	36	C	P	1.25	7.89	11.24
FALCONBRIDGE NICKEL -- FALCONBRIDGE, ONT.	59	3030	NOV. 22/69	36	C	P	0.63	9.14	3.78
HUDSON BAY MINE. & SMLT., FLIN FLON, MAN.	59	2250	SEPT.28/73	36	C	P	0.46	10.56	10.20
HUDSON BAY MINING & SMELTING, MAN.	59	1650	SEPT.15/70	37	C	P	0.59	8.57	5.82
INT'L NICKEL, THOMPSON, MAN.	59	2940	FEB. 26/73	36	C	P	0.93	9.30	11.24
INT'L NICKEL CO., SUDBURY, ONT.	59	14200	JULY 8/72	36	C	P	0.93	6.83	10.95
INT'L NICKEL CO., SUDBURY, ONT.	59	14500	JULY 18/75	36		P	7.18	9.51	9.03
INT'L NICKEL -- SUDBURY, ONT.	59	15700	NOV. 13/69	32	C	P	0.69	10.34	3.77
INT'L NICKEL -- THOMPSON, MAN.	59	3300	JAN. 27/70	38	C	P	0.57	8.42	4.30
NORANDA MINES, NORANDA, QUE.	59	1350	FEB. 27/75	36		P	6.48	11.85	8.86
PATINO MINES, CHIBOUGAMAU, QUE.	59	500	APR. 14/75	24		P	16.96	24.62	13.49

NAME OF COMPANY	SIC	EMPL.	SIGNING DATE	L	FEATURES	WAGE CHANGE COLA %	WAGE CHANGE OTHER %	PRICE CHANGE %
SHERITT GORDON MINE, LYNN LAKE, MAN.	59	985	APR. 28/73	38	C P	0.88	9.28	10.45
SHERRITT GORDON MINES -- LYNN LAKE, MAN.	59	575	FEB. 20/70	40	C P	0.54	8.01	4.73
CAPE BRETON DEV. CORP., SYDNEY & O.P.N.S.	61	3200	JUNE 18/75	24	C T P	0.00	17.99	7.93
CDN. JOHNS-MANVILLE CO., ASBESTOS, QUE.	71	2150	APR. 2/75	24	%	7.86	13.69	8.15
BURNS FOODS, CALGARY & EDMONTON, ALTA.	101	1960	JULY 25/74	26	T P	1.01	14.15	10.53
BURNS FOODS, VAR. PLACES, ALTA.	101	2200	DEC. 22/70	39	T P	1.16	7.57	4.28
CANADA PACKERS LTD., TORONTO, ONT.	101	5075	JULY 23/74	26	T P	1.00	14.06	10.53
INTERCONTINENTAL PACKER	101	1165	SEPT. 6/74	26	T P	1.03	15.34	10.53
INTERCONTINENTAL PACKERS, SASK.	101	1100	FEB. 22/71	39	T P	0.29	7.59	7.35
SCHNEIDER, J.M. LTD., KITCHENER, ONT.	101	1650	AUG. 5/74	26	T P	1.00	14.06	9.70
SCHNIEDER, J.M. LTD., KITCHENER, ONT.	101	1385	FEB. 28/71	39	T P	1.14	7.54	7.92
SWIFT CANADIAN CO., TORONTO, ONT.	101	2470	JULY 17/74	26	T P	0.99	13.67	10.53
SWIFT CANADIAN CO., LTD., ONT.	101	2000	DEC. 15/70	39	T P	1.33	7.52	7.35
HJ HEINZ CO. OF CANADA, LEAMINGTON, ONT.	103	1000	JULY 6/74	24	P	7.45	11.37	10.50
HJ HEINZ CO. OF CANADA -- LEAMINGTON, ONT.	103	1000	JULY 4/70	27	C P	0.88	9.92	3.47
DAVID & FRERE, MONTREAL, QUE.	107	600	SEPT. 22/74	24	T P	1.57	17.11	9.26
McCORMICK'S LTD., LONDON, ONT.	107	820	MAR. 20/75	24	C T P	0.00	16.22	8.23
COCA-COLA LTD., MONTREAL, QUE.	109	1000	JULY 10/75	24	C T P %	0.43	16.03	8.56
HIRAM WALKER & SONS, WAKERVILLE, ONT.	109	525	JAN. 1/71	36		5.36	4.97	6.83
HIRAM WALKER & SONS, WALKERVILLE, ONT.	109	800	DEC. 16/74	36		10.90	3.76	14.19
HOUSE OF SEAGRAMS -- N.B., QUE., ONT., MAN.	109	1200	MAR. 16/70	36	C P	1.54	7.31	4.24
HOUSE OF SEAGRAMS, ONT.	109	1100	APR. 12/73	36	C P	1.72	9.27	22.33
IMPERIAL TOBACCO, GUELPH, ONT.	153	725	SEPT. 26/74	24	C P	2.75	9.10	8.38
MACDONALD TOBACCO, MONTREAL, QUE.	153	1155	JUNE 15/74	24	C P	4.16	15.80	10.50
ROTHMANS OF PALL MALL CANADA, QUE., QUE.	153	565	MAR. 30/74	24	C P	3.47	11.33	10.66
ROTHMANS OF PALL MALL, TORONTO, ONT.	153	500	DEC. 19/73	24	C P	3.93	12.90	11.54
FIRESTONE TIRE & RUBBER, HAMILTON, ONT.	162	1200	NOV. 3/74	36	T P	3.40	9.05	10.07
GOODRICH, B.F. CANADA, KITCHENER, ONT.	162	750	NOV. 24/74	36	P	5.25	9.34	9.24
GOODRICH, B.F. CANADA, KITCHENER, ONT.	162	650	NOV. 24/74	36	P	5.79	9.33	9.66
GOODYEAR TIRE & RUBBER, TORONTO, ONT.	162	1530	OCT. 23/74	36	T P	0.19	9.99	10.07
GOODYEAR TIRE & RUBBER, VALLEYFIELD, QUE.	162	730	AUG. 1/75	35	T P	1.55	11.18	8.66
MANSFIELD-DENMAN (TIRE DIV.), BARRIE, ONT.	162	525	NOV. 18/74	36	T P	4.05	6.88	9.42

NAME OF COMPANY	SIC	EMPL.	SIGNING DATE	L	FEATURES	WAGE CHANGE COLA %	WAGE CHANGE OTHER %	PRICE CHANGE %
UNIROYAL LTD., KITCHENER, ONT.	162	1185	OCT. 29/74	36	T P	1.72	8.82	10.03
DOMINION TEXTILE, DRUMMONDVILLE, QUE.	181	500	MAY 9/75	24	C T P	0.00	16.17	8.23
DOMINION TEXTILE, VALLEYFIELD & O.P., QUE.	181	1900	MAY 2/75	24	C T P	0.00	16.64	8.15
DOMINION TEXTILE, VAR. PLACES, QUE.	181	3630	APR. 18/75	24	C T P	0.00	16.17	8.23
WABASSO LIMITED, WELLAND, ONT.	181	550	SEPT.10/75	24	C T P	0.00	13.46	8.15
CLEYN AND TINKER -- HUNTINGTON	182	640	JUNE 18/70	35	T P	0.00	7.55	5.23
DOMINION AYERS -- LACHUTE, QUE.	182	550	JUNE 13/69	36	T P	0.00	11.10	3.58
ASSOC. TEXTILES OF CAN., LOUISEVILLE, QUE.	183	550	JULY 4/75	24	C P	3.20	15.18	8.25
ALLEN IND. CAN., HAMILTON, ONT.	188	600	OCT. 30/74	30		10.30	14.95	8.92
ALLEN INDU. CAN., HAMILTON, ONT.	188	515	FEB. 25/72	36	P	10.98	9.54	9.22
CDN. FABRICATED PROD., STRATFORD, ONT.	188	665	DEC. 15/74	37	P	6.30	10.25	9.11
CHILDREN OUTERWEAR MFR., MONTREAL, QUE.	245	550	JAN. 20/75	24	C T	3.16	14.97	7.93
FUR MRFS GUILD., MONTREAL, QUE.	246	1675	MAY 1/71	36	C T P %	0.83	7.66	7.49
CDN. FOREST PRODUCTS, NORTHERN B.C.	251	700	SEPT.20/74	12	P	5.84	14.65	10.67
CDN. FOREST PRODUCTS, NORTHERN B.C.	251	500	SEPT.22/75	24	T P	1.11	13.61	7.74
FOREST INDUSTRIAL RELATIONS, B.C. COAS.	251	31570	JULY 31/74	12	P	3.37	14.65	10.38
INTERIOR FORST. LAB. REL., SOUTHERN B.C.	251	6600	JULY 31/74	12	P	3.37	14.65	10.38
NORTHWOOD TIMBER, PRINCE GEORGE, B.C.	251	800	SEPT.22/75	24	T P	1.11	13.61	7.54
NORTHWOOD TIMBER, PRINCE GEORGE, B.C.	251	1200	SEPT. 1/74	12	P	5.39	14.65	11.08
NTH. CARIBOO LBRIREL. ASSN., NORTHERN B.C.	251	2000	SEPT. 1/74	12	P	5.39	14.65	11.08
WELDWOOD OF CANADA, QUESNEL, B.C.	252	500	SEPT.22/75	27	T P	0.99	12.23	6.70
WELDWOOD OF CANADA, QUESNEL, B.C.	252	600	JULY 31/74	15	P	2.68	11.94	8.30
LIVINGSTONE INDUST., TILLSONBURG, ONT.	256	735	NOV. 15/74	23	P	5.68	11.72	9.12
SKLAR FURNITURE, WHITBY, ONT.	261	600	JUNE 15/74	24	C T	3.02	9.99	11.02
CAN. ASSOC. STOREFITTING MFRS., TOR., ONT.	266	795	FEB. 17/74	24	T P	1.10	17.27	11.54
AMER. CAN. OF CAN., MARATHON, ONT.	271	370	MAY 17/75	24		8.74	15.88	8.56
DOMTAR FINE PAPERS, WINDSOR, QUE.	271	705	JUNE 12/75	12		10.31	11.69	8.95
DOMTAR PACKAGING, EAST ANGUS, QUE.	271	500	JULY 3/75	12		10.38	11.77	8.95
SCOTT PAPER, CRABTREE, QUE.	271	650	MAY 23/75	12		24.17	19.56	17.13
CONSOLIDATED-BATHURST, HAMILTON, ONT.	273	555	JULY 14/74	24	P	5.25	17.60	11.73
KIMBERLY-CLARK OF CAN., REXDALE, ONT.	274	510	AUG. 7/75	24		6.90	13.20	7.54

NAME OF COMPANY	SIC	EMPL.	SIGNING DATE	L	FEATURES		WAGE CHANGE COLA %	WAGE CHANGE OTHER %	PRICE CHANGE %
ALCOMA STEEL CORP., SAULT S.MARIE, ONT.	291	6300	AUG. 4/72	36	C		1.37	7.53	11.01
ALCOMA STEEL CORP., SAULT S.MARIE, ONT.	291	6145	NOV. 5/69	36	C	P	0.76	9.03	4.00
ALCOMA STEEL CORP., SAULT S.MARIE, ONT.	291	525	AUG. 8/72	36	C		1.53	8.23	11.01
ALCOMA STEEL CORP., SAULT S.MARIE, ONT.	291	525	AUG. 5/75	36		P	7.79	9.67	9.04
ALCOMA STEEL CORP., SAULT S.MARIE, ONT.	291	6300	AUG. 5/75	36		P	7.17	9.04	9.04
BURLINGTON STEEL, COHAMILTON, ONT.	291	550	FEB. 22/70	36	C	P	0.78	9.19	4.01
LAKE ONT. STEEL CO., WHIBTY, ONT.	291	520	APR. 4/73	36	C	P	0.81	7.94	11.42
SIDBEC-DOSCO, CONTRECOEUR, ONT.	291	950	MAY 23/73	36	C	P	1.51	7.59	11.33
SIDBEC-DOSCO, MONTREAL, QUE.	291	970	APR. 24/73	36	C		1.52	7.67	11.33
STEEL CO. OF CAN., EDMONTON, ALTA.	291	890	SEPT.16/72	35	C		1.49	8.05	11.32
STEEL CO. OF CAN., HAMILTON, ONT.	291	10540	OCT. 19/69	36	C	P	0.76	9.03	3.52
STEEL CO. OF CAN. (HILTON), HAMILTON, ONT.	291	11270	JULY 31/75	35	C	P	7.38	9.25	9.29
STELCO (HILTON WKS), HAMILTON, ONT.	291	11500	JULY 28/72	36	C		1.37	7.53	11.01
SYDNEY STEEL CORP., SYDNEY, N.S.	291	3100	SEPT.12/74	24	C	P	1.96	11.49	9.51
ALCOMA (TUBE WKS), SAULT S.MARIE, ONT.	292	615	MAR. 10/73	36	C	P	0.62	9.21	11.24
INTERPROV. STEEL & PIPE, REGINA, SASK.	292	550	APR. 16/73	24	C	P	0.61	10.99	10.63
MANNESMAN TUBE CO., SAULT S.MARIE, ONT.	292	585	JUNE 8/70	36	C	P	0.81	9.75	4.30
STANDARD TUDE CAN., WOODSTOCK, ONT.	292	900	APR. 9/75	36	C		7.09	6.14	8.95
STANDARD TUDE CAN., WOODSTOCK, ONT.	292	600	FEB. 2/72	36			9.05	5.74	11.44
STANDARD TUBE CAN., WOODSTOCK, ONT.	292	550	FEB. 19/69	36			2.45	6.92	3.82
STEEL CO. OF CAN., WELLAND, ONT.	292	1100	FEB. 18/70	36	C		0.75	8.70	4.00
STEEL CO. OF CAN., WELLAND, ONT.	292	785	DEC. 22/72	36	C		1.35	7.32	11.38
HOLMES FOUNDRY, SARNIA, ONT.	294	520	APR. 14/70	12	C		3.32	5.19	1.93
HOLMES FOUNDRY, SARNIA, ONT.	294	500	MAY 1/68	23	C		3.79	4.17	4.10
CDN. REYNOLDS METAL CO., BAIE COMEAU, QUE.	295	1000	APR. 22/75	30		P	7.51	15.95	6.64
COMINCO LTD., VARIOUS PLACES, B.C.	295	3500	OCT. 31/74	36	C	P	7.02	14.83	8.92
INT'L NICKEL CO., PT. COLBORNE, ONT.	295	1300	JULY 8/72	36		P	0.93	6.83	10.95
INT'L NICKEL CO. OF CAN., PT.COLBORNE, ONT.	295	1200	JULY 18/75	36		P	7.18	9.51	9.03
INT'L NICKEL, PT. COLBORNE, ONT.	295	1600	NOV. 17/69	32	C	P	0.69	10.36	3.77
ANACONDA AMER. BRASS, NEW TORONTO, ONT.	297	765	DEC. 19/71	36		P	8.85	8.35	9.53
ANACONDA CANADA, NEW TORONTO, ONT.	297	800	JAN. 5/75	36			9.26	4.69	9.09
BABCOCK & WILCOX CAN., CAMBRIDGE, ONT.	301	850	NOV. 17/74	21	C		3.27	17.47	8.53

NAME OF COMPANY	SIC	EMPL.	SIGNING DATE	L	FEATURES	WAGE CHANGE COLA %	OTHER %	PRICE CHANGE %
DOM STEEL &COAL CORP., WAKERVILLE, ONT.	302	545	JULY 28/68	30	C P	0.56	7.98	3.66
AMERICAN CAN. OF CANADA, ONTARIO	304	1500	APR. 28/71	36	P	6.22	10.17	7.49
AMERICAN CAN. OF CANADA, HAMILTON, ONT.	304	600	MAY 27/74	36	P	9.60	4.88	10.07
AMERICAN CAN. OF CANADA, SIMCOE, ONT.	304	675	APR. 29/74	36	P	9.60	4.88	10.07
CONTINENTAL CAN. CO., QUE.,ONT.,ALTA & B.C.	304	2200	FEB. 14/74	36	T	9.83	6.30	10.07
CONTINENTAL CAN., QUE., ONT., ALTA & B.C.	304	2070	MAR. 15/71	36	P	4.19	10.17	7.21
STEEL CO. OF CAN., HAMILTON, ONT.	305	565	JULY 28/72	36	C	1.38	7.60	11.01
STELCO CO. OF CAN., MONTREAL, QUE.	305	2720	JULY 31/75	36	P	7.22	9.10	9.04
METAL IND. ASSOC., VANCOUVER & O.P., B.C.	308	750	MAY 3/75	24	P	5.15	17.73	8.52
DECOR METAL PROD., MIDLAND, ONT.	309	550	NOV. 15/74	36	P	9.13	9.90	9.25
DOMINION FORGE CO., WINDSOR, ONT.	309	690	DEC. 4/68	36	P	2.74	8.28	3.70
COCKSHUTT FARM EQUIP., BRANTFORD, ONT.	311	565	APR. 24/68	35	C	2.70	5.83	3.72
INT'L HARVESTER CAN., HAMILTON, ONT.	311	2280	NOV. 6/71	29	P	8.23	5.78	8.28
INT'L HARVESTER CO., HAMILTON, ONT.	311	1700	APR. 23/74	36		10.02	4.20	10.03
MASSEY FERGUSON LTD., BRANTFORD & O.P., ONT.	311	2655	MAR. 3/71	18		5.91	5.51	5.30
MASSEY FERGUSON LTD., BRANTFORD & O.P., ONT.	311	5000	JUNE 29/68	36	C	2.24	9.67	3.49
MASSEY-FERGUSON, BRANTFORD & TORONTO, ONT.	311	4000	NOV. 19/72	24		10.74	7.19	10.01
MASSEY-FERGUSON INDUST., BRANTFD. & TO.,ONT.	311	4600	SEPT.16/74	36	P	7.64	4.52	9.26
CANRON LTD., TROIS-RIVIERES, QUE.	315	600	JULY 12/74	24		10.25	22.77	9.99
CDN. INGERSOLL RAND CO., SHERBROOKE, QUE.	315	500	SEPT. 4/75	36	C P	4.35	10.92	8.64
DOM. RD MACHINERY, GODERICH, ONT.	315	520	JULY 31/73	24		7.48	15.56	11.57
DOMINION ROAD MACHINERY, GODERICH, ONT.	315	725	SEPT.28/75	24		5.39	7.38	7.54
FORANO LIMITÉE, PLESSISVILE, ONT.	315	560	JUNE 27/74	34	C T P	0.32	15.44	9.61
METAL INDUSTRIES, BURNABY & O.P., B.C.	315	1800	JAN. 1/75	25	P	7.17	14.41	8.08
OUTBOARD MARINE CORP., PETERBOROUGH, ONT.	315	1600	NOV. 14/74	34		9.35	10.68	9.79
S. K. F. MANU. OF CAN., SCARBOROUGH, ONT.	315	635	MAR. 19/74	20	C	3.24	13.02	11.72
COMPUTING DEVICES OF CAN., OTTAWA, ONT.	318	600	JULY 15/74	26	T P	1.07	10.21	9.07
DEHAVILLAND AIRCRAFT, MALTON, TORONTO, ONT.	321	900	SEPT.17/72	36		9.88	8.81	10.95
DOUGLAS AIRCRAFT, MALTON, ONT.	321	3200	JULY 26/68	39	C	2.42	6.14	3.48
DOUGLAS AIRCRAFT CAN., MALTON, ONT.	321	1200	MAY 31/75	37		10.05	2.76	9.39
DOUGLAS AIRCRAFT CO., MALTON, ONT.	321	4690	DEC. 13/71	36	P	6.50	5.31	8.88
FLEET MANUFACTURING, FORT ERIE, ONT.	321	550	JAN. 29/69	32	C	3.22	7.40	4.30

NAME OF COMPANY	SIC	EMPL.	SIGNING DATE	L	FEATURES	WAGE CHANGE COLA %	WAGE CHANGE OTHER %	PRICE CHANGE %
HAWKER SIDDELEY CAN., THUNDER BAY, ONT.	321	750	SEPT. 2/75	24		8.44	14.11	8.52
HAWKER SIDDELY CAN., THUNDER BAY, ONT.	321	620	NOV. 2/70	36		4.34	8.15	4.34
HAWKER SIDDELY, THUNDER BAY, ONT.	321	700	MAY 11/73	24		10.23	10.25	11.39
ORENDA LTD., MALTON, ONT.	321	550	SEPT.18/71	11		2.65	6.77	5.09
PRATT & WHITNEY OF CAN., VARIOUS PL., QUE.	321	2500	AUG. 28/75	24	C T P	11.26	8.31	9.81
AMERICAN MOTORS, BRAMPTON, ONT.	323	1125	MAY 5/71	47	P	5.28	5.99	7.42
CHRYSLER CAN., WINDSOR, ONT.	323	625	FEB. 10/71	36	P	5.12	7.03	6.07
CHRYSLER CAN., WINDSOR & OTHER PL., ONT.	323	9285	FEB. 2/71	36	P	4.08	6.02	6.07
CHRYSLER CAN., WINDSOR & OTHER PL., ONT	323	11000	FEB. 5/68	34	C	2.69	10.59	4.02
CHRYSLER CAN., AJAX, WINDSOR & O.P., ONT.	323	610	SEPT.24/73	36	T	8.95	4.83	10.20
CHRYSLER CORP., WINDSOR, ONT.	323	11135	SEPT.23/73	36	T	7.46	4.48	10.20
FORD CAN., WINDSOR & OTHER PLACES, ONT.	323	10300	APR. 22/68	33	C	2.47	10.55	4.17
FORD CAN., WINDSOR & OTHER PLACES, ONT.	323	13800	JAN. 25/71	34	P	3.43	6.46	6.39
FORD MOTOR CO., WINDSOR & O. PLACES, ONT.	323	14935	DEC. 7/73	36	P	7.41	4.49	10.20
G.M. OF CAN., OSHAWA, WINDSOR & O.P., ONT.	323	22250	MAR. 29/68	34	C	2.41	10.79	4.02
GEN. MOTORS OF CANADA, OSHAWA, ONT.	323	24885	DEC. 17/70	33	T	4.35	6.65	6.75
GEN. MOTORS OF CANADA, OSHAWA, ONT.	323	25815	DEC. 16/73	36	P	7.41	4.49	10.20
INTERNTL. HARVESTOR CO., CHATHAM, ONT.	323	1500	SEPT.17/74	36		8.59	4.34	9.42
SICARD INC., STE THERESE, QUE.	323	500	JULY 30/72	36		10.27	7.75	10.03
CDN. TRAILMOBILE LTD., BRANTFORD, ONT.	324	650	JULY 29/73	36		6.12	5.34	11.03
FRUEHAUF TRAILER CO., COOKSVILLE, ONT.	324	550	JUNE 15/73	36		8.71	8.65	11.00
BENDIX AUTO OF CANADA, WINDSOR, ONT.	325	510	AUG. 11/74	33		9.87	5.22	10.94
BENDIX AUTO. LTD., WINDSOR, ONT.	325	500	JULY 6/71	36	P	4.15	6.21	7.49
BUDD AUTOMOTIVE CO. OF CAN., KITCHENER, ONT.	325	900	APR. 4/71	36	C	2.61	8.36	7.49
BUDD AUTOMOTIVE CO., KITCHENER, ONT.	325	2000	APR. 11/74	36		7.68	6.77	10.10
FORD MOTOR CO., WINDSOR (OFFICE EMPLS)	325	500	JAN. 20/71	33		4.24	7.44	6.59
FORD MOTOR CO. (OFFICE EMPLS) WINDSOR, ONT.	325	500	DEC. 7/73	36	P	8.36	4.62	10.20
GABRIEL OF CAN., LONG BRANCH, ONT.	325	620	APR. 5/71	36	C P	1.47	6.89	7.21
GABRIEL OF CAN., LONG BRANCH, ONT.	325	500	APR. 10/74	24	C	3.48	10.02	11.02
HAYES-DANA LTD., ST.CATH & THOROLD, ONT.	325	1415	JUNE 18/71	36	C P	2.40	7.34	8.01
HAYES-DANA LTD., ST.CATH & THOROLD, ONT.	325	1650	JULY 18/74	36		8.44	3.90	9.66
HOUDAILLE, OSHAWA, ONT.	325	660	JUNE 24/74	36		8.56	4.49	9.42

NAME OF COMPANY	SIC	EMPL.	SIGNING DATE	L	FEATURES	WAGE CHANGE COLA %	WAGE CHANGE OTHER %	PRICE CHANGE %
HOUDAILLE IND., OSHAWA, ONT.	325	640	JUNE 15/69	36	C	2.48	8.11	3.68
HOUDAILLE IND., OSHAWA, ONT.	325	550	JUNE 19/71	36	P	4.73	3.87	8.45
KELSEY-HAYES CAN., WINDSOR, ONT.	325	750	FEB. 19/71	36	P	4.57	6.30	6.83
KELSEY-HAYES CAN., WINDSOR, ONT.	325	780	DEC. 19/79	36		7.90	3.90	10.08
ONT. STEEL CO., CHATHAM & O.P., ONT.	325	1300	APR. 26/71	36	C	4.81	5.73	7.49
PRESTOLITE CO., SARNIA, ONT.	325	500	MAY 1/71	36	C	2.97	5.99	7.21
PRESTOLITE CO., SARNIA, ONT.	325	580	APR. 29/74	36	C	3.83	5.60	9.35
ROCKWELL INTER., CHATAM & O.P., ONT.	325	650	APR. 20/74	36	P	8.79	4.17	10.07
THOMPSON PROD. LTD., ST.CATHERINES, ONT.	325	900	AUG. 11/71	36	P	5.78	7.42	7.49
THOMPSON PROD. LTD., ST.CATHERINES, ONT.	325	950	JUNE 2/68	36	C	3.17	5.96	3.61
THOMPSON PROD. LTD., ST.CATHERINES, ONT.	325	900	MAY 15/74	36		8.36	4.39	10.03
HAWKER SIDDELEY CAN., TRENTON, N.S.	326	1400	APR. 23/75	24	C P	2.71	15.97	8.52
MLW-INDUSTRIES LTD., LONGUE PTE., QUE.	326	850	DEC. 20/74	24	C	5.04	16.41	8.74
BURRARD DRY DOCK, NORTH VANCOUVER, B.C.	327	720	OCT. 15/74	22	P	7.62	22.59	8.84
SHIPYARD ASSN., VAN. & WESTMIN., B.C.	327	1515	NOV. 1/74	21	P	8.61	24.00	8.96
CDN. GEN. ELECTRIC, MONTRL. & QUE., QUE.	332	3850	MAR. 13/74	24	P	2.74	11.60	11.02
CDN. GEN. ELECTRIC, MONTRL. & QUE., QUE.	332	3550	APR. 3/70	24	P	1.16	8.62	3.34
CDN. GEN. ELECTRIC, MONTRL. & QUE., QUE.	332	3370	MAR. 13/72	24	P	3.05	6.80	7.97
C.S.W. APPLIANCES, WESTON, ONT.	332	500	SEPT. 2/75	24	P	4.20	14.01	8.12
INGLIG LIMITED, STONEY CREEK, ONT.	332	750	SEPT. 27/73	36		6.62	7.11	10.64
INGLIS LIMITED, TORONTO, ONT.	332	800	AUG. 18/74	36	P	4.95	8.60	10.07
CDN. ADMIRAL CORP., PORT CREDIT, ONT.	334	1000	MAY 22/74	24	C P	3.52	15.05	10.66
PHILCO FORD OF CAN., TORONTO, ONT.	334	730	JAN. 19/75	24	P	8.26	18.93	8.30
RCA LIMITED, PRESCOTT, ONT.	334	605	JULY 5/74	24	C P	3.30	12.64	9.29
CANADIAN MARCONI, MONTREAL, QUE.	335	640	AUG. 20/74	27	C T P	2.09	7.61	9.59
CANADIAN MARCONI, MONTRELA, QUE.	335	750	APR. 2/74	24	C T P	6.03	11.01	11.54
GTE AUTOMATIC ELECTRIC, BROCKVILLE, ONT.	335	1100	AUG. 11/75	24		9.31	20.53	8.55
LENKURT ELECTRIC (CANADA), BURNABY, B.C.	335	525	MAR. 15/74	25	C T P	5.15	12.49	12.17
MARSLAND ENGINEERING, WATERLOO, ONT.	335	800	MAY 27/73	36	C P	1.02	9.08	11.33
NORTH. ELECT., NFLD, PEI, NB, QUE, ONT.	335	700	JULY 20/73	31		11.24	10.87	11.10
NORTH. ELECT., BELLEVILLE & O.P., ONT.	335	1290	JULY 15/73	31		15.92	18.12	11.10
NORTH. ELECT., BELLEVILLE, ONT.	335	1300	MAY 7/70	37	P	5.30	4.63	4.18

NAME OF COMPANY	SIC	EMPL.	SIGNING DATE	L	FEATURES	WAGE CHANGE COLA %	WAGE CHANGE OTHER %	PRICE CHANGE %
NORTH. ELECT., BRAMALEA, ONT.	335	2300	JUNE 28/73	34		10.23	10.77	10.89
NORTH. ELECT., BRAMALEA, ONT.	335	2500	DEC. 6/70	30	P	0.29	6.22	5.56
NORTH. ELECT., LONDON, ONT.	335	925	AUG. 14/68	36	P	0.73	7.21	3.58
NORTH. ELECT., MONTREAL, QUE.	335	3000	JUNE 4/70	36	P	6.13	9.16	4.30
NORTH. ELECT., LONDON, ONT.	335	1070	APR. 8/71	23		5.63	7.34	5.56
NORTH. ELECT., LONDON, ONT.	335	2460	JULY 15/73	36		10.26	12.07	11.24
NORTH. ELECT., MONTREAL, QUE.	335	1750	AUG. 23/73	30		15.44	12.10	10.80
NORTH. ELECT., MONTREAL, QUE.	335	4465	JUNE 15/73	36		10.06	11.09	9.93
RCA LTD., MIDLAND, ONT.	335	880	JUNE 1/75	24	C P	2.79	15.16	8.55
BROWN BOVERI, LACHINE, QUE.	336	500	JULY 23/75	30	P	3.93	13.65	8.77
CDN GENERAL ELECTRIC, TORONTO, ONT.	336	6735	MAR. 22/70	24	P	1.10	7.48	3.28
CDN GENERAL ELECTRIC, TORONTO, ONT.	336	6300	MAR. 12/74	24	C P	2.67	10.95	11.54
CDN GENERAL ELECTRIC, TORONTO, ONT.	336	6300	MAR. 10/72	24	P	2.94	6.27	7.37
WESTINGHOUSE CAN., HAMILTON, ONT.	336	3310	JUNE 22/72	34	C P	1.76	6.65	10.52
WESTINGHOUSE CAN., HAMILTON, ONT.	336	525	DEC. 6/73	24	C P	1.68	12.06	10.71
CANADA WIRE & CABLE, LEASIDE, ONT.	338	725	SEPT.11/73	12	C P	6.51	17.51	23.40
CANADA WIRE & CABLE, LEASIDE' ONT.	338	800	OCT. 17/69	24	C T P %	0.00	7.36	3.19
LEVITON MFG. OF CAN., MONTREAL, QUE.	339	600	MAY 26/75	24	C P	3.92	16.13	8.55
SYLVANIA ELECTRIC, DRUMMONDVILLE, QUE.	339	675	JAN. 24/75	24	T	1.82	17.03	8.17
CONSUMERS GLASS, TORONTO, ONT.	356	790	JUNE 20/75	24	C	1.76	15.97	8.10
DOMINION GLASS, MONTREAL, QUE.	356	830	MAY 16/75	24	C P	3.62	16.52	8.23
DOMINION GLASS, HAMILTON, ONT.	356	930	MAY 7/75	24	C P	1.85	16.71	8.52
DOMINION GLASS, WALLACEBURG, ONT.	356	840	AUG. 1/75	24	C	1.82	16.44	7.85
DUPLATE CANADA, HAWKESBURY, ONT.	356	750	DEC. 14/71	36	P	5.86	4.52	8.88
DUPLATE CANADA, HAWKESBURY & OSHAWA, ONT.	356	750	OCT. 12/74	42		8.64	4.04	9.58
PILKINGTON BROS., SCARBOROUGH, ONT.	356	720	MAY 12/75	22	C	4.41	14.39	9.30
PILKINGTON BROS., SCARBOROUGH, ONT.	356	700	SEPT.17/72	36	P	9.21	8.32	10.07
CDN JOHNS-MANVILLE, PORT UNION, ONT.	359	550	AUG. 23/71	32		10.69	7.64	7.17
CDN JOHNS-MANVILLE' PORT UNION, ONT.	359	570	MAY 15/74	36	P	7.77	4.86	10.07
CDN REFRACTORIES, DIV. DRESSER IND., QUE.	359	500	AUG. 3/74	24		9.99	18.01	10.50
CONNAUGHT LABORATORIES, BOLTONSTO., ONT.	374	540	AUG. 21/74	22	C T P %	0.59	10.41	9.99
KODAK CAN., MT.DENIS & BRAMPTON, ONT.	391	1250	DEC. 23/74	24	C	4.21	11.98	8.30

NAME OF COMPANY	SIC	EMPL.	SIGNING DATE	L	FEATURES	WAGE CHANGE COLA %	OTHER %	PRICE CHANGE %
CAN. CYCLE & MOTOR CO., WESTON, ONT.	393	900	MAY 6/73	30		10.70	5.16	11.73
COLECO (CAN.), MONTREAL, QUE.	393	550	JUNE 20/75	36		12.21	17.19	8.87
TORRINGTON CO., BEDFORD, QUE.	399	500	JUNE 7/71	36		9.21	9.93	7.49
TORRINGTON CO., BEDFORD, QUE.	399	610	JULY 15/74	36		10.78	12.65	10.03
AIR CANADA, SYSTEM-WIDE	501	2175	MAR. 22/74	36	C P	6.78	11.10	10.20
C.N. RAIL, ATLANTIC, ST.LAW. & GRT LAKES	503	9780	NOV. 7/74	12	T %	0.77	15.05	9.50
C.N. RAIL, ATLANTIC, ST.LAW. & GRT LAKES	503	1845	NOV. 7/74	8	T %	1.04	23.41	14.25
C.N. RAILWAY, ATLANTIC & CENTRAL REGIONS	503	2040	NOV. 7/74	12	T %	0.74	15.04	9.50
C.P. RAIL, ATLANTIC & EASTERN REGIONS	503	600	NOV. 7/74	12	T %	0.79	15.03	9.50
C.P. RAIL, PRAIRIE & PACIFIC REGIONS	503	5825	NOV. 7/74	12	T %	0.77	15.05	9.50
C.P. RAIL, ATLANTIC & EASTERN REGIONS	503	1700	NOV. 7/74	11	T %	0.75	16.63	10.36
QUE. N. SHORE & LAB. RAIL., QUE. & NFLD.	503	1155	JULY 22/75	36	T	8.79	6.68	8.86
RLWY. ASSN. OF CAN. (NON-OPS) SYSTEM-WIDE	503	55760	NOV. 7/74	12	T P %	0.76	15.91	9.50
RLWY. ASSN. OF CAN. (SHOP-CRAFT) SYSTEM-WIDE	503	21000	NOV. 7/74	12	T P %	0.71	17.18	9.50
B.C. GOV'T, PROV-WIDE, B.C.	504	2620	OCT. 1/74	18	P	10.13	12.63	7.25
TOWBOAT IND. REL. ASSOC., B.C.	504	1100	JAN. 25/73	36	C P	0.52	8.75	11.05
B.C. MARITIME EMPLRS. VARIOUS, PL., B.C.	505	3300	MAY 30/75	24	T P	0.00	14.94	7.93
LOGISTEC CORP., HALIFAX, N.S.	505	600	MAR. 10/75	12	T P %	0.90	15.12	9.50
ST.LAWRENCE SEAWAY AUTHORITY	505	1000	JUNE 3/74	19	P	4.66	3.84	10.71
ALTRANS EXPRESS & OTHERS, B.C.	507	505	NOV. 21/74	24	C	2.89	15.92	11.95
CND. FREIGHTWAYS, YUKON, N.W.T. & WEST CAN.	507	600	AUG 2/74	24	C	4.41	15.72	11.54
DIRECT MOTOR EXPRESS, MONTREAL, QUE.	507	535	DEC. 11/60	12	P	1.65	34.96	1.51
MOTOR TRAN. IND. REL. BUR., TORONTO, ONT.	507	7050	OCT. 3/71	36		1.08	12.17	8.88
MOTOR TRAN. IND. REL. BUR., MONTREAL, QUE.	507	2400	MAR. 25/69	36	C	1.07	13.17	3.84
MOTOR TRAN. IND. REL. BUR. OF ONT.	507	8000	SEPT.29/74	36		5.68	9.14	9.24
MOTOR TRAN. IND. REL. BUR., VAR. PL., QUE.	507	2400	APR. 15/75	36		5.97	10.16	9.11
MTR TRANSPORT INDUS RELATION BUREAU, ONT.	507	9560	AUG. 25/68	36	C	0.97	11.07	3.75
MTR TRANSPORT INDUST. BUREAU, QUE. & ONT.	507	1350	JULY 15/73	35	P	5.13	8.83	11.15
GREYHOUND LINES OF CAN., ALTA.	508	900	JUNE 12/75	36		4.01	7.33	5.28
HAMILTON STREET RLWY., HAMILTON, ONT.	509	600	APR. 16/75	24	T	4.32	13.92	8.52
MONTREAL URBAN COMM. TRANSIT, QUE.	509	3400	AUG. 30/75	24	T	0.00	16.91	7.71
OTT.-CARLTN. REG. TRANS. COMM., OTTAWA, ONT.	509	1000	SEPT.15/74	18	T P	0.00	19.27	10.32

NAME OF COMPANY	SIC	EMPL.	SIGNING DATE	L	FEATURES	%	COLA %	OTHER %	PRICE CHANGE %
TORONTO TRANSIT COMMISSION, TORONTO	509	6380	JAN. 20/75	24	T		0.00	14.70	9.15
LAKEHEAD TERMINAL ELEV., THUNDERBAY, ONT.	524	1500	MAR. 5/75	24	T P		3.64	18.87	7.93
MAN TELEPHONE SYSTEM, PROV-WIDE, MAN.	544	800	JULY 17/74	24	T		2.51	22.07	12.15
MARITIME TELEGRAPH & TELEPHONE, N.S.	544	550	DEC. 29/74	15	T	%	0.00	20.96	8.78
QUEBEC-TELEPHONE, RIMOUSKI & O.P., QUE.	544	675	APR. 28/75	17	P		6.12	29.71	8.32
GOV'T OF CAN. (POSTAL), ONT.	548	15350	MAY 27/75	30	C P		4.50	14.55	6.48
B.C. HYDRO & POWER AUTHOR., PROV-WIDE, B.C.	572	3000	AUG. 20/74	24	T P		4.65	17.10	12.22
B.C. HYDRO & POWER AUTHOR., PROV-WIDE, B.C.	572	2150	NOV. 5/73	24	T P		5.93	15.56	12.22
HYDRO ELEC. POWER COMM. OF ONTARIO	572	12450	APR. 16/73	36	T P	%	5.14	13.24	10.07
HYDRO ELEC. POWER COMM. OF ONTARIO	572	10460	OCT. 14/70	24	T P		0.97	8.75	3.30
MANITOBA HYDRO, PROV-WIDE, MAN.	572	900	JULY 25/74	18	T P		0.00	16.50	12.13
ONTARIO HYDRO, PROV-WIDE, ONT.	572	13350	APR. 30/75	24	T P	%	4.54	8.91	8.52
SASK. POWER CORP., PROV-WIDE, SASK.	572	1100	FEB. 18/74	12	T P		9.15	26.13	12.13
SASK. POWER CORP., PROV-WIDE, SASK.	572	1200	APR. 16/75	12			12.01	25.49	10.24
TORONTO HYDRO ELECTRIC, TORONTO, ONT.	572	500	MAY 4/75	24		%	0.00	18.80	8.15
TORONTO HYDRO ELECTRIC, TORONTO, ONT.	572	500	MAY 4/75	24		%	0.00	18.81	8.15
B.C. HYDRO & POWER, VANCOUVER & O.P., B.C.	574	605	APR. 5/74	24	T P		6.45	14.09	12.29
UNION GAS CO. OF CANADA, SOUTHERN ONT.	574	910	JULY 23/74	24	C T P		2.09	12.35	11.54
OKANAGAN FED. SKIP. ASSN., OKANAGAN, VL., B.	614	1700	AUG. 17/74	24	C		12.02	20.71	8.99
NORTHERN ELECTRIC, ONT., MAN., SASK., ALTA.	621	645	JULY 24/73	27	P		12.22	13.52	11.63
OCEAN CONSTRUCTION, VARIOUS PLACES, B.C.	626	650	JULY 1/74	24	T P		1.99	20.09	11.54
A & P STORES, PROV-WIDE, ONT.	631	4735	OCT. 15/74	24	C P		0.97	14.65	9.51
ASSN. DETAILLANT ALIMENTN., MONTREAL, QUE.	631	1100	JULY 29/74	24	T P		3.84	25.22	8.07
CANADA SAFEWAY LTD., SOUTH EASTERN, ONT.	631	600	NOV. 20/74	24	C T P		2.99	14.56	9.51
DOMINION STORES, NORTHERN, ONT.	631	1025	NOV. 24/74	24	C T		3.50	15.28	9.99
DOMINION STORES, ONT. & QUE.	631	10000	AUG. 19/74	24	C T		3.04	14.82	9.51
DOMINION STORES, TORONTO, ONT.	631	600	AUG. 19/74	24	C T		3.01	16.67	8.49
DOMINION STORES, VARIOUS PLACES, ONT.	631	620	NOV. 10/74	21	C T		3.48	15.64	10.61
LOBLAWS LTD., OTTAWA & O.P., ONT.	631	730	SEPT.15/74	24	C P		3.47	15.60	9.99
LOBLAWS LTD., TORONTO & O.P., ONT.	631	5500	AUG. 19/74	24	C P		2.94	13.49	9.99
LOBLAWS LTD., TORONTO & SOUTHERN ONT.	631	695	OCT. 8/74	24	C P		3.95	16.75	9.51
STEINBERG LTD., OTTAWA & O.P., ONT.	631	1000	DEC. 22/74	22	C T P		0.93	14.34	8.43

| NAME OF COMPANY | SIC | EMPL. | SIGNING DATE | L | FEATURES | WAGE CHANGE | | PRICE CHANGE |
						COLA %	OTHER %	%
STEINBERG'S LIMITED, SOUTHERN ONT.	631	4500	JULY 18/74	24	C T P	0.96	13.09	9.51
HUDSON'S BAY CO., VICTORIA, B.C.	642	500	MAY 5/75	24	T P %	0.00	20.94	9.40
SYNDICAT DE QUEBEC, QUEBEC, QUE.	642	650	APR. 18/74	33	C T P	2.34	19.06	9.47
MTL CITY DIST. SAVINGS BANK, MONTREAL, QUE.	701	1005	JUNE 26/70	18	P	2.80	8.93	2.08
SASK. GOV. INSURANCE, REGINA, SASK.	721	595	SEPT.25/74	16	T P	1.39	20.96	10.46
B.C. HOTEL ASSN., VICTORIA & SYDNEY, B.C.	881	600	JULY 15/74	21	T P	18.39	18.03	9.49
B.C. HOTELS ASSN., VARIOUS PLACES, B.C.	881	2400	JUNE 12/74	24	T P	5.32	17.53	10.50
TORONTO HOTEL ASSOC., TORONTO, ONT.	881	800	APR. 13/75	24	T	4.04	13.08	8.74
CDN. NAT-INSTUTE-FOR BLIND, PROV-WIDE, ONT.	886	600	FEB. 21/75	24	C P	4.34	24.04	8.74

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