

UNITED NATIONS



NEW YORK

NATIONS UNIES

INTERNATIONAL CIVIL
SERVICE COMMISSION

COMMISSION DE LA FONCTION
PUBLIQUE INTERNATIONALE

EXPLANATION OF RESULTS OF THE 2016 BASELINE COST-OF-LIVING SURVEYS IN HEADQUARTERS DUTY STATIONS

The ICSC conducted cost-of-living surveys in headquarters duty stations in September and October 2016. The post adjustment multipliers resulting from these surveys are to be implemented in May 2017, affecting net salaries of staff in the Professional and higher categories. This document reviews the underlying factors affecting the survey results and the impact of their implementation of the net salaries in three headquarters duty stations: Geneva, Montreal and Washington, D.C.

The combination of current operational rules dealing with salary setting, differences in the evolution of macro-economic indicators between duty stations, and changes in the survey methodology together resulted in changes in post adjustment for Geneva and Montreal. For Geneva, the implementation resulted in an overall decrease of 7.7% in net salary, whereas for Montreal the new post adjustment multiplier led to a net salary increase of 2.1%. The implementation of survey results triggered no change in the Washington, D.C. post adjustment.

8 May 2017

A. EXECUTIVE SUMMARY

This purpose of this document is to explain to UN staff and other ICSC stakeholders the conduct of the 2016 baseline cost-of-living surveys, the interpretation of the survey results, and the implications the survey results have on staff salaries, in the three Headquarters duty stations: Geneva, Montreal, and Washington, D.C.; and to provide a detailed analysis of the factors contributing to the results and their impact on staff compensation via the existing operational rules for salary setting. While the salary implication of the survey results are presented, most of the document aims to focus on the data, macro-economic indicators, and the methodology used in the actual survey to measure cost-of-living differentials. Section A provides a summary of the survey results, the main factors driving the changes in relative cost of living, and their implication for salaries, while section B provides a more in-depth analysis of the evolution of the cost of living in the three duty stations compared to New York, as measured by the previous survey in 2010, the updating in between the surveys and finally the current survey.

A.1 SURVEY OBJECTIVE

Baseline cost-of-living surveys are conducted periodically to collect the benchmark data required for comparisons of cost of living between New York and other headquarters duty stations around the world. They are designed to establish purchasing power parity of the salaries of United Nations staff members in the Professional and higher categories, serving at the designated duty stations relative to those of their counterparts in New York. The 2016 baseline surveys were conducted in accordance with the methodology, guidelines and procedures approved by the Commission, and with active participation of many stakeholders.

The objective of implementing the baseline survey results is to reset the net salaries for Professional and higher category staff to equalize the purchasing power of UN salaries across the Common System. For salary setting purposes, the survey results in the Post Adjustment Index (PAI) for each duty station reflecting the relative cost of living with New York, the base of the system. The PAI is then translated into a Pay Index through the post adjustment multiplier (*Pay Index = 100 plus multiplier*), published monthly on the ICSC website and indicated on individual earning statements or pay slips. Between surveys, the standing policy of the Commission is to adjust the PAI for inflation in all its components and exchange rate fluctuations, while at the same time to keep salaries stable in local currency by adjusting the post adjustment multiplier according to operational rules. Only at the time of implementation of new survey results, may the multipliers be set at the same level derived from the PAIs.

A.2 SUMMARY OF THE SURVEY RESULT

To understand the nature of the results of the 2016 cost-of-living surveys, the resulting PAIs and their implications for salaries for the three duty stations, it is imperative to make an assessment of the evolution of the PAI and Pay Index between the two most recent surveys. Table 1 below presents these indices, first as compiled based on the 2010 survey methodology and first implemented in April 2011, and as updated to prevailing estimates according to the PAI methodology (PAI) and the operational rules (Pay Index). Second, the resulting estimates from the new 2016 survey, following the new methodology and updated to 1 May 2017, are presented together with the corresponding changes in PAI and Pay Index as of the same date.

Table 1. Evolution of PAI and Pay Index and Changes from Implementation of 2010 Survey in April 2011 to Implementation of 2016 Results, as of 1 May 2017

<i>Duty Station</i>	<i>2010 Cost-of-Living Round</i>				<i>2016 Cost-of-Living Round</i>			
	<i>2010 Survey, April 2011 [1]</i>		<i>Prevailing, as of 1 May 2017 [2]</i>		<i>2016 Survey, as of 1 May 2017 [3]</i>		<i>Changes, as of 1 May 2017 [4]</i>	
	<i>PAI</i>	<i>Pay Index</i>	<i>PAI</i>	<i>Pay Index</i>	<i>PAI</i>	<i>Pay Index</i>	<i>PAI</i>	<i>Pay Index</i>
Geneva	198.1	201.4	172.4	181.1	167.1	167.1	-3.1%	<i>-7.7%^a</i>
Montreal	167.7	167.7	133.2	131.7	134.5	134.5	1.0%	<i>2.1%</i>
Washington, D.C.	144.6	144.6	143.4	145.7	145.5	145.7	1.5%	<i>-^b</i>
<i>a. New post adjustment index is lower than existing Pay Index by more than 5 %. Transitional measures applicable for existing staff. See section B.4.1 for the implementation details.</i>								
<i>b. New post adjustment index is lower than existing Pay Index, but less than 5 %. No change in the Pay Index. See section B4.3.</i>								

Main issues to note from the summary Table 1 are:

- To assess the overall change in cost-of-living indices between the two surveys, compare the Survey PAIs in April 2011, column [1], and new Survey PAI, column [3]. The largest relative change has been for Montreal from 167.7 to 135.4, (decrease of nearly 20 %).
- The difference between prevailing PAI and Pay Index (column [2]) represents the extent to which current operational rules have led to a deviation of the salaries from the underlying principle of equal purchasing power as measured in US dollars. In particular, note the difference between 181.1 and 172.4 (PAI about 5 % lower than the Pay Index) for Geneva.

- The changes in PAIs in May 2017 reflect (column [4]), to a large extent, the impact of methodological changes implemented for the compilation of PAIs. The introduction of the new methodology, for example, decreased the PAI for Geneva by 3.1 % and increased it for Washington, D.C. by 1.5 %.
- The changes in Pay Index (column [4]), represent the combined effect of the operational rules governing the salary setting process and the methodological changes.

The 2016 round of cost-of-living surveys incorporated a number of improvements in the compilation of the PAI, as recommended by the Advisory Committee on Post Adjustment Questions (ACPAQ) in previous sessions and approved by the Commission. These improvements were designed to make the post adjustment system more accurate, more transparent and more reflective of its raison d'etre in ensuring equal purchasing power of net salaries across duty stations. The design, administration, and analysis of the 2016 baseline cost-of-living surveys were discussed at the 39th session of ACPAQ with the full participation of representatives of administrations and staff federations. ACPAQ confirmed that the conduct of the 2016 surveys was based on a faithful application of the methodology, guidelines and procedures approved by the Commission for the 2016 round of surveys. It should be noted that the 39th session did not discuss the impact of the results on staff salaries, following the operational rules established by the Commission, as issues concerning these rules are not in the scope of the Committee's work, and final salary repercussions could, in any case not be determined in absence of relevant information on latest inflation estimates and exchange rates.

The next section summarizes the two underlying factors explaining the results for each of the three HQ duty stations:

- The combined effect of **relative evolution of inflation** between New York and each duty station and the impact of **exchange rate fluctuations**, i.e. the difference in the evolution of prices at the duty station and New York, as measured in US Dollars.
- The impact of **changes in the PAI compilation methodology**, i.e. what impact the changes in the methodology to measure the cost of living at the duty station versus New York had, incorporating real cost-of-living changes accumulated by the PAI updating process from the 2010 survey.

A.3 MAIN DRIVERS OF THE SURVEY RESULTS

This section summarizes the main drivers of the changes in cost of living at the concerned duty stations relative to New York. Changes in the duty station specific cost-of-living indices (COLI) are considered, instead of PAI and Pay Index that are affected by changes in base salaries and operational rules. As the surveys were conducted in September and October 2016, this analysis looks at the COLIs at survey dates in 2010 and 2016 – not the implementation dates relevant for salary setting, as in Table 1, – without the influence of the updating process. All estimates and figures referred to here can be found in section B with additional detail and clarification of the PAI compilation and the process of applying relevant operational rules.

A.3.1 GENEVA

Table 2 below summarizes the evolution of Geneva’s relative cost of living from the 2010 survey to the 2016 survey. Starting from the September 2010 survey, the cost-of-living index (112.2) based on the old survey showed Geneva being 12.2 % more expensive than New York. Once inflation – **in both Geneva and New York** – and currency exchange rate changes, are accounted for, the relative cost of living in Geneva decreased by 4.9 % to 106.7, as measured by the established updating process. In October 2016, the new survey, conducted with a revised survey methodology, resulted in an index of 102.5, indicating that the cost of living in Geneva, as measured in US dollars, had decreased a further 4 %. In total, the two COLIs indicated a decrease in Geneva cost of living relative to New York of 8.7 %.

Table 2. Geneva Cost-of-Living Indices relative to New York from 2010 to 2016

<i>Survey</i>	<i>Date</i>	<i>Index</i>	<i>Value</i>	<i>Change</i>
2010 Survey	Sept 2010	Cost of Living (1)	112.2	
	Oct 2016	Updated COLI (2)	106.7	
		<i>Account for ex. Rate and inflation (2)/(1) -1</i>		-4.9%
2016 Survey	Oct 2016	COLI (3)	102.5	
		<i>Account for methodology changes (3) / (2) -1</i>		-4.0%
Overall change (3) / (1) -1				-8.7%

This overall decrease of relative cost of living to New York in US dollar terms does not mean that cost of living in Geneva has decreased. Quite the opposite! In spite of slight deflation (decrease in national price level) according to official Swiss figures, based on the updated COLI produced by ICSC, the cost of goods and services representing expenditure patterns of UN staff increased from 2010 to 2016; both the rent index based on annual rent surveys by the International Service for Remunerations and Pensions (ISRP) and the medical insurance premiums paid by UN staff in Geneva increased. However, all these costs increased also in New

York. In fact, they all increased faster than in Geneva. That is why, in relative terms, the cost of living in Geneva decreased compared to New York, even though local prices or costs may have increased. The main drivers were:

- There was high overall inflation in New York, while Geneva experienced a slight overall deflation over the past six years. The high inflation in New York, coupled with relative strength of the Swiss franc vis-a-vis the US dollar, led to a decrease of about 6.8 % in the in-area (excluding Housing) index (IA-H).
- The small rent index increase in Geneva (1.7 %) was outpaced by an increase of the New York index (11.8 %), contributing to the reduction in the housing index of about 7.8 %.
- Larger increases in medical insurance premiums in New York relative to Geneva led to a decrease in the medical insurance index of about 9.4 %.

As mentioned earlier, the 2016 round of cost-of-living surveys incorporated a number of methodological improvements in the compilation of the PAI, as recommended by ACPAQ. For Geneva, the impact of these methodological changes was, on aggregate, negative. The main reasons were:

- The IA-H component of the PAI decreased a further 7.9 %. The impact of introduction of new expenditure weights and more representative consumer basket had only a small negative impact. More significant was the difference between the actual surveyed cost-of-living index and that of the updated 2010 index, reflecting changes not captured by the updating process. The official inflation between the surveys in the US was 10.7 % and -1.2 % in Switzerland.
- The housing component of the PAI decreased by 3.5 % as a result of the application of the new methodology for calculating the rent index. Application of actual weights for different types of dwellings reflecting housing patterns and market rents in Geneva and Vaud cantons (not in France) and New York had a large negative impact. This was partially offset by the revision of the sample of New York apartment rental neighbourhoods to include the more affordable suburbs.
- The new methodology for specification of the weight for the out-of-area component, other things being equal, resulted in a slight increase of the overall COLI by 0.3 %.

A.3.2 MONTREAL

Contrary to Geneva, Montreal is more affordable than New York. Table 3 shows that the cost-of-living index (96.4) in 2010 was 3.6 % lower in Montreal than in New York. Once inflation **in both Montreal and New York** and for Canadian dollar exchange rate changes are accounted for, the relative cost of living in Montreal decreased by 12.6 % to 84.3. The recent survey in 2016 resulted in an index of 83.2, indicating a further 1.2 % decrease in relative cost of living in Montreal. In total, the two surveys indicated a decrease in Montreal cost of living relative to New York of 13.7 %.

Table 3. Montreal Cost-of-Living Indices relative to New York from 2010 to 2016

<i>Survey</i>	<i>Date</i>	<i>Index</i>	<i>Value</i>	<i>Change</i>
2010 Survey	Sept 2010	Cost of Living (1)	96.4	
	Oct 2016	Updated COLI (2)	84.3	
	<i>Account for ex. Rate and inflation (2)/(1) -1</i>			-12.6%
2016 Survey	Oct 2016	COLI (3)	83.2	
	<i>Account for methodology changes (3) / (2) -1</i>			-1.2%
Overall change (3) / (1) -1				-13.7%

While general inflation, as measured by national CPIs, did not significantly differ between New York and Montreal and therefore did not have a large impact on the purchasing power parity, the Canadian Dollar's sustained depreciation relative to the US Dollar, from 2010 to date, had a significant impact. The main drivers were:

- The relative decrease in the IA-H component, which was 18.4 %, reflecting largely the currency exchange rate.
- The housing index based on the 2010 methodology decreased from the 2010 survey date to the 2016 survey date by 23.5 %, again reflecting both the depreciation of the Canadian dollar relative to the US dollar, and New York's significantly faster rent inflation evident in the ISRP market rent data.
- Much larger increases in medical insurance premiums in New York relative to Montreal, as well as the underlying currency exchange rate, led to a decrease in the medical insurance index of about -18.4 %,

The second factor, changes in the overall survey methodology, had a small aggregate impact. However, the underlying components tell a more nuanced story. The main drivers were:

- The methodology improvements, consumer basket composition and expenditure weight revisions, and faster New York inflation as evidenced in the price data collected by the ICSC compared with those based on updating with national CPIs, decreased the IA-H index a further 5.4 %.
- The new rent index calculation methodology, using duty station specific dwelling class weights and revision of New York apartment rental neighbourhoods to include more affordable New York suburbs, resulted in a 16.7 % increase in the housing index. As the changes in residential patterns were minor, most of the change is due to lower average New York apartment rents.
- The impact attributable to the change in the methodology for specifying the weight for the OA component, from the specification used in the 2010 round, was a decrease of 0.2 % in the overall COLI.

A.3.3 WASHINGTON, DC

Similar to Montreal, Washington, D.C. has a lower cost of living than New York. Table 4 shows that the cost-of-living index (88.9) in 2010 was 11.1 % lower in Washington, D.C. than in New York. Once inflation in both **Washington, D.C. and New York** are accounted for, the COLI decreased slightly by 0.5% to 88.5. The new survey in September 2016 resulted in an index of 88.7, indicating a small 0.2 % increase in relative cost of living in Washington, D.C. In total, the two surveys indicated only a slight total change of -0.3 % in the measured cost of living relative to New York.

Table 4. Washington, D.C. Cost-of-Living Indices relative to New York from 2010 to 2016

<i>Survey</i>	<i>Date</i>	<i>Index</i>	<i>Value</i>	<i>Change</i>
2010 Survey	Sept 2010	Cost of Living (1)	88.9	
	Sept 2016	Updated COLI (2)	88.5	
	<i>Account for ex. Rate and inflation (2)/(1) -1</i>			-0.5%
2016 Survey	Sept 2016	COLI (3)	88.7	
	<i>Account for methodology changes (3) / (2) -1</i>			0.2%
Overall change (3) / (1) -1				-0.3%

As both Washington D.C. and New York share the same currency and are updated from time to time on the basis of the same US city average CPI, the small 0.5 % decrease reflects mainly the different rental price evolution. The changes were:

- The most important effect within the PAI components was the initial decrease of the housing index by 2.6% due to slightly faster rent inflation in New York than Washington, D.C.
- The average medical insurance premiums in 2010 were lower in Washington, D.C. than in New York, but increased slightly faster, leading to an overall increase of about 5 % in the medical insurance index.

As in Montreal, the impact of changes in the overall survey methodology had a small aggregate impact. The main issues to note, however, are:

- The introduction of the new rent index calculation methodology increased the housing index by a significant 7.7 %, as the change in dwelling class weights in both

locations and lower average New York apartment rents contributed to an increase in the rent index.

- The impact attributable to the change in the methodology for specifying the weight for the OA component, from the specification used in the 2010 round, was a decrease of 0.7 % in the overall COLI.

B. DETAILED EXPLANATIONS

B.1 GENERAL BACKGROUND

There are two major components of the survey: a price survey, which entails the collection of prices and costs of a basket of goods and services, from retail outlets at the duty station; and a staff expenditures survey, in which expenditure data are collected from eligible staff.

The price data collected are used to estimate price relativities at the duty station versus New York; and expenditure data are used to estimate expenditure patterns or weights at the duty station. Both types of data are incorporated in the compilation of the Cost-of-Living Index (COLI), an estimate of the cost of living at the duty station relative to New York. The COLI is then rebased to the pay level at the time of price data collection in New York to obtain the Post Adjustment Index (PAI). The PAI is then converted to a post adjustment multiplier (which determines salary levels), by application of a number of operational rules designed to strike a reasonable balance between punctual salary adjustments reflecting the cost-of-living relativity with New York and the stability of remuneration.

The results of the cost-of-living surveys in Geneva, Montreal and Washington D.C. must be explained in the context of the principle underpinning the post adjustment system, which is the equalization of the purchasing power of salaries of UN common system staff in the Professional and higher categories at any duty station with the salaries of their counterparts in New York, the base of the post adjustment system.

This principle is operationalized with the conduct of periodic cost-of-living surveys, whereby prices and costs at the duty station are compared to prices and costs in New York for a selected basket of goods and services common to all locations. The data are used for the calculation of bilateral indices between each duty station and New York. At the same time, the expenditure patterns of staff, as reported in the staff expenditures survey, are used to determine the expenditure weights assigned to the five major PAI components. The frequency of the surveys varies by type of duty station. For Geneva and other HQ duty stations, surveys are normally conducted once every 5 years. This period was extended by one extra year for this new round of surveys because of the comprehensive review of the compensation package.

Between surveys, the results are updated on a monthly basis using appropriate inflation factors (disaggregated CPI series or other specially calculated factors). The updating process provides just an approximation of current cost-of-living relativities, whereas a more accurate estimate of the cost-of-living relativity of a duty station with New York is obtained when a new survey is conducted. Furthermore, as part of the Commission's operational rules for salary setting, salary levels for Group I duty stations such as Geneva, are kept stable in local currency by protecting them from monthly exchange rate fluctuations. This keeps monthly pay levels constant, regardless of other macro-economic conditions, in duty stations such as Geneva, with strong local currencies relative to the USD. This policy and several other operational rules designed as a trade-off between the accuracy of cost-of-living measurement, and stability of

remuneration, may lead to a disconnect of pay levels from the principle of purchasing power parity of salaries of duty stations relative to New York. The primary objective of cost-of-living surveys is to correct this distortion and realign pay levels with actual cost of living.

B.2 SUMMARY OF COMPILATION OF THE POST ADJUSTMENT INDEX (PAI)

All information collected with a cost-of-living survey is used to calculate a Cost-of-Living index (COLI). The COLI, calculated as a weighted arithmetic average, comprises five major expenditure components as follows:

- 1) IA-H: In-Area (excluding Housing)
- 2) H: Housing
- 3) MI: Medical Insurance
- 4) PC: Pension Contribution
- 5) OA: Out-of-Area expenditures

The relative importance of each of the five major PAI components is indicated by the expenditure weights derived from data reported in the staff expenditures surveys. The weights for the H, MI, PC and OA major components are derived directly from data specific to the duty stations and obtained either from the staff expenditures surveys or administrative sources. While the overall weight of the IA-H component is derived as a difference between the level of net remuneration and the weights of the other major components at the time of the survey, the weight for the basic headings within the IA-H component apportion the overall weight by common expenditures weights derived staff reported expenditures on goods and services within the country of the duty station of assignment and pooled across all headquarters duty stations to ensure stability of the weights.

The expenditure weights used in the calculation of the PAI are different for different duty stations, depending on the expenditure patterns of staff serving in them. Table 5 shows the five major PAI components and the relative weight of each component, on the basis of the 2016 baseline cost-of-living surveys. These weights are used to aggregate the corresponding component indices to estimate the COLI and, in turn, the overall PAI.

Table 5. Main PAI Components and their share expenditure on the basis of the 2016 cost-of-living survey

<i>PAI Component</i>	<i>Geneva</i>	<i>Montreal</i>	<i>Washington, D.C.</i>
Total	100	100	100
In-Area Excluding Housing	42	55	41
Housing, water, electricity, gas and fuels	25	21	32
Medical Insurance	5	3	7
Pension Contribution	8	11	10
Out-Of-Area	20	10	10

The In-Area (excluding Housing) (IA-H) component covers a broad range of expenditures: food and non-alcoholic beverages; alcoholic beverages and tobacco; clothing and footwear; furniture, household equipment and routine maintenance of the house; health; transport; communication; recreation and culture; education; restaurants and hotels and miscellaneous goods and services. The IA-H has a high relative importance in determining the COLI, or the PAI, with weights ranging between 42 to 55 % of the index.

The Housing (H) component covers rents for housing; maintenance and repair of the dwelling; utilities (water supply, electricity, gas, heating energy) and other housing costs. The H component also is of high importance, with weights usually ranging between 21 and 32 % of the index.

The Medical Insurance (MI) component reflects the average staff contribution to the payment of the medical insurance premium at the duty station. It is calculated on the basis of the proportion of subscription of different medical plans available to the staff population at the duty station. The MI component usually has a lower importance, with a weight in the range of 3 to 7 %.

The Pension Contribution (PC) component measures the average staff contribution to the United Nations Joint Staff Pension Fund at any point in time and is the same for all staff no matter where they are located. At the beginning of the survey round its index is set to 100 and its periodic increases coincide with increases of the pensionable remuneration scale. The PC component has a medium importance in the PAI, with a weight ranging from about 8 to 10 %.

The Out-of-Area (OA) component covers expenditures incurred outside of the country of the staff member's duty station. The index of this component is calculated and updated every month as a weighted average of 26 US dollarized inflations, making it more or less like a worldwide inflation index in US dollar terms. As with the index of the PC component, the OA index is also the same for all duty stations, at any point in time.

B.3 OPERATIONAL RULES FOR SALARY DETERMINATION

The PAI is a statistical measure of the cost-of-living relativity of a duty station compared to New York, and is updated on a monthly basis to account for changing macro-economic indicators, i.e., inflation in all PAI components and exchange rate fluctuations. A number of operational rules are used to determine the multiplier and hence the salary payable to staff on a monthly basis. The overall goal of the operational rules is to strike a reasonable balance between accurate and punctual measurement of the cost-of-living relativity and the stability of remuneration (in local currency for group I duty stations and US dollars for group II duty stations).

The combined effect of these rules for a group I duty station is that the Net Take-home Pay (NTP), defined as base salary plus post adjustment minus pension contribution, in local currency terms, once set at the beginning of the round, is kept stable from month to month,

except for possible real salary increases warranted by annual adjustments for inflation in PAI components, or small downward adjustments emanating from periodic increases in staff contributions to the Pension Fund, in tandem with periodic increases in net remuneration in New York.

However, the implementation of new survey results supersedes the normal updating of the multiplier under the operational rules for salary setting. In case of positive survey results when the survey-PAI at the time of implementation is higher than the prevailing Pay Index, as is the case with Montreal in May 2017, the new multiplier would be set as the updated survey-PAI minus 100.

In case of negative survey results, when the survey-PAI at the time of implementation of the survey results, is lower than the prevailing Pay Index, but not more than by 5 %, the prevailing Pay Index would be maintained, as is the case with Washington, D.C. In case of significantly negative survey results, when the survey-PAI at the time of implementation of the survey results, is lower than the prevailing Pay Index by more than 5 %, the negative survey results would be implemented. This is the case for Geneva.

Nevertheless, staff already in service at the duty station at the time of implementation (existing staff) would receive a Personal Transitional Allowance (PTA), introduced to phase-in the negative survey results in a more gradual manner. At the time of implementation and for the first three months, the PTA would cover the entire gap between the earlier and the actual level of remuneration. After three months and for all successive periods of iteration, the PTA would be reduced to reflect a lowering of the level of the prevailing Pay Index for existing staff by 5 %.

B.4 IMPACT OF SURVEY RESULTS FOR GENEVA, MONTREAL AND WASHINGTON, D.C.

To understand the nature of the results of the 2016 cost-of-living surveys and their implications for salaries for the various duty stations, it is imperative to make a full assessment of the evolution of the PAI and Pay Index (post adjustment multiplier plus 100) from the data of the last survey (2010) to that of the latest survey (2016).

The impact of the survey results on staff salaries is assessed by comparing the PAI based on the 2016 survey updated to the date of implementation of the survey results, to the prevailing Pay Index at the same point in time. In accordance with the Commission's decision, the implementation date of the survey results is 1 May 2017, and hence both the post adjustment index based on the survey and the Pay Index were updated to 1 May 2017, and the new Pay Index is determined by a comparison of these two indices. The new Pay Index reflects the combined effect of the existing gap, if any, between the updated PAI (based on the 2010 Survey) and prevailing Pay Index, as well as the impact of changes due to the methodology and data for the 2016 cost-of-living surveys. Table 4 contains a summary of the changes to the pay indices resulting from the 2016 cost-of-living surveys conducted at the concerned duty stations.

Table 6. Summary of changes in the Pay Index for Geneva, Montreal and Washington D.C as a result of the 2016 cost-of-living surveys, as of 1 May 2017

<i>Duty Station</i>	<i>Updated 2016 survey PAI</i>	<i>Updated 2010 survey PAI</i>	<i>Prevailing Pay Index</i>	<i>New Pay Index</i>	<i>Change in Pay Index</i>
Geneva	167.1	172.4	181.1	167.1	-7.7% ^a
Montreal	134.5	133.2	131.7	134.5	2.1%
Washington, D.C.	145.4	143.4	145.7	145.7	- ^b
<i>a. New post adjustment index is lower than existing Pay Index by more than 5 %. Transitional measures applicable.</i>					
<i>b. New post adjustment index is lower than existing Pay Index, but less than 5 %. No change in the Pay Index.</i>					

B.4.1 GENEVA

As can be seen in Table 6, the multiplier derived from the survey and updated to 1 May 2017 is 67.1 (equivalently, the updated Pay Index derived from the 2016 survey is 167.1), representing a pay level that is about 7.7 % less (in US dollar terms) than that based on the prevailing multiplier of 81.1. 81.1 is the multiplier calculated on the basis of the operational rule that ensures stability of the Net Take-home Pay (NTP) in Swiss francs for Geneva, by adjusting it for the effects of the fluctuations of the Swiss franc relative to the US dollar, without regard to inflation.

Since the survey based PAI is below the prevailing Pay Index by more than 5 %, the gap closure measure is triggered, which is another operational rule designed to mitigate the impact of negative survey results on salaries. According to established rules, the salaries for new staff in Geneva will immediately be adjusted to the new Pay Index, whereas for existing staff an additional individual measure to adjust the effective Pay Index, namely Personal Transitional Allowance (PTA) is initiated. It works as an adjustment to the general Geneva multiplier so that, for the first three months the PTA covers the full difference between the old and new Pay Index, after which it is phased out by adjusting the PTA downward by an amount of 5 % of the Pay Index every consecutive three months. Table 5 presents the changes in Net Take-home Pay in US dollar terms during the implementation of the gap closure measure, **under the unrealistic assumption that exchange rates will remain the same from May through November**, when the PTA is expected to be phased out. Under this assumption, there will be no change in net remuneration between May and July 2017; then a reduction of 5 % in August 2017, and a further reduction of 2.9 % in November 2017, at which point the PTA, under current arrangements, is expected to be phased out. **The actual figures would depend on the evolution of inflation and UN operational exchange rates, and hence the underlying PAI and prevailing Pay Index, between May and November 2017.**

Table 7 shows how, according to the existing operational rules, the PTA and net remuneration of a Geneva based staff (P4, Step 6 with spouse or single parent allowance) would evolve from the date of implementation of the survey results (1 May 2017), assuming that there would be no change in the exchange rate of the Swiss franc relative to the US dollar, and no inflation as measured by the relevant official consumer price index in Switzerland.

Table 7. Transitional Measure for Geneva based staff salaries (in USD)

<i>Date</i>	<i>Multiplier</i>	<i>PTA (exist. staff)</i>	<i>Net Salary (USD) (new staff)</i>	<i>Net Salary (USD) (exist. staff)</i>	<i>Change in Net Pay (%)</i>	<i>Cumulative change in Net Pay (%)</i>
May 2017	81.1	0		12,530.76		
May 2017	67.1	14	11,562.07	12,530.76	0	
Aug 2017	67.1	5	11,562.07	11,908.03	-5.0	-5.0
Nov 2017	67.1	0	11,562.07	11,562.07	-2.9	-7.7

B.4.2 MONTREAL

As presented in Table 6 above, the survey-PAI of October 2016, updated to 1 May 2017 is 134.5, leading to a multiplier of 34.5, or an increase of 2.1 % in the Pay Index.

B.4.3 WASHINGTON, DC

As presented in Table 6 above, the survey-PAI of September 2016, updated to 1 May 2017 is 145.4, leading to a multiplier of 45.4. However, as the new survey-based PAI is less than 5 % lower than the existing Pay Index of 145.7 the latter will remain, and so there is no change in the multiplier and the Pay Index.

B.5 DETAILS ON THE MAIN DRIVERS OF CHANGE IN THE PAI

In this section, we provide more details on the analysis of main drivers of the changes in the PAI manifested in the results of the survey, which were summarized in Section A.4. These include:

- (i) exchange rate and relative inflation evolution between the duty station and New York; and
- (ii) Changes in the methodology for the calculation of the PAI.

The relative impact of each of these factors on the changes in the PAI at the aggregate level was discussed in Section A. Next, we analyze the same factors in terms of their impact on the changes in the major PAI components that, in turn, led to the overall change in the PAI. In order to better understand the changes in PAI, one needs to look at the components of the PAI, as well as the actual cost-of-living index (COLI), from which it is derived.

B5.1 GENEVA

The cost-of-living index for Geneva with New York decreased by 8.7 % between the September 2010 and October 2016 cost-of-living surveys. As the exchange rate, while volatile during this six-year period, changed only slightly when one compares their levels on the two respective survey dates, the decrease is attributable approximately equally to the difference in relative inflation and from changes in methodology. Table 8 shows the component-wise impact of these two main drivers. As the pension contribution is identical for all duty stations and hence there has been no relative change for this component, it has been excluded from the analysis.

Table 8. Drivers of the change in the Post Adjustment Index for Geneva

<i>PAI Components</i>	<i>Inflation & Currency fluctuations 2010 to 2016</i>	<i>Changes in Methodology; October 2016</i>	<i>Total Change</i>
In-area (excl. housing)	-6.8%	-7.9%	-14.2%
Housing	-7.8%	-3.5%	-11.1%
Medical Insurance	-9.4%	0.2%	9.2%
Out-of-Area	1.8%	1.2%	3.0%
Cost-of-living	-4.9%	-4.0%	-8.7%

First, Table 9 illustrates how the cost-of-living index changes shown in Table 8 can be explained by the impact of the updating process and then the additional impact of applying the changes to the methodology to the actual 2016 data. For instance, an examination of the figures presented in Table 9 and Table 10 shows clearly that the impact of inflation and exchange rate fluctuations was a reduction in the COLI of 6.8 % in the IA-H component, which in turn is attributable to the fact that the corresponding COLI for Geneva increased by 0.8 %, while that of New York increased 10 fold, at 8.2 %. Similarly, the changes in methodology also led to a further decrease in the COLI of about 7.9 %, essentially attributable to the application of the methodology changes to the 2016 survey data.

Table 9. Decomposing the change in cost-of-living index for the In-Area (Excluding housing) component of PAI

	<i>Old COLI Sep-10</i>	<i>Old COLI Oct-16</i>	<i>Difference</i>	<i>New COLI Oct-16</i>	<i>Difference</i>
	<i>(1)</i>	<i>(2)</i>	<i>(2) / (1) - 1</i>	<i>(3)</i>	<i>(3) / (2) - 1</i>
Geneva	131.3	132.4	0.8%	112.7	
New York	100	108.2	8.2%	100.0	
Parity	131.3	122.4	-6.8%	112.7	-7.9%

Table 10 then summarizes all the changes for all other components. It is important to note that the change in PAI at the survey date, the 3.3 % decline, is derived as the difference between PAIs in Columns D and B (166.66/172.42 – 1). As mentioned before, this change, while relevant for assessing potential salary implications if implemented at the survey date, does not exclusively measure the relative cost-of-living changes as it incorporates the changes to the base salary scale of the UN common system, as reflected in the rebasing factor, between the surveys.

While a larger share of the overall decrease in survey results is explained already by the unfavorable evolution of the relevant indicators for Geneva, the cost-of-living survey conducted in October 2016 recorded a further decrease of the COLI from 106.71 to 102.47, or about - 4%, which is attributable to decreases in IA-H index of -7.9% and in the H index of -3.5%, while the OA index increased by 1.2 %.

Table 10. Summary of COLI and PAI changes from 2010 survey to 2016 survey

	2010 round								2016 round		
	Col. A		Col. B		Col. C		Change from Table A to Table C		Col. D		Change from Table C to Table D
	Survey-PAI at survey date		Updated-PAI		Updated-PAI (new base)				Survey-PAI at survey date		
	Weight (%)	Index	Weight (%)	Index	Weight (%)	Index	Index change	Contrib. change	Weight (%)	Index	Index change
In-Area (excl. Housing)	38.53	131.33	38.53	132.44	38.53	122.38	-6.8%	-3.1%	41.46	112.67	-7.9%
Housing	26.15	108.29	26.15	109.33	26.15	99.83	-7.8%	-2.0%	25.41	96.31	-3.5%
Medical Insurance	4.34	63.02	4.34	74.67	4.34	57.11	-9.4%	-0.2%	4.89	57.24	0.2%
Pension Contribution	8.28	100.00	8.28	104.71	8.28	100.00	0.0%	0.0%	8.24	100.00	0.0%
Out-of-Area	22.70	98.27	22.70	95.62	22.70	100.00	1.8%	0.3%	20.00	101.21	1.2%
Cost-of-Living Index (COLI)	100.00	112.24	100.00	113.23	100.00	106.71	-4.9%		100.00	102.47	-4.0%
<i>rebasing factor</i>	<i>162.940000</i>		<i>152.267396</i>		<i>162.654096</i>				<i>162.654096</i>		
Post Adjustment Index (PAI)	182.88		172.42		173.58				166.66		

Table A: Survey PAI for Geneva, under the 2010 round of surveys, September 2010

Table B: Updated PAI for Geneva, under the 2010 round of surveys, October 2016, reference base New York (June 2010)

Table C: Updated PAI (new base), under the 2010 round of surveys, October 2016, reference base New York (June 2016)

Table D: Survey PAI for Geneva, under the 2016 round of surveys, October 2016

In order to compare updated COLI results in October 2016 for Geneva (Column B), referring to prices in New York in June 2010, with the results of the cost-of-living survey conducted in Geneva in October 2016 (Column D), which refers to prices in New York in June 2016, it is necessary to adjust the base of the comparison with the level of overall measured inflation in New York (which includes inflation factors for all PAI major components), from 2010 to 2016, which is done in Column C. After such adjustment, the overall index change shows that the cost of living in New York has increased about 5 % faster than Geneva over the 6-year period.

This is in line with – and reflecting the 6.8 % decrease of the In-Area (excluding Housing) index – the general consumer inflation that has clearly been faster in New York than in Geneva. The national CPIs, used for monthly updating of the indices of both duty stations, show that while inflation in Geneva slightly decreased during the past six years, the cumulative US inflation has been over 10% during the same period, as presented in Charts 1 and 2.

Chart 1. Consumer Price Evolution in US and Switzerland

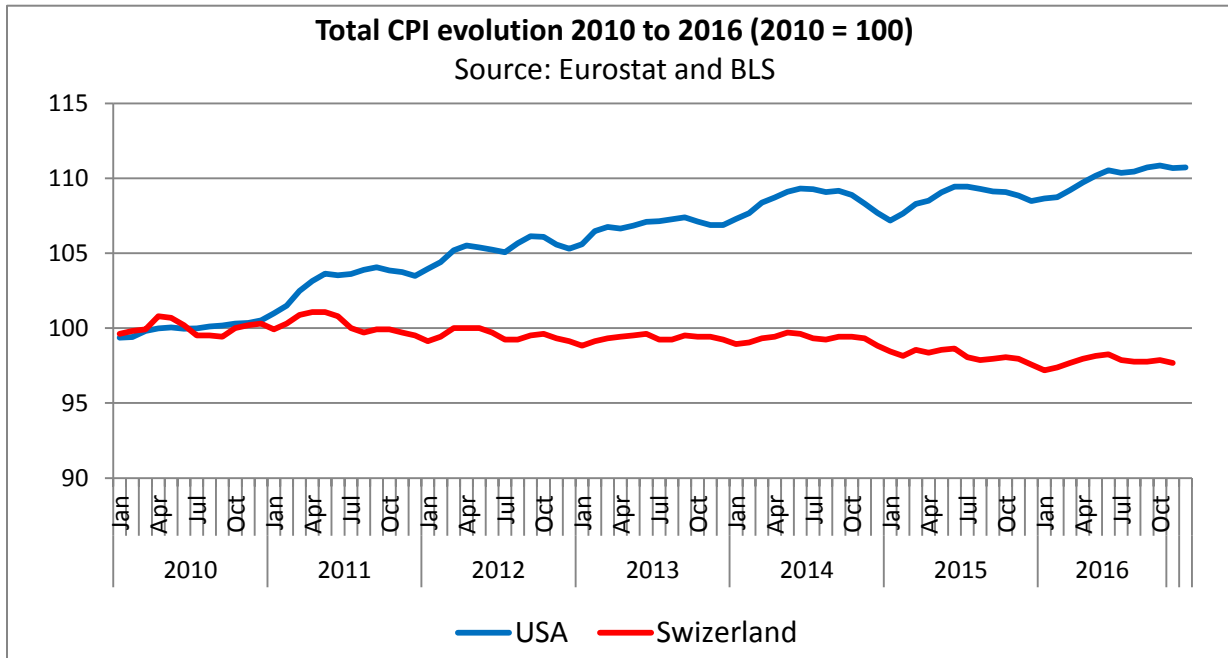
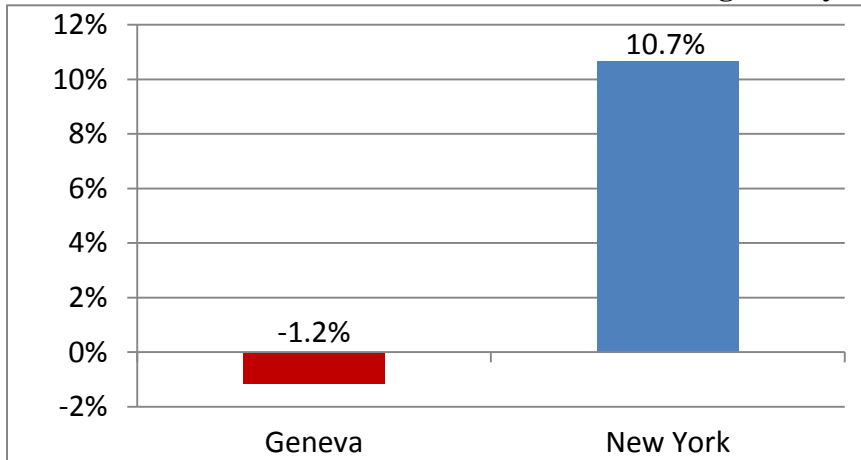


Chart 2. Cumulative Inflation Between Cost-of-living Surveys in US and Switzerland



The impact of methodological changes in the IA-H index was minor, but not completely insignificant. The overall impact of the changes in the basket composition and new expenditure weights as recorded from the 2016 cost-of-living survey was a decrease of about -0.8 % in the overall IA-H index. The rest of the 7.9 % decrease in in-area (excluding Housing) index due to methodological change reflects the actual widening of cost-of-living differentials between New York and Geneva in excess of the updating, as measured by the 2016 price surveys conducted in both cities. Part of this measurement also accounts for possible differences in the process of selection of outlets and brands of items included in the final price comparisons.

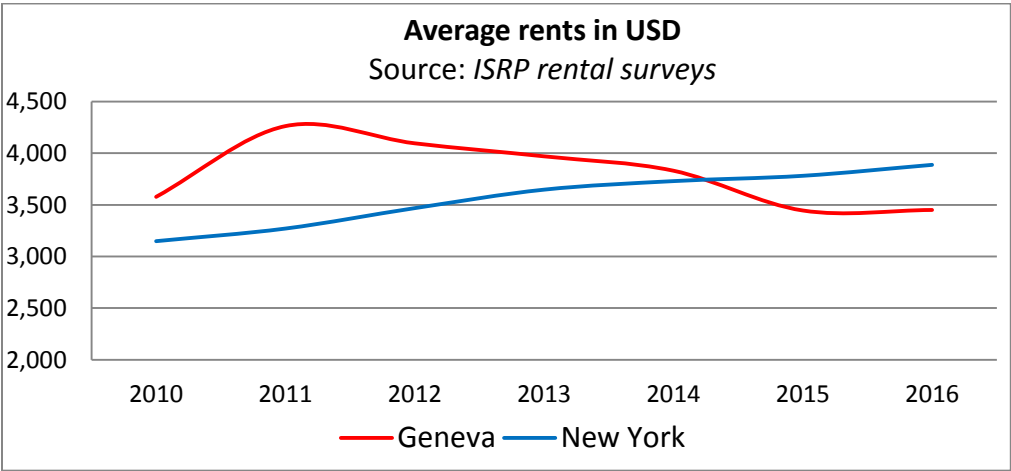
Another aspect of price evolution is that of rent inflation, and in this respect, the average evolution of rents in Geneva has been remarkably different from New York. According to the cost-of-living index of the whole housing component of Geneva, relative to New York, dropped some 7.8 % from the 2010 survey to October 2016 survey. For the rent index alone, the change was even larger showing over 9 % decrease in relative rents between Geneva and New York, as shown in Table 11.

Table 11 Geneva Rent Index

	<i>Sept 2010</i> <i>(1)</i>	<i>Oct 2016</i> <i>(2)</i>	<i>Difference</i> <i>(2) / (1) - 1</i>
Geneva	109.8	111.6	1.7%
New York	100.0	111.8	11.8%
Parity	109.8	99.9	-9.1%

It should be noted that for calculating the rent index, the PAI uses ISRP market rent data and the methodology recommended by ACPAQ and approved by the Commission. In particular, for the purposes of updating the rent parities established during the baseline cost-of-living surveys, the ICSC uses annual average rent data collected by ISRP rent surveys. The evolution of weighted average rents (with weights estimated by duty station-specific residential patterns), not the rent index that is based on a 6-year moving average of rents, is illustrated in Chart 3.

Chart 3. Annual average rents in Geneva and New York



The overall impact of changes in the methodology for the calculation of the rent index (new dwelling class (type and size) weights and expanded New York rental neighborhood sample) is a decrease of 7.4 % (as presented in Table 12 below), compared to the overall decrease of total PAI housing component of 3.5 %, reflecting increasing parities of other housing related sub-components, such as water, electricity, gas and fuels subcomponents.

Table 12 Impact of the new methodology for calculating the Rent Index

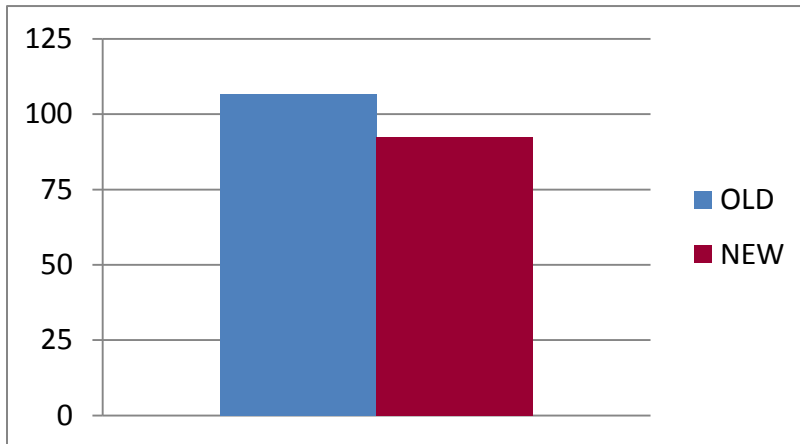
	<i>Updated 2010 Index</i> <i>(1)</i>	<i>2016 Survey</i> <i>(2)</i>	<i>Difference</i> <i>(2) / (1) - 1</i>
Geneva	111.6	92.5	
New York	111.8	100.0	
Parity	99.9	92.5	-7.4%

It is worth providing more details on the calculation of rent parities based on the 2016 cost-of-living survey. For this survey, the neighbourhood sample for New York was revised to include additional rental apartments in Westchester county and Brooklyn neighbourhoods. This expansion, implemented for the first time in calculating rent indices, had a significant impact on the 6-year weighted average apartment rents in New York, resulting in almost 15 % decrease compared to the older average apartment rents in New York, hence lifting the Geneva parities for apartments correspondingly. Therefore, the revision of the neighbourhood sample in New York was beneficial for all duty stations by lowering the average apartment rents compared to the old set of sample neighbourhoods.

The other significant methodology change in the calculation of the rent index was the introduction of duty station specific weights for different classes of dwellings (the shares of occupancy by staff at the duty station among apartments with one to three bedrooms, studios, detached and non-detached houses). Previously, such weights were based on outdated estimates from external sources, and were the same for all duty stations, and hence the resulting index did not satisfy the criteria for a Fisher index. Consequently, ACPAQ recommended the use of duty station-specific weights derived from data reported in the staff expenditures survey, as part of its package of methodological improvements for the 2016 round of surveys.

For Geneva, the weight of detached and non-detached houses dropped from about 44 % to 28 %, and the weight of apartments grew accordingly to 72%, reflecting a drastic shift in the residential patterns of staff. This significant decrease in the relative importance of higher rent relativities associated with houses in Geneva (renting a house in Geneva is more expensive than renting it in New York) in favour of lower rent relativities for apartments in Geneva (apartments in Geneva are generally less expensive than apartments in New York) had the effect of lowering the rent index, and, by extension, the overall housing index. All things being equal, the marginal impact of this change is to decrease the rent index by 14.2%, as shown in Chart 4, compared to the actual decrease of 7.4 %, as mentioned in Table 12.

Chart 4. Impact of dwelling class weights on rent parity for Geneva



The largest change at the index component level was related to medical insurance premiums that, while increasing almost 20 % in Geneva, increased over 30 % in New York, as shown in Chart 5 and Table 13 below. However, with such a relatively small weight, the medical insurance index does not have much of an impact on the overall PAI.

Chart 5. Medical Insurance premiums paid in Geneva and New York

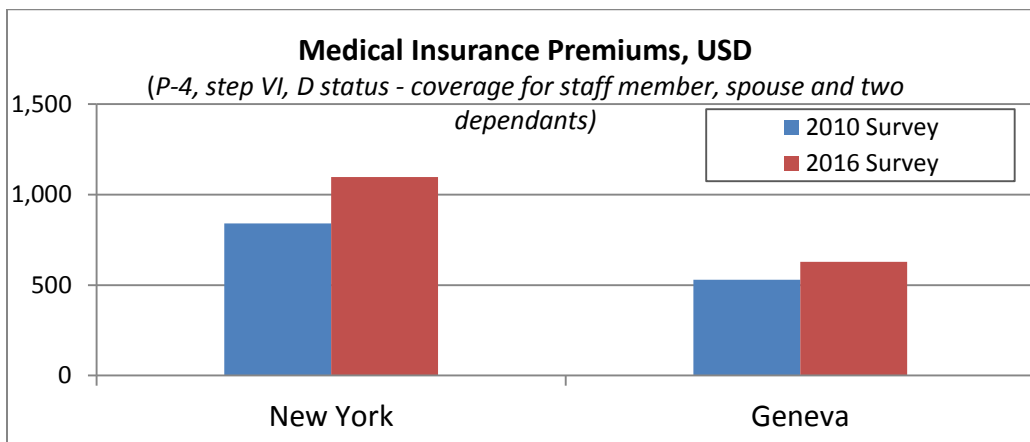


Table 13 Medical Insurance Index

	<i>Sept 2010</i> <i>(1)</i>	<i>Oct 2016</i> <i>(2)</i>	<i>Difference</i> <i>(2) / (1) - 1</i>
Geneva	63.0	74.7	18.5%
New York	100.0	130.8	30.8%
Parity	63.0	57.1	-9.4%

The Out-of-area (OA) index increased by 1.2 % at survey date, as shown in the last column of Table 10. The compilation methodology for the OA index has not changed since the prior round. However, the specification of the overall weight of the OA component was changed, now better reflecting the actual out-of-area expenditures as reported by staff assigned to a system of bands with increasing 10 % widths. For Geneva the change meant a slight decrease in weight of OA from 22.7% in the last round of surveys to 20 %, which was slightly beneficial for the PAI. According to the established methodology, this 2.7 % excess weight was re-distributed to the IA-H component and since the IA-H index in Geneva is higher than the OA index, that methodological change increased the overall PAI for Geneva, from an estimated 166.17 due under the old methodology to the existing 166.66, that is, an increase of 0.3 % in the PAI, as shown in Table 14.

Table 14. Impact of change in specification of Out-of-Area weight

<i>PAI under Old OA Weight</i>	<i>Survey PAI</i>	<i>Difference (2) / (1) – 1</i>
166.17	166.66	0.3%

B5.2 MONTREAL

The cost-of-living index for Montreal with New York decreased by 13.7 % between the 2010 and 2016 cost-of-living surveys. As the inflation rates in US and Canada have been very close, the overall decrease is almost exclusively attributable to changes in the Canadian Dollar exchange rate, as the US dollar has strengthened significantly over the 6-year period, as illustrated in Chart 6, and the relative national CPI evolutions in Chart 7. Table 15 shows the component-wise impact of these two main drivers.

Table 15. Drivers for change in the PAI for Montreal

<i>PAI Components</i>	<i>Inflation & Exchange rate fluctuations 2010 to 2016</i>	<i>Changes in Methodology; October 2016</i>	<i>Total Change</i>
In-area (excl. housing)	-18.4%	-5.2%	-22.7%
Housing	-23.5%	16.7%	-10.7%
Medical Insurance	-18.4%	-4.6%	-22.2%
Out-of-Area	1.8%	1.2%	3.0%
Cost-of-living	-12.6%	-1.2%	-13.7%

Chart 6. US dollar against Canadian dollar

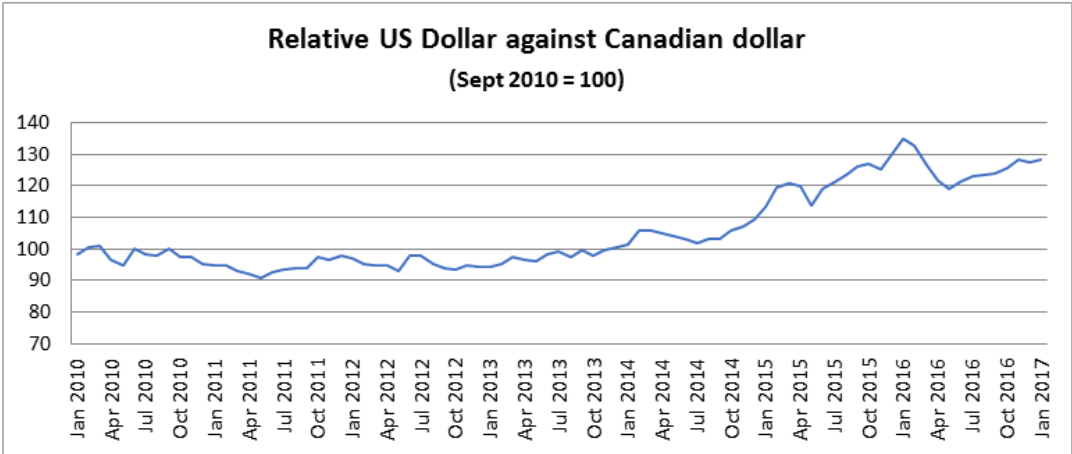


Chart 7. US CPI evolution in US and Canada

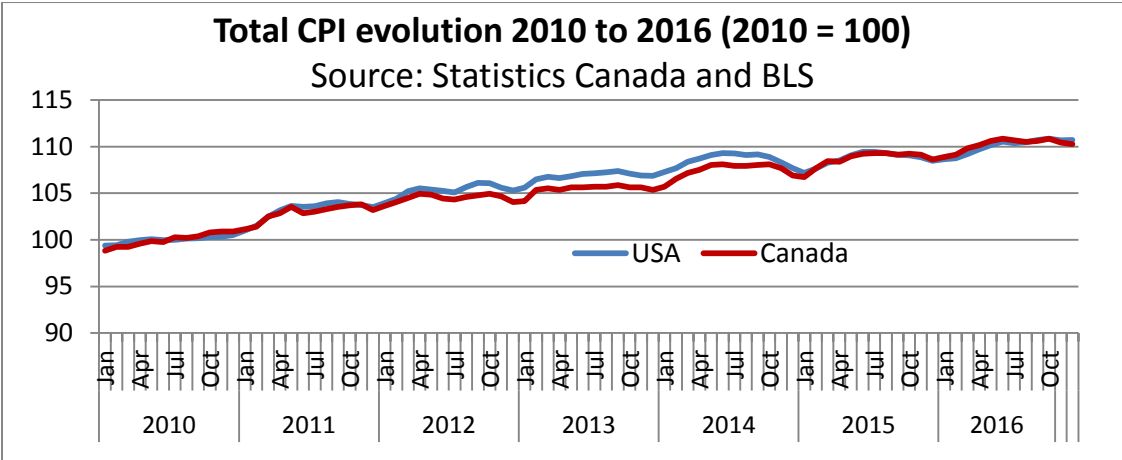


Table 16 summarizes the changes for all PAI components for Montreal. The change in PAI at survey date is derived as the difference between PAI in Column D and B (135.39/134.32 – 1). As for Geneva, this change does not exclusively measure relative change in cost of living, by including a variable rebasing factor. It is evident that the inflation and exchange rate component have been driving the PAI: together with the in-area component including housing they combined brought the Montreal/ New York parity down by almost 13 %, measured in US dollar terms. The survey methodology change resulted in a further decrease of 1.3 %, with a significant increase in the housing index and decreases in IA-H and Medical Insurance components. The exchange rate has a direct impact on the IA-H, H, and MI components of the PAI, and the 18.4% decrease in the IA-H index reflects the over 20% strengthening of US dollar against the Canadian dollar, contributing some 8.8% of the 12.6% overall decrease in PAI as measured by the updated cost-of-living index based on the 2010 survey.

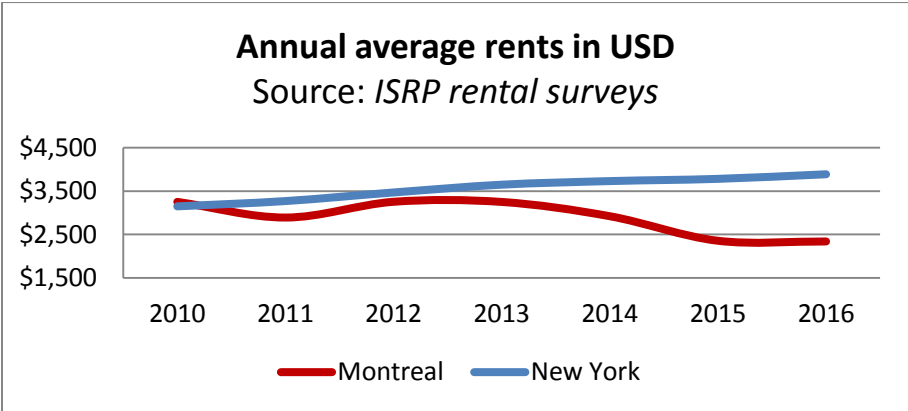
Table 16. Summary of COLI and PAI changes from 2010 survey to 2016 survey in Montreal

	2010 round								2016 round		
	Col. A		Col. B		Col. C				Col. D		Change from Table C to Table D
	Survey-PAI at survey date		Updated-PAI		Updated-PAI (new base)		Change from Table A to Table C		Survey-PAI at survey date		
	Sep-2010		Oct-2016		Oct-2016		Index change	Contrib. change	Oct-2016		Index change
Weight (%)	Index	Weight (%)	Index	Weight (%)	Index	Weight (%)			Index		
In-Area (excl. Housing)	41.14	112.06	41.14	98.92	41.14	91.41	-18.4%	-8.8%	54.88	86.62	-5.2%
Housing	23.22	72.30	23.22	60.58	23.22	55.32	-23.5%	-4.1%	21.29	64.57	16.7%
Medical Insurance	2.35	28.15	2.35	30.01	2.35	22.96	-18.4%	-0.1%	2.56	21.89	-4.6%
Pension Contribution	10.02	100.00	10.02	104.71	10.02	100.00	0.0%	0.0%	11.27	100.00	0.0%
Out-of-Area	23.27	98.27	23.27	95.62	23.27	100.00	1.8%	0.4%	10.00	101.21	1.2%
Cost-of-Living Index (COLI)	100.00	96.44	100.00	88.21	100.00	84.28	-12.6%		100.00	83.24	-1.2%
<i>rebasng factor</i>	162.940000		152.267396		162.654096				162.654096		
Post Adjustment Index (PAI)	157.14		134.32		137.08				135.39		

As before, in order to compare updated COLI results in October 2016 for Montreal (Column B) with the results of the cost-of-living survey conducted in Montreal in October 2016, it is necessary to adjust the base of the comparison with the level of overall measured inflation in New York. After such adjustment, the overall index change shows that the cost of living in Montreal, measured in US dollars, decreased 12.6 % over the 6-year period.

The average evolution of rents in Montreal has also been different from New York, particularly as measured in US dollar terms. Rents in New York have increased much more rapidly than in Montreal, resulting in a 23.5% decrease of the housing index as measured by the 2010 methodology, representing the change from Column A to C. The impact of this change is 4.1% of the total 12.6% decrease. Chart 8 below shows the evolution of average rents in Montreal and New York, from which the rent index is compiled based on a 6-year moving average model.

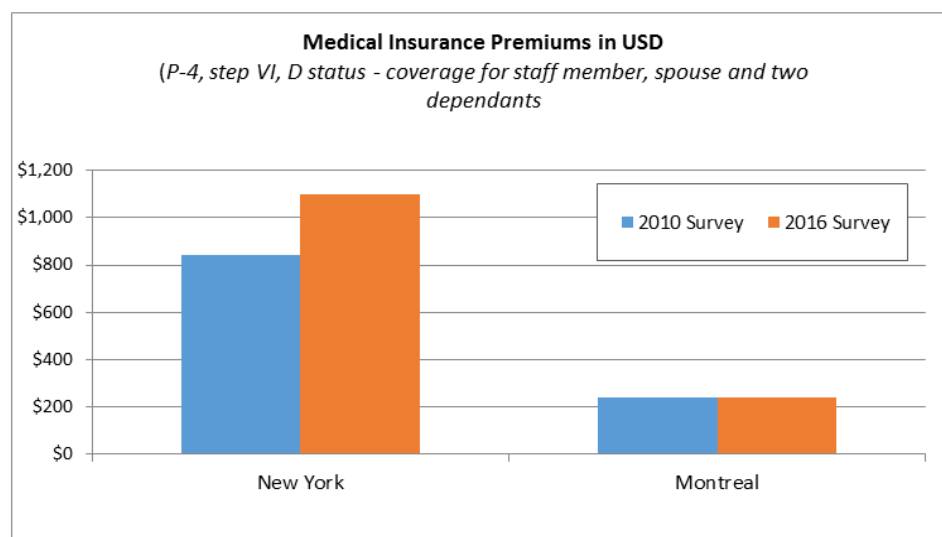
Chart 8. Annual average rents in Montreal and New York



The housing index increased by 16.7 %. This increase reflects mainly the change in the ISRP rent survey sample neighbourhoods in New York that lowered the New York average rents for apartments, while the change in derivation of dwelling class weights did not have a significant impact for Montreal weights. The 5.4% decrease in the IA-H index reflects the impact of higher observed price increases from the price survey than US national CPI updating had produced, together with the impact of changes in the consumer basket composition and expenditure weights between the two surveys.

Another large relative decrease was the medical insurance premiums, which when measured in US dollar terms increased only 1.4% in Montreal between 2010 and 2016 surveys, while increasing over 30% in New York, as illustrated in the Chart 8 below. The impact at the index component level was an 18.4 % decrease, contributing to 0.4% of the total 12.6% decrease due to the low expenditure weight of 2.35 % for this component. The new medical insurance index, with new actual staff insurance plan participation shares, decreased by another one index point from about 23 to 22%.

Chart 9. Medical Insurance



For Montreal the change in the specification of out-of-area weight meant a decrease from 23.3 % to 10 %. This 13.3% weight was re-distributed to the In-Area (excluding Housing) component and since the IA-H index in Montreal is lower than the OA index, the methodological change contributed negatively to the overall PAI for Montreal, other things being equal, bringing the PAI of 138.54 under the old methodology to the level of 135.39, which means a 2.3 % decline.

B5.3 WASHINGTON, D.C.

The cost-of-living index between Washington, D.C. and New York decreased by 0.5 % between the September 2010 and October 2016 cost-of-living surveys, mainly driven by the faster rent inflation in New York. As the updating process for both New York and Washington uses identical input, the national CPI sub-series and the currency being the same, the changes from the updating process are minor, as expected. Tables 18 and 19 summarize the impact, by component, of these main drivers.

Table 18. Drivers for change in the PAI for Washington, D.C.

PAI Components	Inflation & Exchange rate fluctuations 2010 to 2016	Changes in Methodology; October 2016	Total Change
In-area (excl. housing)	-1.0%	-1.8%	-2.8%
Housing	-2.6%	7.7%	4.9%
Medical Insurance	2.8%	2.2%	5.1%
Out-of-Area	1.7%	0.8%	2.5%
Cost-of-living	-0.5%	0.2%	-0.3%

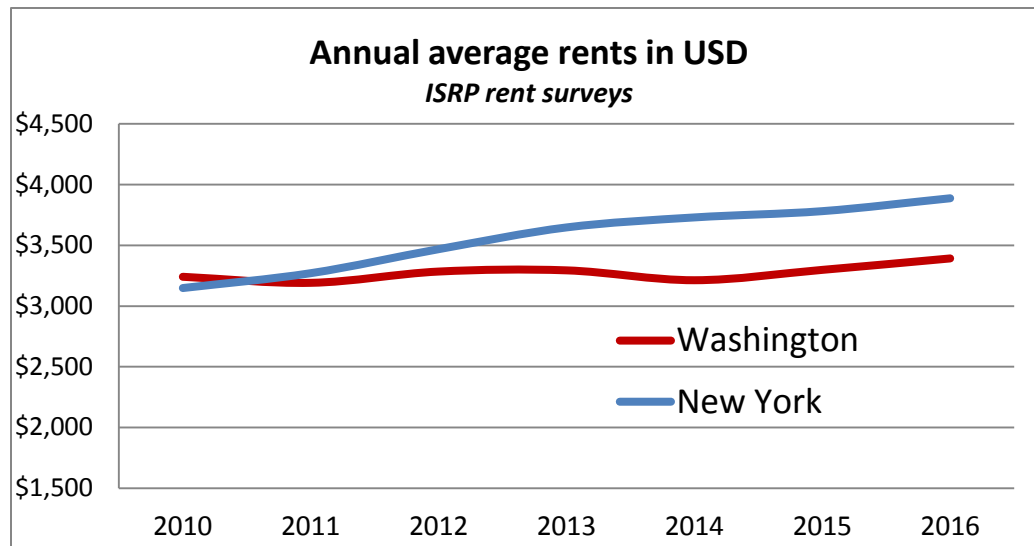
Table 19. Summary of COLI and PAI changes from 2010 survey to 2016 survey

	2010 round								2016 round			
	Col. A		Col. B		Col. C		<i>Change from Table A to Table C</i>		Col. D		<i>Change from Table C to Table D</i>	
	Survey-PAI at survey date		Updated-PAI		Updated-PAI (new base)				Survey-PAI at survey date			
	<i>Oct-2010</i>		<i>Sept-2016</i>		<i>Sept-2016</i>		<i>Spt-2016</i>		Index change			
Weight (%)	Index	Weight (%)	Index	Weight (%)	Index	Weight (%)	Index					
In-Area (excl. Housing)	29.40	98.25	29.40	105.29	29.40	97.25	-1.0%	-0.3%	41.23	95.49	-1.8%	
Housing	31.19	74.41	31.19	79.41	31.19	72.51	-2.6%	-0.7%	31.67	78.07	7.7%	
Medical Insurance	5.17	57.78	5.17	77.67	5.17	59.40	2.8%	0.1%	6.61	60.70	2.2%	
Pension Contribution	10.74	100.00	10.74	104.71	10.74	100.00	0.0%	0.0%	10.49	100.00	0.0%	
Out-of-Area	23.51	98.31	23.51	95.49	23.51	100.00	1.7%	0.4%	10.00	100.78	0.8%	
Cost-of-Living Index (COLI)	100.00	88.93	100.00	93.43	100.00	88.52	-0.5%		100.00	88.67	0.2%	
<i>rebasng factor</i>	<i>162.940000</i>		<i>152.267396</i>		<i>162.654096</i>				<i>162.654096</i>			
Post Adjustment Index (PAI)	144.90		142.26		143.98				144.23			

The parity of IA-H index for Washington decreased by 1% based on the updating of the 2010 index. After introduction of new consumer basket and expenditure weights, and collecting fresh prices through the 2016 survey, the IA-H index decreased a further 1.8 %.

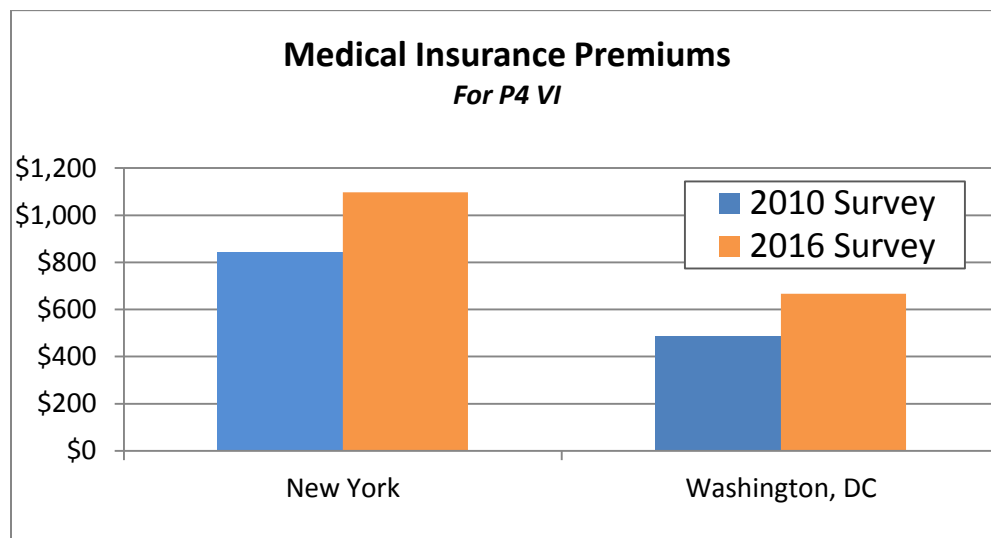
The main effect within the PAI components was the decrease of the housing index by 2.6 percent due to slightly faster rent inflation in New York than in Washington, D.C. The introduction of a new rent index calculation methodology increased the housing index by a significant 7.7 percent. For the Washington, D.C. rent index, both the introduction of duty station specific dwelling class weights – increasing the weight of houses for which the WDC/NY parities are lower than for apartments – and an effective decrease of average New York apartment rents due to broadening the apartment sample outside Manhattan, had a positive impact. Due to the rent index increasing, the housing component index increased from 74.4 to 78.1, or 4.9 %. This increase was registered in spite of rents on average actually growing faster in New York than in Washington D.C., as indicated by the housing index decrease of 2.6 % in Table 19. Chart 10 illustrates the average annual rents in Washington and New York.

Chart 10. Annual average rents in Washington, D.C. and New York



Finally, while the average Medical Insurance premiums paid by Washington, D.C. based UN staff were lower than in New York, they increased slightly faster from 2010 to 2016. In fact, the medical insurance index grew from 57.8 to 60.7, or 5.1 % as show in table 18 above. The average insurance premiums in Washington, D.C. and New York are illustrated in Chart 11.

Chart 11. Medical Insurance Premiums in New York and Washington, D.C.



As with all other duty stations, there was an overall increase in the out-of-area index due to the interaction of US dollar with currencies of 25 select countries. However, the OA index made a negative contribution to the overall PAI attributable to the change in the methodology for specifying the weight for the out-of-area component, decreasing the overall PAI by 0.9 % compared to the specification used in the 2010 round.