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MARKET ACCESS FOR NON-AGRICULTURAL PRODUCTS

The NAMA Package

Communication from Mexico

Addendum

The following communication, dated 14 October 2005, is being circulated at the request of the Delegation of Mexico.

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1. The negotiations of the NAMA negotiating group have made it clear that a "one-size-fits-all" approach may not be appropriate for all Members.[1] While a number of proposals have been presented, there are a number of considerations to take into account and consensus can only be possible if Members are in a position to take an informed decision based on a complete picture of the overall outcome of these negotiations.

2. In Mexico's opinion, it is important to establish a methodology which combines flexibility for developing country Members without affecting a balanced outcome, and particularly, to provide with equitable results to all developing countries.

3. In this respect, it might be useful to count with a complete package of possibilities to deal both with unbound tariffs and the application of the formula in a manner that provides developing country Members policy space for sensitive products, while achieving a degree of ambition to be established during the negotiation.

- The **first element of this package** would be the application of a simple-Swiss formula for tariff reduction with some in-built flexibilities to it. The coefficients of this formula would be bound to the other elements of the package.[2]

- The **second element** of the package would be to establish a non-linear mark-up approach for unbound tariffs, combining simplicity with precision and flexibility. In this sense, we recall Mexico's proposal in document TN/MA/W13/Add.1.

- As a **third element**, those Members willing to bind all their tariff lines, and that require additional protection for high applied tariffs, that are currently unbound, may depart from the

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[1] A number of concerns have been expressed regarding the need for flexibilities, and an important number of examples have been discussed in different proposals (TN/MA/W/54, TN/MA/W/60, Job(05)/86, Job(05)/150, among others).

[2] See TN/MA/W/50.

non-linear markup approach in some instances. In that case, this additional flexibility would be balanced by applying a reduced mark-up in the remaining tariff lines to be bound.

This tailor-made package should give developing-country Members sufficient policy space for some products, thus responding to each Member's individual needs and constraints.

I. THE SWISS FORMULA AND PARAGRAPH 8

4. In general terms, Mexico would propose to approach the flexibilities contained in paragraph 8 in the same manner as suggested in document TN/MA/W/50, *i.e.*, to establish a mechanism by which additional flexibilities be matched with additional commitments either in terms of the β coefficient of reduction or the implementation period. The objective is that the **overall results are equitable to all developing countries**, both to those using the paragraph 8 flexibilities and to those that may choose not to take advantage of them and apply the Swiss formula across the board to all industrial products favored by a slightly higher coefficient.

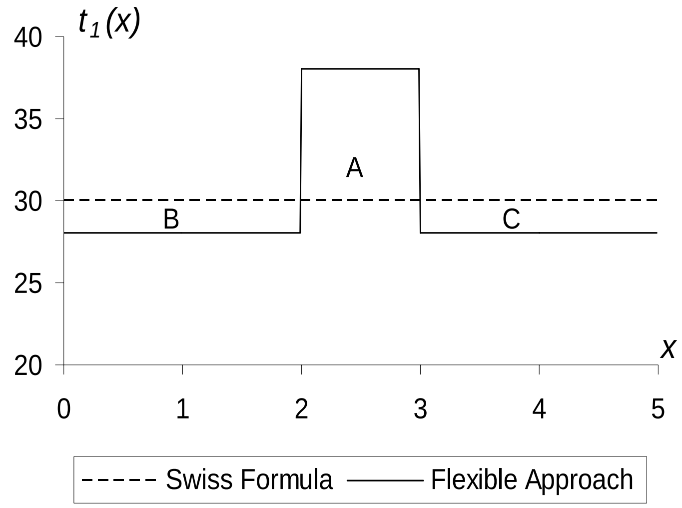
5. As has been made abundantly clear, a negotiation on the appropriate combination of ambition and flexibilities is an extremely difficult task. It may, therefore, be preferable to establish **objective criteria**, by which flexibilities be automatically matched by an equivalent level of additional ambition.

6. As established in paragraph 8, Members would benefit from keeping a number of tariff lines unaffected by the reduction formula (hereafter referred to as "sensitive products"). Alternatively, Members could choose to apply "less than formula cuts". In those cases, all other tariff lines would have to be recalculated for purposes of maintaining the final result.

7. For illustrative purposes, consider a simple case where the trade of a Member is covered by five tariff lines. Assume that after applying the Swiss formula, we obtain a final tariff of 30% so obtained for all five tariff lines; and therefore the average tariff for the Member is 30% (as shown by the discontinuous line in figure 1). A more flexible approach (shown by the solid line) would allow this Member to exercise its flexibility by maintaining the tariff for product 3 (a particularly sensitive product) tariff at a base rate of 38%. Afterwards, that Member would lower the other tariffs in such a way that keeping the base rate for product 3 (given by area A in figure 1) is equal to the sum of the further reductions in the tariffs of products 1,2,4 and 5 (given by areas B and C). In this case, the average tariff form the flexible approach would remain the same as the average tariff resulting from the simple implementation of the Swiss formula. In this case the tariff rate for goods 1,2,4 and 5 would need to be set at 28, as

$$\frac{28+28+38+28+28}{5}=\frac{30+30+30+30+30}{5}=30$$

Figure 1
Average Tariff rates



Thus we would be building the flexibilities of the July framework into the Swiss formula, allowing a number of tariff lines to deviate from it, and lowering all other tariffs proportionately to keep the average tariff constant.

8. A Member can choose a set of sensitive products *P*, where the tariff would not be reduced, and therefore would remain at the base rate. In that case, a modified version of the Swiss formula would be applicable for all other products in the same proportion.

A. AN EXAMPLE

9. Consider a Member's tariff schedule, such as the one summarized in table1.

10. In the first column we have the number of tariff lines, for each tariff rate in column 2. This means that, for example, there are 23 lines which are duty free, 52 lines with a 10% tariff rate, etc. In this example, the majority of the products are subject to a 35% tariff rate.

11. The third column shows the tariffs that would be obtained by applying the Swiss formula given by equation (IV.1) to all lines, reducing the average tariff of the Member from 34.9% to 14.5% as indicated in the bottom of the table.

12. Assuming that 5% of all tariff lines are set aside as sensitive products with a final tariff rate equal to the base rate of 35%, we apply the modified formula to all other tariff lines.

13. Finally, figure 2 shows the different tariff levels for each category, obtained with the Swiss formula and with the flexible approach that leaves 5% of the lines at their initial level.

Table 1

Number of Tariff Lines	**Initial Tariff**	**Final Tariff**	
		Swiss Formula (B=25)	**Flexible Approach**
	(%)	(SWISS)	(FLEX)
23	0	0.0	0.0
52	10	7.1	6.6
51	20	11.1	10.3
138	25	12.5	11.6
23	30	13.6	12.6
9629	35	14.6	13.5
18	36	14.8	13.7
2	37	14.9	13.8
105	40	15.4	14.2
16	45	16.1	14.9
173	50	16.7	15.4
538*	35	14.6	35.0
Average Tariff	34.9	14.5	14.5

* 538 tariff lines, or 5% of the total, were selected as sensitive products.

II. BUILDING FLEXIBILITIES INTO THE RATIONAL FORMULA FOR SETTING BASE RATES FOR UNBOUND LINES

14. As mentioned above, the second element of the package would be to establish a non-linear mark-up approach for unbound tariffs, **in the understanding that all tariff lines would be ultimately bound**. Document TN/MA/W13/Add.1 is particularly relevant to that effect.

15. However, there might be cases where Members require additional flexibility to that provided for in a non-linear mark-up approach (third element). In that case, they might want to choose to set aside a subset of all currently-unbound products where the bound equivalent tariff will be higher than the level obtained by applying the rational formula. Such markup should not be higher than 1.5 times the applied rate.

16. For all other products, the bound equivalent will be proportionately lower than the level obtained by the non-linear mark-up formula. These products should, in any case, not represent more than 5% of tariff lines and 5% of the value of imports.

B. AN EXAMPLE

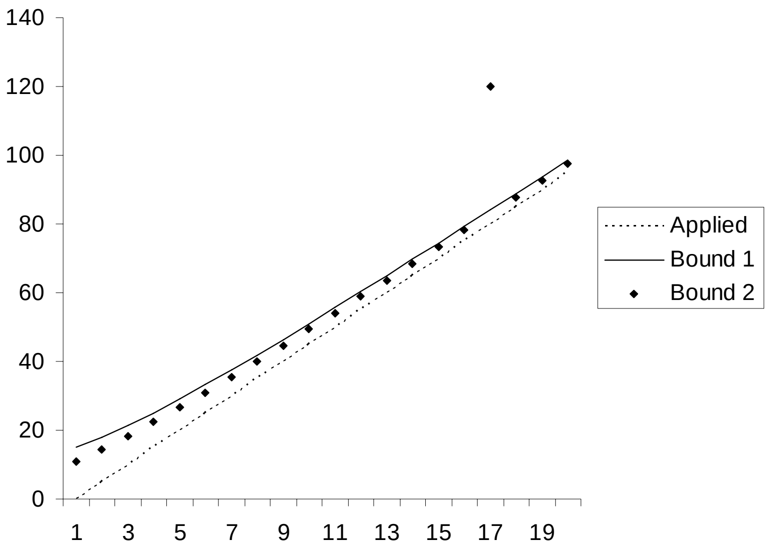
17. Consider a Member with 20 unbound tariff lines (1-20) with applied rates in a range from 0 to 95%, as shown in column B of table 1. The imports for each tariff line are shown in column C. In column D (and in the solid line of figure 1), we show the bound equivalent tariff from applying the equation for the non-linear markup.

18. Suppose that this country Member strongly prefers to bind its tariff for good 17 at a level that is 1.5 times the applied rate. This is shown in column E. Applying the rational formula to all tariff lines except good 17, with an adjusted α coefficient of 314.5, maintains the average tariff of this Member, at the same level as column D.

Table 1

Tariff Line	**Applied Tariff**	**Imports**	**Bound 1**	**Bound 2**
(A)	(B)	(C)	(D)	(E)
1	0	1918.2	15.0	11.0
2	5	2044.9	17.9	14.4
3	10	1790.4	21.3	18.2
4	15	1376.4	25.0	22.3
5	20	1516.8	29.0	26.6
6	25	1975.2	33.2	31.0
7	30	1575.9	37.5	35.5
8	35	1565.3	41.9	40.1
9	40	1648.6	46.4	44.7
10	45	1708.8	51.0	49.4
11	50	1231.5	55.6	54.1
12	55	1594.7	60.3	58.9
13	60	940.7	65.0	63.7
14	65	1135.0	69.7	68.5
15	70	1351.5	74.5	73.3
16	75	1369.0	79.3	78.1
17	80	564.3	84.1	**120.0**
18	85	1247.0	88.9	87.9
19	90	301.1	93.8	92.7
20	95	1147.7	98.6	97.6
Average Tariff	47.5		54.4	54.4

Figure 1
Applied and bound equivalent tariffs.



The software used to make these calculations is accessible at the WTO webpage on the Members, at the website http://members.wto.org/members/[3] (WTO Resources/Market Access - Negotiations on Non-Agricultural Products) section. The data to run simulations on some real Members' schedules is available on request from the Secretariat. For referential purposes, all mathematical formulations are contained in the Annex to this document.

III. CONCLUSION

19. This package addresses the potential needs for policy space expressed in the application of the Swiss formula, as well as in the context of binding tariff lines which are currently unbound for those that will bind all their tariff lines. Mexico believes that this proposal constitutes a compromise between both offensive and defensive interests during the negotiations, without affecting any other Member.

[3] Once in the Member's site, access the following links: WTO Resources/Market Access - Negotiations on Non-Agricultural Products.

ANNEX

MATHEMATICAL BACKGROUND

1. The Tariff reduction formula

To start with, let's consider the Swiss tariff-reduction formula with a single *B* coefficient, defined for all developing countries[4]:

$$t_1(x) = \frac{Bt_0(x)}{t_0(x) + B} \qquad \text{(A.I.1)}$$

Where $t_0(x)$ and $t_1(x)$ are the base rate and the final tariff rate, for good *x*. Formula (A.I.1) would apply to all tariff lines in the absence of flexibilities. In accordance with the flexibilities from the paragraph 8 of Annex B to the July Framework, a developing Member can choose

(i) To leave out of the tariff-reduction formula (A.I.1) a number of products not exceeding 5% of tariff lines and 5% of the total value of its imports, or

(ii) To apply "less then formula cuts"[5] to a number of products not exceeding 10% of tariff lines and 10% of the total value of its imports.

Let's call $P_{5\%}$ the subset of products where flexibilities are requested by the Member if that Member chooses option (i) above, and $P_{10\%}$ the subset of products where flexibilities are requested by the Member if that Member chooses option (ii) above. It can be argued that the Member will always use the full extent of the flexibilities available. Therefore, it would be reasonable to think about these subsets as representing around 5% of tariff lines (and/or imports) and 10% of tariff lines (and/or imports), respectively. For all specially treated products belonging to these predefined subsets, the final tariff, resulting from the negotiation, would be equal to the base rate, if option (i) is chosen, or equal to the average between the base rate and the rate that would result from applying formula (A.I.1)[6], if option (ii) is chosen. Therefore, we have

For all products x in $P_{5\%}$, in the case where option (i) above is chosen:

$$t_1(x) = t_0(x) \qquad \text{(A.I.2.i)}$$

For all products x in $P_{10\%}$, in the case where option (ii) above is chosen:

$$t_1(x) = \frac{1}{2}\left[t_0(x) + \frac{Bt_0(x)}{t_0(x) + B}\right] \qquad \text{(A.I.2.ii)}$$

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[4] Except those referred to in paragraph 6.9 of the July framework.

[5] If a Member opts for option (ii), it must apply tariff cuts at least one half as large as full formula cuts to the products where flexibilities are defined. For the purposes of this illustration, we will assume that the Member always applies tariff cuts one half as large as full formula cuts. This implies that the Member will always use its flexibilities to their full extent.

[6] This average value results from the interpretation of "less than formula cuts" as one half, or 50% of the full cuts given by the formula (see previous footnote).

In accordance with the approach proposed to integrate the flexibilities in a formula, we would reduce the tariffs of all other products (where flexibilities don't apply), beyond the Swiss formula (A.I.1).The additional reduction defined for these products would be γ percent for all of them. Therefore, the formula that applies to all products not in the subset $P_{5\%}$ (or $P_{10\%}$ if option (ii) is the case):

$$t_1(x) = \frac{(1-\gamma)B\,t_0(x)}{t_0(x)+B} \qquad \text{(A.I.3)}$$

The average tariff, after taking into account the flexibilities required by the Member, and applying the additional reduction of γ to all other products; must be equal to the average tariff that would result from applying the original Swiss formula (A.I.1) with a coefficient *B*, to all the products without flexibilities. This ensures that, regardless of the products to which the flexibilities are applied and the modality chosen (case (i) or (ii)), the final outcome of the negotiation will be the same in terms of the average tariff, and consequently, in terms of level of ambition. Mathematically, this condition translates into:

for the case where option (i) is chosen:

$$\bar{t}_1 = \frac{1}{n}\sum_x \frac{Bt_0(x)}{t_0(x)+B} = \frac{1}{n}\left[\sum_{x\in P_{5\%}} t_0(x) + \sum_{x\notin P_{5\%}} \frac{(1-\gamma)Bt_0(x)}{t_0(x)+B}\right] \qquad \text{(A.I.4.i)}$$

for the case where option (ii) is chosen:

$$\bar{t}_1 = \frac{1}{n}\sum_x \frac{Bt_0(x)}{t_0(x)+B} = \frac{1}{n}\left[\sum_{x\in P_{10\%}} \frac{1}{2}\left[t_0(x) + \frac{Bt_0(x)}{t_0(x)+B}\right] + \sum_{x\notin P_{10\%}} \frac{(1-\gamma)Bt_0(x)}{t_0(x)+B}\right] \qquad \text{(A.I.4.ii)}$$

Where $\bar{t}_1$ is the average tariff rate from applying the original Swiss formula without flexibilities, with a coefficient *B*, to all products. To obtain γ we only need to know for which products the Member has applied the flexibilities.

Solving the above equations for γ *:*

for the case where option (i) is chosen:

$$\gamma = \frac{\sum_{x\in P_{5\%}}\left[t_0(x) - \frac{Bt_0(x)}{t_0(x)+B}\right]}{\sum_{x\notin P_{5\%}} \frac{Bt_0(x)}{t_0(x)+B}} \qquad \text{(A.I.5.i)}$$

and for the case where option (ii) is chosen:

$$\gamma = \frac{\sum_{x\in P_{10\%}}\left[t_0(x) - \frac{Bt_0(x)}{t_0(x)+B}\right]}{2\sum_{x\notin P_{10\%}} \frac{Bt_0(x)}{t_0(x)+B}} \qquad \text{(A.I.5.ii)}$$

The numerators of these ratios correspond to the sum of the tariff increases that result from applying the flexibilities in the selected products. It is a measure of how much higher would the average tariff of the Member be as a result of flexibilities, in and the absence of a compensation for all other products. Dividing this value by the sum of the tariffs for all other products tells us the further relative drop in all these product's tariffs that would be needed to maintain the average tariff of the Member constant.

Note that, if the same products were set aside for flexibilities in cases (i) and (ii), γ in would be exactly one half in case (ii), compared to the corresponding level in case (i). This is because, in case (ii), the tariff increases that result from the flexibilities are exactly one half of the corresponding tariff increases in case (i) (because the formula cut is applied halfway from the base rate in case (ii) , vs. not at all in case (i)). In general, however, the Member would select twice as many products for flexibilities in case (ii), so that the corresponding γ would tend to be very close in the "5%" case and in the "10%, less than formula cuts" case.

Once we know the level of γ , we may want to know what alternative level of *B* in the Swiss Formula would be "equivalent" to applying equation (A.I.3) to all the other products (the ones without flexibilities). Let's call this *B'*. This would be useful to the extent that it allows the Members to quantify the additional ambition for these products in terms of a further decrease in the parameter *B*, and consequently negotiate a level of *B*, knowing that, after requesting the flexibilities, the actual tariff reduction over all other products will be determined by a *B'*, which can be confidently estimated.

If we set the average tariff for the products where no flexibilities apply (referred-to previously as "all other products"):

$$\sum_{x \notin P} \frac{(1-\gamma)Bt_0(x)}{B+t_0(x)} = \sum_{x \notin P} \frac{B' t_0(x)}{B'+t_0(x)} \qquad \text{(A.I.6)}$$

For simplicity, we refer to the subset *P* as meaning either $P_{5\%}$ in case (i) or $P_{10\%}$ in case (ii). This simplification does not change the mathematical results as far as *B'* is concerned. *B'* cannot be solved in a straightforward manner, as it enters (A.I.6) in a very non-linear way. A numerical algorithm could easily return the value of *B'* . For the purposes of this exercise, however, we offer an approximate solution based on a first order Taylor expansion of the right hand side of equation (A.I.6), around the original *B*, that is:

$$\sum_{x \notin P} \frac{(1-\gamma)Bt_0(x)}{B+t_0(x)} \approx \sum_{x \notin P} \left[\frac{t_0(x)(B+t_0(x))}{(B+t_0(x))^2} \right] (B'-B) + \sum_{x \notin P} \frac{Bt_0(x)}{B+t_0(x)} \qquad \text{(A.I.7)}$$

The right hand side is now a linear equation in *B'*, that we can solve for an approximate value…

$$B' \approx \frac{\displaystyle\sum_{x \notin P} \frac{(1-\gamma)Bt_0(x)^2 - \gamma B^2 t_0(x)}{(B+t_0(x))^2}}{\displaystyle\sum_{x \notin P} \frac{t_0(x)^2}{(B+t_0(x))^2}} \qquad \text{(A.I.8)}$$

2. The Rational Approach for Unbound Tariffs

As indicated in document TN/MA/W13/Add.1, Mexico proposed that unbound tariff lines be subject to a non-linear mark-up, which favored unbound products with lower unbound rates, through the use of the following "rational" formula, which combines simplicity with precision and flexibility[7]:

$$t_1(x) - t_0(x) = \frac{\alpha}{t_0(x) + \beta} \quad \text{(A.II.1)}$$

Where: $t_1(x)$: the base rate tariff for good *x*'s

$t_0(x)$: the corresponding initial applied rate

α and β are positive constant parameters that can be specified in the course of the negotiation

A Member can choose to set aside a subset *Q* of all unbound products, not exceeding 5% of all unbound tariff lines and 5% of the total value of imports under such tariff lines. For the products in subset *Q*, the bound equivalent tariff will be higher than the level obtained by applying the rational formula (A.II.1), by a markup that cannot exceed 50% of the applied tariff rate $t_0(x)$ [8].

Therefore, we have:

For all unbound products in subset Q[9];

$$t_1(x) - t_0(x) = \frac{t_0(x)}{2} \quad \text{(A.II.2)}$$

For all other unbound products, we will define a markup that is smaller than the one defined by the rational formula (A.II.1). We will do this by applying a rational formula with a lower α parameter we will call α':

$$t_1(x) - t_0(x) = \frac{\alpha'}{t_0(x) + \beta} \quad \text{(A.II.3)}$$

In the same way as with the approach followed in integrating flexibilities into the tariff-reduction formula, the average bound tariff for all unbound goods , from applying formulae (A.II.2) to the products selected for flexibilities and (A.II.3) to all other products, will be to be the same as if the rational formula (A.II.1) with a coefficient α had been applied to all unbound applied tariffs, that is:

$$\frac{1}{n}\sum_{x} \frac{\alpha}{t_0(x) + \beta} = \frac{1}{n}\sum_{x \in Q}\left[\frac{3t_0(x)}{2}\right] + \frac{1}{n}\sum_{x \notin Q} \frac{\alpha'}{t_0(x) + \beta} \quad \text{(A.II.4)}$$

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[7] In document TN/MA/W/13/Add.1, we have shown that this formula is continuous, increasing in the applied tariff and yields a nonnegative, decreasing tariff increase (t_1-t_0) as long as $\beta \geq \sqrt{\alpha}$.

[8] Again, a reasonable assumption can be made that the Members will use their available flexibilities to the full extent and therefore the markup is always equal to 50 % of the applied tariff.

[9] In cases with low applied tariffs, this markup will be smaller than if we had applied the original rational formula. It is not rational for Members to select flexibilities in this region of their tariff schedules, given by $t_0(x) < \frac{-\beta + \sqrt{\beta^2 + 8\alpha}}{2}$.

From the above equation, we can obtain α' as

$$\alpha' = \alpha - \frac{\sum_{x \in Q} \left[\frac{t_0(x)}{2} - \frac{\alpha}{t_0(x) + \beta} \right]}{\sum_{x \notin Q} \frac{1}{t_0(x) + \beta}} \qquad \text{(A.II.5)}$$

The new level of α is obtained by subtracting from α the ratio between the sum of the additional increases in the markup (by how much the average base tariff increases), because of the flexibilities; divided between the sum of levels of the markup for all other product (multiplied by α, which gives us by how much the level of α must further decrease to keep the average base tariff rate constant for all unbound products).

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