TARIFF NEGOTIATIONS IN AGRICULTURE: A DYNAMIC BLENDED FORMULA

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Summary

Market access has been a controversial issue from the very beginning of the reform process in agriculture and continues to be the one holding back the negotiations not only in agriculture but in other sectors as well. All attempts to come up with a tariff reduction formula that could bridge the gap between ambition and flexibility have failed. While the blended formula was meant as an attempt to balance these two objectives, a great degree of unpredictability was left as to how the flexibility offered would play in practice and an important part of the WTO membership rejected it on these grounds. Clearly, more certainty is needed and a number of improvements to the blended formula are suggested here to address the concerns expressed. The resulting Dynamic Blended Formula (DBF) offers a possibility of a compromise through a number of self-regulating mechanisms, which take into account the differences in the tariff profiles between members. An attempt is made to strike a balance between the flexibility desired and the additional obligations of those members being granted such flexibility.

The DBF retains the basic structure of the blended formula, i.e. the three categories of tariff lines envisaged: those to be reduced to zero, those subject to an Uruguay Round type formula, and those subject to the Swiss formula. The key innovation in the DBF is to define a member-specific "ceiling" tariff level based on the average of the tariff lines that a member wishes to include in the UR category. The broader the UR category the lower that "ceiling" and therefore there is a self-regulating mechanism in place which limits the number of sensitive products. Similarly, there is a self-regulating application of the Swiss component of the blended formula in the sense that its coefficient is member-specific and depends on the choice made about the UR category. The broader the UR category the lower the Swiss coefficient, i.e. the greater the tariff cuts for the tariff lines under the Swiss. Finally, the member-specific "ceiling" level is flexible in the sense that it can be exceeded provided that a member undertakes extra obligations in the form of an additional TRQ. Again, that mechanism is self-regulating whereby the additional obligation is prorated according to the degree of non-compliance so that there is an incentive to reduce high tariffs.

Overall, the DBF responds to the concerns raised with the original specification of the blended formula in the Derbez text but in a way that it would also meet the concerns of members seeking flexibility on market access and are prepared to undertake additional obligations for such flexibility. The DBF takes into account the differences in the initial tariff profiles of different members and the relative effort each makes to reduce tariffs of sensitive products. While the notion of self-declaration of sensitive products is retained, there are built-in mechanisms to limit the use of this provision. At the same time, additional obligations for flexibility do not become a permanent feature of the system but go away automatically (on a product by product basis) as soon as a member is in full compliance with its member-specific obligations. SDT provisions, including the envisaged Special Product category for developing countries, are easily incorporated into the DBF so that the general formulation (with differentiated parameters) would be applicable to all countries. Annex II contains the specific amendments to the Derbez draft text to implement the DBF.

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[1] The views expressed in this paper are those of the author and do not necessarily reflect official policy of the Food and Agriculture Organization.

I.   Introduction

Market access and specifically the tariff cut formula in agriculture is admittedly the make or break issue in the current round of negotiations. According to the Chairman of the Special Session of the Committee on Agriculture (SSCoA), as of the second negotiating meeting in April 2004 following the setback in Cancun, there was no indication of any emerging convergence on the blended formula contained in the Derbez text, nor was there a consensus on any other alternative. The Chairman also stated that at that stage no conclusions could be drawn on whether or not the negotiations would achieve an agreement on a framework on agriculture by July 2004, which would include all three pillars of the Agreement on Agriculture (AoA). If this is to be interpreted as implying that a framework text on the two other pillars of the AoA would be possible by July 2004, this is likely also unattainable, given the explicit and implicit linkages between the three pillars that have been made all along by several WTO members who are prepared to make concessions in one of the pillars contingent upon concessions being made by others in another pillar. Hence it is imperative that a compromise is found on market access in order to increase the likelihood of an overall framework agreement by the set date of July 2004.

One basic problem of approaches that have been put on the negotiating table so far is that a formula is proposed without spelling out in concrete terms what would be achieved by that formula and how it may affect different members. All of that has been left to interpretation. The latest attempt, the blended formula contained in the Derbez text[2], had a number of important compromising elements, however, it had the same fate as earlier formulae, basically because questions as to how it would be applied and what its final outcome would be, were left to interpretation. An infinite number of final outcomes were possible and it is understandable that members differed in their interpretations of how the formula would be used and were it would lead. The same formula can be interpreted as overly ambitious or as too flexible, depending on the assumptions made on how it may be applied in practice.

What are the generally understood expectations on market access reform during this round of negotiations? Paragraph 13 of the Doha Declaration recalled the long-term objective referred to in Article 20 of the AoA to establish a fair and market-oriented trading system through a programme of fundamental reform. Specifically, on market access, it called for "substantial improvements in market access". The Declaration went on to recognise the need for special and differential treatment for developing countries and also confirmed that non-trade concerns (NTCs) will be taken into account in the negotiations.

The above general language on market access has been the subject of continuous debate during the long negotiating process since Doha and while interpretations vary, there is a general understanding on the operational meaning of the broadly stated objectives in the Doha Declaration[3]. In operational terms, the concrete objectives on market access are understood to include the following:

1. substantial reduction of the average level of tariffs
2. reduction of tariff peaks (and tariff escalation)
3. accommodation of country-specific concerns on particular products; for developing countries this has been expressed in the form of Special Products (SPs) on the basis of food security and rural development considerations, while for developed countries in the form of "sensitive" products, inter alia on NTC grounds.
4. special and differential treatment (SDT) for developing country members, implying less onerous commitments compared to those of developed country members.

It is clear from the above that the Doha Declaration and what is understood to imply in operational terms contain an important contradiction. Specifically, to the extent that country-specific concerns are to be taken into account (third objective) that limits the degree to which substantial improvement in market access could be achieved (the first and especially the second objective). Hence, a compromise on what is to be achieved on market access was already embedded in what was agreed in the Doha Declaration. Essentially, the Doha text limits the set of possible acceptable solutions on market access

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[2] Draft Cancun Ministerial Declaration - Annex A, Second Revision (13 September 2003)
[3] Modalities phase: revised first draft (18 March 2003) and Modalities phase: chair's overview paper (18 December 2002).

during this Round of negotiations and a compromise between these contradictory objectives had to be found.

The remaining of the paper describes in general terms the various approaches that have been proposed on market access up to now and identifies the extend to which they meet the above objectives. The final part of the paper proposes a way forward by focussing on a number of improvements of the blended formula in a way that the objectives enumerated above could be effectively addressed.

II.   *The starting point: initial agricultural tariff profiles*

In order to illustrate how the different formulae that have been considered so far may affect different countries, seven illustrative country cases are being considered. These include three developed countries and four developing countries drawn from the main negotiating groups.

Table 1. Agricultural tariff profiles of selected WTO Members

WTO member	Average initial bound tariff (%)	Spread of bound tariffs (STD/ave) (%)	Peak initial bound tariff (%)	Average initial applied tariff (%)	Spread of applied tariffs (STD/ave) (%)	Peak initial applied tariff (%)	Applied over bound average tariffs (%)	Peak bound over average bound (%)
US	6.4	257.8	182.7	6.4	254.7	182.7	100.0	2854.7
EU	17.4	170.1	456.9	17.4	170.1	456.9	100.0	2625.9
Japan	20.8	245.7	534.8	18.5	242.7	477.9	88.9	2571.2
Brazil	35.5	29.6	55.0	12.5	43.2	55.0	35.2	154.9
Colombia	91.9	37.4	227.0	14.8	35.1	20.0	16.1	247.0
India	115.1	45.9	300.0	42.6	63.1	210.0	37.0	260.6
Kenya	100.0	0.0	100.0	23.1	52.4	85.0	23.1	100.0

Source: Compiled from data provided by UNCTAD, based on 6 digit HS tariff lines (some 620-670 tariff lines for each member)

Several observations can be made from the country profiles presented in Table 1. First, the average bound tariffs of the developed countries are generally less than those of the developing countries. However, in terms of average applied tariffs, the differences between the different members are less pronounced. The main difference between developed and developing countries is on the spread of both bound and applied tariffs, with the former group of countries having a spread of tariffs which is several-fold that of the latter. The same picture emerges as regards maximum tariffs. Generally, the maximum applied tariffs for developed countries are much higher and equal (or very close) to the bound levels compared to developing countries where there is a significant gap between bound and applied ("water in tariffs"). In general, the tariff profiles of the developed countries are highly skewed with many tariff lines at zero or very low single-digit levels and another set of tariff lines bound at very high levels. This is evident from the figures of the last column in Table 1. These substantial differences in the spread of initial tariffs between developed and developing countries are of significance as regards the relative impact of different tariff cut formulae, as we will see below.

III.   *Uruguay Round vs. Swiss formula*

Two general approaches were put on the table from the very start of the negotiations: the approach used during the Uruguay Round (UR) negotiations, which became known as the "UR formula" and the Swiss formula, a mathematical formula used for industrial products during the Tokyo round. The UR formula implies an average overall reduction with a minimum cut per tariff line (e.g. during the UR negotiations, 36% average and 15% minimum for developed countries, and 24% and 10%, respectively, for developing countries). For illustrative purposes, the same parameters are assumed in the hypothetical application of the UR formula shown in Table 2.

Table 2. Hypothetical application of the UR formula

WTO member	Average initial bound tariff (%)	Peak initial bound tariff (%)	Average tariff reduction (%)	Cut of peak tariff (%)
US	6.4	182.7	36.0	15.0
EU	17.4	456.9	36.0	15.0
Japan	20.8	534.8	36.0	15.0
Brazil	35.5	55.0	24.0	10.0
Colombia	91.9	227.0	24.0	10.0
India	115.1	300.0	24.0	10.0
Kenya	100.0	100.0	24.0	10.0

How does the UR formula score in terms of achieving the four objectives mentioned above?

1. Yes
2. Marginally - can actually increase relative tariff peaks (spread between low and high tariffs)
3. Yes
4. Yes

The major opposition to the UR formula came from those members that expected effective market access, which essentially would come about by a reduction in tariff peaks.

The opponents of the UR formula had a preference for a Swiss-type formula aiming at an harmonization of tariffs between members by cutting higher tariffs more than lower tariffs[4]. Table 3 illustrates an application of the Swiss formula.

Table 3. Hypothetical application of the Swiss formula

WTO member	Average initial bound tariff (%)	Peak initial bound tariff (%)	Average tariff reduction (%)	Cut of peak tariff (%)
US	6.4	182.7	17.8	88.0
EU	17.4	456.9	37.1	94.8
Japan	20.8	534.8	34.6	95.5
Brazil	35.5	55.0	40.5	52.4
Colombia	91.9	227.0	63.2	81.9
India	115.1	300.0	66.6	85.7
Kenya	100.0	100.0	66.7	66.7

Note:
In this illustrative application the coefficient "A" of the Swiss formula was assumed to be 25 for developed countries and 50 for developing.

How does the Swiss formula score in terms of achieving the four objectives mentioned above?

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[4] Mathematically, the Swiss formula is expressed as follows:
$$T_{final} = T_{initial} * A / (T_{initial} + A)$$
where the value of the coefficient "A" determines the upper limit of the final tariffs, i.e. no final tariff line would be greater than "A".

1. Yes, but highly uneven both within dev'd and between dev'd and dev'g
2. Yes, dramatically for both dev'd and dev'g
3. Not at all
4. No; in fact the opposite, with average cuts for dev'g much greater than for dev'd

The Swiss fails in two key objectives of the reform, namely in accommodating country concerns with sensitive and special products and also in ensuring SDT for developing countries.   Essentially, the Swiss accomplishes what the UR formula did not and vice versa. For this reason, these two approaches to market access were seen as two extremes of all possible outcomes and it was evident from the beginning of the negotiations that a compromise between the two had to be found.

IV.   Harbinson's "banded" formula

A compromise between the UR and the Swiss formulae was first sought in the Harbinson draft modalities in the form of the "banded" approach[5]. According to this approach, the whole range of tariff lines was divided in three bands: a high band (comprising the top tariff lines), a medium band and a low band. The UR formula was to be applied within each band (i.e. an overall average reduction was stipulated and a minimum cut per tariff line). A Swiss-type approach was proposed between bands (i.e. substantially higher average and minimum cuts for the top band relative to the middle and the bottom band). Table 4 illustrates the application of Harbinson's formula.

Table 4. Hypothetical application of the Harbinson formula

WTO member	Average initial bound tariff (%)	Peak initial bound tariff (%)	Average tariff reduction (%)	Cut of peak tariff (%)
US	6.4	182.7	41.3	45.0
EU	17.4	456.9	44.7	45.0
Japan	20.8	534.8	44.2	45.0
Brazil	35.5	55.0	29.6	20.0
Colombia	91.9	227.0	35.8	30.0
India	115.1	300.0	36.1	30.0
Kenya	100.0	100.0	35.0	25.0

Harbinson formula

Developed countries: 3 band reduction formula
        tariff > 90   average reduction of 60% with a minimum 45%
        15 < tariff ≤ 90   average reduction of 50% with a minimum 35%
        tariff ≤ 15   average reduction of 40% with a minimum 25%
Developing countries: 4 band reduction formula
        tariff > 120   average reduction of 40% with a minimum 30%
        60 < tariff ≤ 120 average reduction of 35% with a minimum 25%
        20 < tariff ≤ 60   average reduction of 30% with a minimum 20%
        tariff ≤ 20   average reduction of 25% with a minimum 15%

How does the Harbinson formula score vis-a-vis the above objectives?

1. Yes
2. Yes
3. No (possibly Yes for developing countries with the envisaged SP provision)
4. Yes

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[5] Modalities phase: revised first draft (18 March 2003)

Clearly, the Harbinson formula is tougher than the pure UR but not as ambitious as the pure Swiss, especially as regards tariff peaks. However, it was rejected by both sides of the spectrum, i.e. those that favoured the UR and wanted to see only modest cuts and those that favoured the Swiss and wished to see an ambitious outcome on market access. In relative terms, however, it was members of the former group that were most unhappy with the Harbinson formula as they considered that it did not satisfy the third objective, i.e. country-specific sensitivities on particular products, and a very strong and broadly-based alliance was formed (some 70+ developed and developing countries) against the Harbinson formula. This formula was the major dividing issue when the Harbinson draft modalities text was considered in March 2003, the deadline set at Doha to reach agreement on such a text. An alternative had to be found for the process to move forward.

V.   The blended formula

The blended formula was the next attempt to strike a compromise (see Annex I on the specification of the blended formula as contained in the draft Cancun Ministerial Text). The blended formula tried to combine ambition, by explicitly specifying that a portion of tariff lines would be subject to a straightforward application of the pure Swiss formula, and flexibility, by stipulating that a portion of tariff lines would be subject to the straightforward application of the pure UR formula. The remaining portion of tariff lines would have been reduced to zero (or between 0-5% for developing countries). Additional provisions were stipulated in the form of increased TRQs to ensure effective additional market access for sensitive products. The designation of the individual tariff lines in each of the three categories was assumed to be essentially "self-declaratory" i.e. the choice of individual WTO members.

In the first instance, one would have concluded that the blended formula was a genuine attempt to find a compromise. It was meant to combine ambition and flexibility, two key characteristics considered essential in a compromise solution. Yet, its fate was not better than that of the previous approaches. Why did it fail?

There are a large number of key parameters that would have to be fixed in order to operationalize the blended formula at the individual country level. These include:

- the proportions of tariff lines under the three categories
- which specific tariff lines would fall under each category
- the average and the minimum cut under the UR category
- the coefficient of the Swiss formula.

There is an infinite number of combinations of these parameters making the application of the blended formula highly unpredictable. Table 5 illustrates clearly that the outcome varies considerably depending on what values are chosen for the various parameters. Because of this wide range of possible outcomes of the blended formula, it is difficult to gauge it in relation to the four objectives considered above. In general terms, however, one could say the following:

1. Yes, but highly uneven both within developed and between developed and developing
2. No; to some extent if the UR category is very narrow
3. Yes, if the UR category is wide enough
4. No; because of their initial tariff profile, developing countries would be generally subjected to higher average cuts of bound tariffs.

It is evident that on all four criteria there is no clear answer as to the outcome of the blended formula. Everything depends on the parameters assumed. While the proponents of the blended formula hoped that ambiguity could foster a compromise, with much to be negotiated at a later stage, the skeptics felt that the uncertainty in the blended formula would prejudice such a negotiated outcome against their interests.

Table 5. Hypothetical application of the blended formula

WTO member	Average initial bound tariff (%)	Peak initial bound tariff (%)	Average tariff reduction (%)						Cut of peak tariff (%)
			Assumed proportion of tariff lines between UR/Swiss/duty free categories (%)						
			2.5/67.5/30	*5/65/30*	*10/60/30*	*20/50/30*	*30/40/30*	*40/30/30*	
US	6.4	182.7	22.9	22.4	22.2	23.4	26.0	29.6	15.0
EU	17.4	456.9	43.8	43.0	40.9	38.6	37.8	38.3	15.0
Japan	20.8	534.8	40.1	38.7	36.8	35.0	35.0	36.1	15.0
			Assumed proportion of tariff lines between UR/Swiss/"duty free" categories (%)						
			5/90/5	*10/85/5*	*20/75/5*	*40/55/5*	*60/35/5*	*80/15/5*	
Brazil	35.5	55.0	40.3	38.3	36.1	32.6	29.6	26.4	10.0
Colombia	91.9	227.0	62.2	59.6	54.9	47.2	40.8	34.7	10.0
India	115.1	300.0	65.7	63.3	58.7	49.1	40.9	32.5	10.0
Kenya	100.0	100.0	66.0	63.8	59.6	51.0	42.5	33.9	10.0

Notes:

The choice of parameters made, in order to demonstrate the application of the blended formula, were guided to some degree by what is stated in the Framework text but were largely arbitrary otherwise. The basic assumptions made are as follows:
• In all scenaria the proportion of tariff lines under the duty free category was assumed to be the same, namely, 30% for developed countries (this comprises both those that are already zero and those to become zero), and 5% for developing. Hence, the variation between the different scenaria was between the portions of tariff lines that were assumed to fall under the UR and the Swiss formulae.
• For both developed and developing countries the tariff lines assumed to fall under the duty free category were those already low, i.e. at the very bottom of the tariff range. For developed countries these tariffs are reduced to zero while for developing to 5%.
• For both developed and developing countries it was assumed that the UR formula would apply to tariff lines at the top of the range of tariffs. The additional specification for a minimum and an average cut contained in the blended formula was ignored (for the sake of simplicity), and a linear cut was assumed instead equal to 36% for developed countries and 24% for developing.
• Finally, for the remaining middle-range of tariff lines the Swiss formula was assumed to apply with a coefficient of 25 for developed countries and 50 for developing.

Those members that had concerns over sensitive products banked on the explicit recognition of flexibility in the blended formula and generally went along with it hoping that they would be able to negotiate a category for sensitive products that would be broad enough and flexible enough to accommodate their concerns. The skeptics, on the other hand, assumed that there was too much flexibility in the blended formula, which would be exploited by those members that resisted reform, thus yielding an outcome much less ambitious than their expectations. The major skeptics of the blended formula were members of the G-20 which characterized it as "fundamentally flawed", on the grounds that it failed to deliver substantial improvements in market access, especially for products protected by tariff peaks, and second because it would have resulted in substantially greater tariff cuts for developing countries than for developed countries.

Specifically, according to the G-20 communiqué of April 2004, in the case of developed countries, application of the blended formula would have:

- offered an 'opt out mechanism' because of the self-declaratory nature of tariff lines subject to UR;
- made the role of Swiss 'merely symbolic'; and
- implied uncertainty on the role of TRQs to increase market access.

On the other hand, for developing countries, application of the blended formula would imply:

- a substantial and disproportional tariff reductions for most of them compared to those of developed countries, in view of their initial tariff profile;
- the role of the Swiss component in the Blended Formula was real; and
- SDT for them was not achieved.

Considering the hypothetical analysis of the blended formula in Table 5, the above claims by the G-20 were not unfounded. It would have taken extreme values for the various parameters of the blended formula for it to yield an outcome that the G-20 would consider acceptable in terms of providing meaningful market access in developed country markets and offering the understood degree of differentiation in reduction commitments between developed and developing countries.

VI.   A self-adjusting Dynamic Blended Formula (DBF)

The fundamental dividing issue on market access is clearly how to accommodate commodity-specific country sensitivities within the overall objective of achieving effective market access. While the blended formula was meant as an attempt to balance these two objectives, a great degree of unpredictability was left as to how the flexibility offered would play in practice. The outcome was apparently not satisfactory neither for those demanding flexibility nor for those that would have gone along with it. The former were not sure whether they would be able to get what they needed given their particular circumstances, and the latter were afraid that, to the extent that what was offered was "open-ended", it was likely to be abused. What was lacking in this approach was some checks and balances from both sides.

While other possible formulations of tariff reduction formulae have been suggested[6], it is worthwhile to explore the possibilities of addressing the main deficiencies of the blended formula before exploring new approaches. Considering the usually incremental nature of progress in trade negotiations, to the extent that these deficiencies can be addressed satisfactorily, the chances of a compromise with a formula that is already on the negotiating table are greater than with another completely new formulation.

The approach suggested here retains the basic architecture of the blended formula, as proposed in the Derbez text, but introduces certain self-regulating mechanisms which take into account the initial tariff profile of individual WTO members and the need to contain flexibility within predictable bounds. This is accomplished by introducing three improvements to the blended formula:

The first innovation is the notion of a self-declaratory but also self-adjusting UR category. Key in this is defining a "ceiling" tariff equal to average initial tariff of all tariff lines placed in UR category. This "ceiling" level would work as an upper limit of tariffs and provides the mechanism of self-regulation. Thus, while the UR category remains self-declaratory, there is a built-in incentive to minimize its width in the sense that the more tariff lines are included in the UR category, the less the average and, hence, the less the "ceiling" final tariff.

Clearly, there is a trade-off between the number of tariff lines placed under the UR category and the resulting tariff "ceiling", as demonstrated in Figure 1a and 1b. For example, in the case of Japan in Figure 1a, the broadening of the UR category from 2.5% of tariff lines to 5% would imply a reduction in the "ceiling" tariff level from 292% to 204%. A further broadening of the UR category implies

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[6] Several approaches have been suggested, including that by Francois, J. and W. Martin, "Formula Approaches for Market Access Negotiations," *The World Economy*, 26(1), 2003 which suggested a variant of the original Swiss formula. Another approach is detailed in A compromise formula for tariff cuts in agriculture, P. Konandreas, *Food Policy*, Vol 28, February 2003. This latter approach recognizes the differences in the tariff profiles of individual members and suggests a reduction formula that would result in a new tariff profile, which has the basic characteristics of the initial, but with a reduced average and a reduced spread in the tariff range (both of which being the parameters to be negotiated).

considerable further reductions in the "ceiling". The same is the case for other members. In general, the more dispersed the initial tariff profile is the greater the reduction in the "ceiling" level as the UR category is made broader. At the other extreme case of a uniform initial tariff (e.g. the case of Kenya), the "ceiling" level remains that initial uniform tariff, irrespective of the width of the UR category. In order to avoid such cases, it would also be necessary to stipulate that a minimum reduction of some level (to be negotiated) would apply to all tariff liners (see Annex II below).

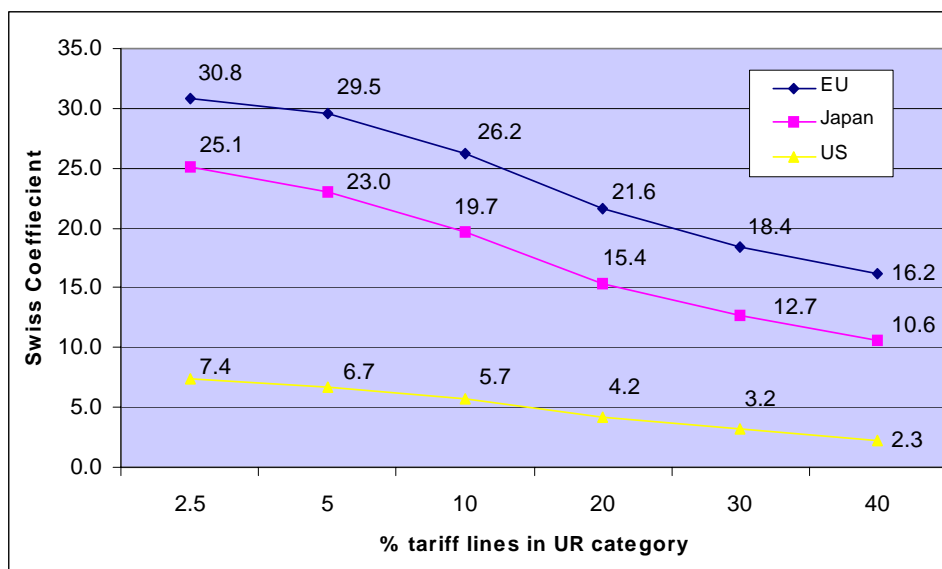**Figure 1a. Trade-off between size of UR category and 'ceiling' for selected developed countries**
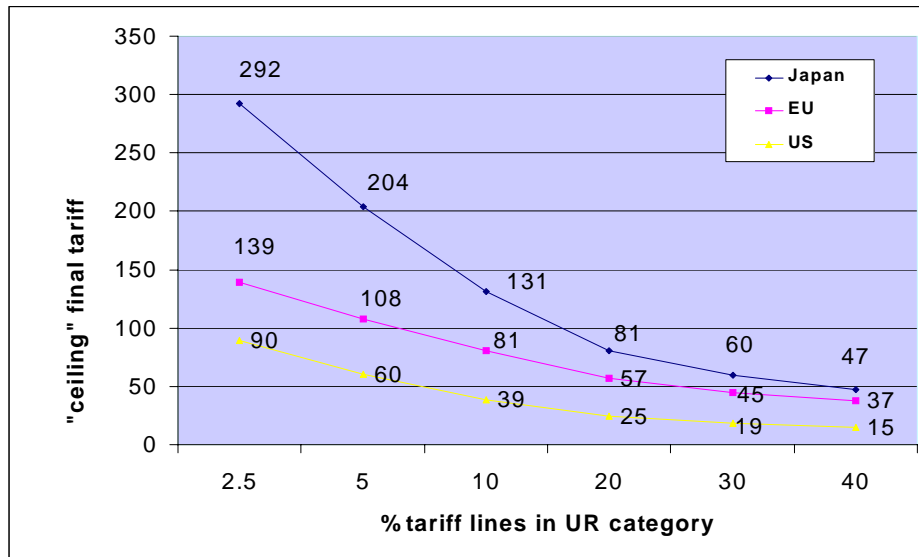
Figure 1b. Trade-off between size of UR category and 'ceiling' for selected developing countries
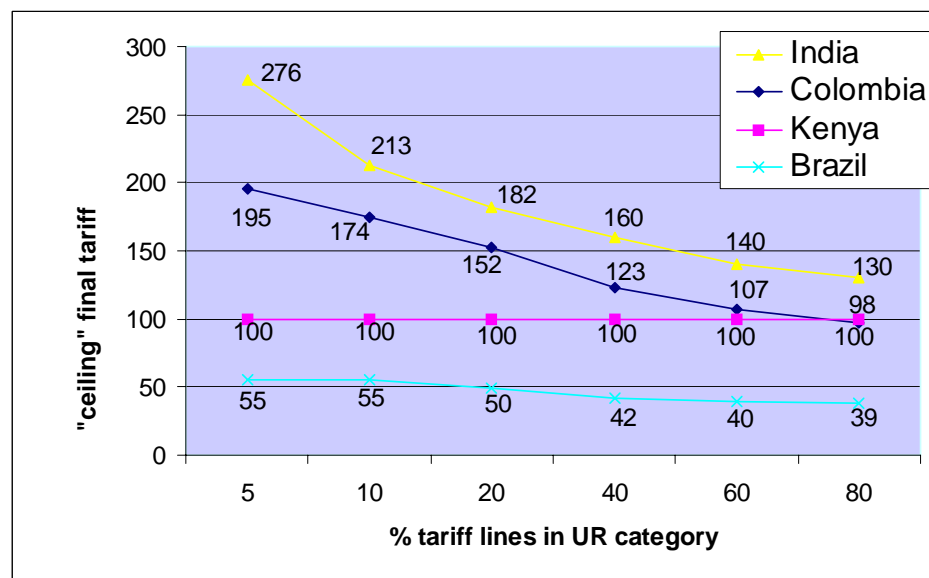

The second improvement to the blended formula comes by introducing the notion of a self-adjusting Swiss formula category. Given that a certain percentage of tariff lines would be under the duty free category and another self-declaratory percentage of tariff lines under the UR category (subject to a negotiated average reduction commitment), the implication is that the Swiss category becomes a residual both in terms of the number of tariff lines under it and its coefficient. The number of tariff lines is the residual of the two other categories. The coefficient is such that the resulting tariff cuts for tariff lines under the Swiss, together with those under the other two categories, yield an overall tariff reduction for all agricultural products which is equal to the negotiated overall tariff reduction commitment (i.e. a number such as the 36% and 24% for developed and developing countries negotiated under the Uruguay Round).

Again, there is a trade-off between the number of tariff lines placed under the UR category and the role of the Swiss in cutting tariffs (one of the points raised by the G-20). As it can be seen from Figure 2a and 2b, the wider the UR category, the tougher the Swiss has to be (smaller value of the Swiss coefficient) in order for an overall agreed reduction commitment to be achieved. The overall reduction commitment for all agricultural products assumed here (for illustrative purposes only) is 40% for developed countries and 27% (two thirds) for developing.

Figure 2a.   Trade-off between size of UR category and Swiss Coefficient for developed countries

Figure 2b.   Trade-off between size of UR category and Swiss Coefficient for developing countries
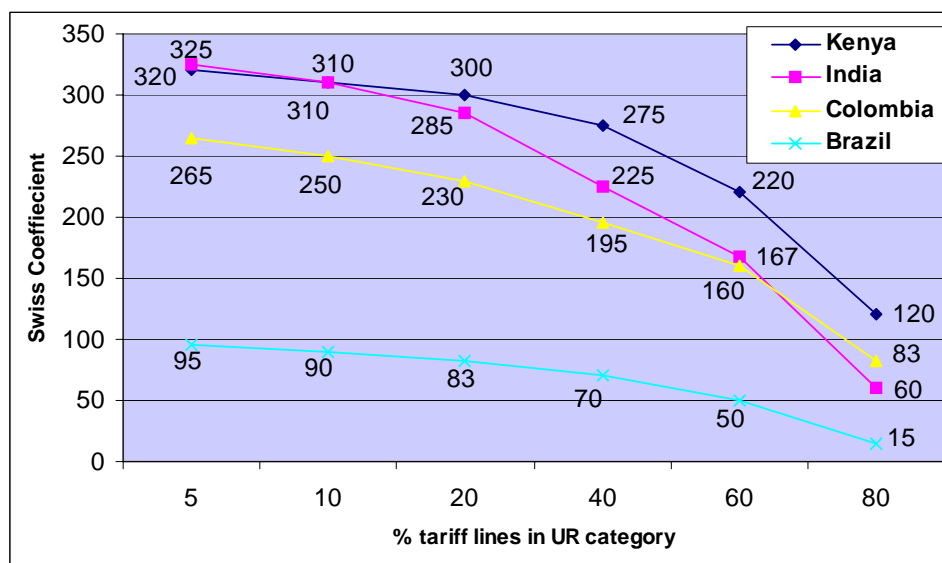

The third element in the formulation of the Dynamic Blended Formula is the notion of a self-adjusting additional obligation for those members not in full compliance with their "ceiling" levels. The blended formula in the Derbez text introduced the notion of a fixed across-the-board maximum tariff level which if exceeded would have penalized members in the form of "additional market access in these or other areas through a request-offer process that could include TRQs." No explicit differentiation was made between members as regards the maximum tariff level and the effort a member would have to make to bring a tariff below that unspecified maximum. It is clear that a fixed across-the-board maximum tariff of, say 50%, is attainable making a relatively lesser effort by

member A with an initial peak tariff of, say 70%, compared to member B with an initial peak tariff of, say 250%.

The "ceiling" level defined above from the self-declaratory specification of tariff lines under the UR category avoids this problem. That level is relative, in the sense that it is determined by member-specific tariff structures, and it can also be made flexible, in the sense that it may be exceeded at a cost. That cost would be proportional to the residual non-compliance. For illustrative purposes, assume that the maximum additional TRQ is 10% of the level of consumption (an across-the-board level applicable in cases of making no effort to comply – a number to be negotiated). Assume further that member A reduced its tariff for product "x" from 70% to 55% (however, still above A's "ceiling" level of say 50%) and member B reduced its tariff from 250% to 150% (also well above B's "ceiling" level of say 100%). The applicable additional TRQs for these two members (for the products in question) would then be prorated by the percentages by which each member's "ceiling" tariff is not met[7].

An illustration of the mechanics involved is shown in Figure 3 where non-compliance is defined as the ratio between residual non-compliance (the remaining gap between the final tariff for product x and the "ceiling" level) and the reduction necessary for full compliance. The relevant calculations for the two hypothetical cases are shown in Table 6. Partial compliance would imply an additional TRQ of 2.5% for member A and 3.3% for member B for the products in question.

Figure 3. Non-compliance ratio
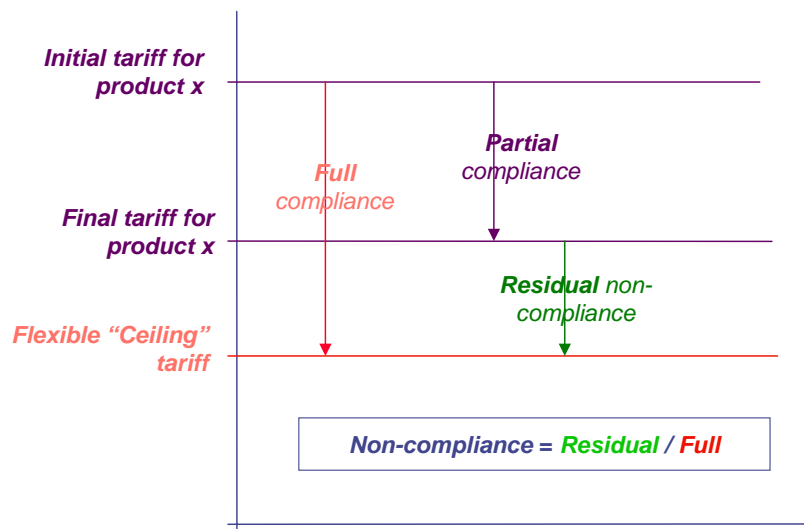
In summary, the approach proposed here in the form of a Dynamic Blended Formula responds to the concerns raised by G-20 but in a way that it would also be acceptable to those members seeking flexibility on market access. In particular, the specification takes into account the differences in the initial tariff profiles of different members and the relative effort each would have to make to reduce tariffs of sensitive products. The proposed formula allows members to define the degree of flexibility desired and is completely transparent about the price that these members would have to pay to have that flexibility. While the notion of self-declaration of sensitive products is retained, there are built-in mechanisms to limit the use of this provision. The DBF has also a build-in incentive to reduce tariff peaks through an additional TRQ imposed when tariffs exceed member-specific "ceiling" levels. At the same time this obligation does not become a permanent feature of the system but goes away automatically (on a product by product basis) as soon as a member is in full compliance with its ceiling" tariff level.

SDT provisions for developing countries are easily incorporated into the DBF by specifying lower overall tariff reduction commitments and longer implementation periods, as has been the practice in the past and by incorporating also the additional special provisions envisaged. For example, the DBF can accommodate the Special Products category for developing countries, as a sub-category of the UR

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[7] Clearly, for those tariff lines for which members reduce their tariffs down to the ceiling level or below it, there would be no penalty to be paid.

category. The "ceiling" tariff level would not apply for these SPs, however the lower tariff reduction commitment that would apply for such products will have to be taken into account in the calculation of the overall agreed reduction commitment for developing countries.

Table 6. Illustration of the calculation of additional TRQ for non-compliance

WTO member	(1) Initial bound tariff for product x[1]/ (%)	(2) "Ceiling" for final bound tariffs[2]/ (%)	(3) Final bound tariff for product x[3]/ (%)	(4) Residual non-compliance[4]/ (%)	(5) Penalty (additional TRQ)[5]/ (%)
Member A	70.0	50.0	55.0	25.0	2.5
Member B	250.0	100.0	150.0	33.3	3.3

[1]/ not necessarily the same product for member A and member B
[2]/ the average initial tariff of all tariff lines placed in UR category
[3]/ for each member the same tariff line as that in column (1)
[4]/ the ratio between (1)-(3) over (1)-(2)
[5]/ residual non-compliance times the maximum penalty (10% additional TRQ was assumed – an across-the-board level, to be negotiated).

VII.   *Application of the Dynamic Blended Formula*

A hypothetical application of the Dynamic Blended Formula to the seven selected countries above is shown in Table 7. It should be noted at the outset that there is complete certainty in the DBF as regards the average tariff reduction to be achieved (as that is one of the negotiated parameters). In the illustration shown in Table 7, it was assumed that the average reduction for all agricultural products would be 40% for developed and 27% (two thirds) for developing. The Table then shows how the tariff peaks would be affected for each member, depending on the proportion of tariff lines placed under the UR category (as in Table 5 above, the proportion of "duty free" tariff lines were assumed to be 30% for developed and 5% for developing countries).

What the Table shows as regards the reduction of tariff peaks is what would be expected. Because of the highly dispersed tariff profiles of developed countries, the cuts of their peak tariff (the single tariff line at the top of their tariff distribution) are much higher than those of developing countries which generally have much more uniform tariff profiles. Even when the UR category is contained to 2.5% of the tariff lines for developed countries, the reduction in their single top tariff is significant (close to 70% for the EU). To the extent that these developed countries desire smaller cuts for their peak tariff, they would have to narrow their UR category even more, or alternatively they would have to commit an additional TRQ for those products for which they do not comply fully with their "ceiling" levels, as described above.

To recapitulate, the Dynamic Blended Formula requires that the following parameters are negotiated (this is spelt out clearly in Annex II where amendments to the Derbez text are proposed):
- the proportion of duty free tariff lines for developed countries and those to be reduced to 0-5% for developing countries;
- the minimum tariff cut applicable to all tariff lines for developed and developing countries, respectively;
- the overall tariff reduction for all agricultural products for developed and developing countries, respectively;
- the average tariff reduction for tariff lines placed under the UR category for developed and developing countries, respectively, and
- the SDT provisions that would apply to Special Products.

In contrast to the original blended formula, the Dynamic Blended Formula avoids completely negotiations on a large number of contentious parameters, such as the proportion of tariff lines placed under the UR category and the coefficients of the Swiss formula. The key innovation of the DBF is its self-regulating built-in mechanisms which automatically determine these parameters, depending on the choice made by each member on the proportion of the tariff lines placed under the UR category (self declaration) and the initial tariff profile of each member.

Table 7. Hypothetical application of the Dynamic Blended Formula

WTO member	Average initial bound tariff (%)	Peak initial bound tariff (%)	Average tariff reduction (%)	Cut of peak tariff to fully comply with "ceiling" tariff levels (%)					
				Assumed proportion of tariff lines between UR/Swiss/duty free categories (%)					
				2.5/67.5/30	5/65/30	10/60/30	20/50/30	30/40/30	40/30/30
US	6.4	182.7	40.0	51.0	67.1	78.7	86.4	89.8	91.8
EU	17.4	456.9	40.0	69.5	76.5	82.3	87.6	90.2	91.8
Japan	20.8	534.8	40.0	45.4	61.9	75.4	84.9	88.9	91.1
				Assumed proportion of tariff lines between UR/Swiss/"duty free" categories (%)					
				5/90/5	10/85/5	20/75/5	40/55/5	60/35/5	80/15/5
Brazil	35.5	55.0	27.0	10.0	10.0	10.0	23.0	27.5	29.7
Colombia	91.9	227.0	27.0	14.1	23.2	33.1	45.7	52.9	57.0
India	115.1	300.0	27.0	10.0	29.0	39.4	46.5	53.2	56.6
Kenya	100.0	100.0	27.0	10.0	10.0	10.0	10.0	10.0	10.0

Notes:

The proportions of tariff lines in the three categories are assumed the same as in Table 5. As regards the other parameters, the basic assumptions made in order to demonstrate the application of the Dynamic Blended Formula are as follows:

• The overall tariff reduction for all agricultural products was assumed 40% for developed countries and 27% (two thirds) for developing countries. These are two levels to be negotiated.

• Depending on the proportion of tariff lines placed under the UR category (self-declaration), the cut of peak tariffs is automatically determined as in Figures 1a and 1b. A minimum cut per tariff line of 15% for developed countries and 10% for developing was also assumed to apply. Additionally, the overall average cut for the tariff lines under the UR category was assumed to be 36% for developed countries and 20% for developing. The 20% average reduction for developing countries (instead of 2/3 of that of developed, i.e. 24%) is in order to take into account Special Products which these countries may include under this category (and the latter would be expected to be subject to minimum cuts, without compensating higher cuts in other products).

• Again, depending on the proportion of tariff lines placed under the UR category, and given the overall negotiated tariff reduction for all agricultural products, the coefficient of the Swiss formula applicable to the remaining tariff lines is automatically determined as in Figures 2a and 2b.

• Finally, the cut in the tariff peak shown, would apply to the single tariff line at the top of the tariff distribution of each member. As explained in the text, to the extent that a member desires smaller cuts for their peak tariffs, it would have to narrow its UR category, or alternatively commit an additional TRQ for those products for which there is partial compliance with "ceiling" levels.

VIII.   Concluding remarks

Market access has been a controversial issue from the very beginning of the reform process in agriculture and continues to be the one holding back the negotiations not only in agriculture but in other sectors as well. The difficulties are understandable as both ambition and flexibility are well embedded in Article 20 of the AoA and in the Doha Declaration. All attempts to come up with a tariff reduction formula that could bridge the gap between ambition and flexibility have failed. Part of the problem is the inherent difficulties and strong sensitivities from all sides, but also to blame is the degree of ambiguity left in what was proposed which has been misinterpreted and seen with suspicion by both sides of the spectrum. Some ambiguity was desirable (as market access is only one of the pillars of the reform process in agriculture and agriculture itself is only one of the sectors being negotiated) but it is clear that too much uncertainty in what would be achieved on market access has not been conducive to an agreement. More certainty is needed and an attempt was made in this paper to suggest an approach that builds on the blended formula and could bridge the gap between ambition and flexibility.

The proposed Dynamic Blended Formula responds to the concerns raised with the original specification of the blended formula in the Derbez text but in a way that it would also meet the concerns of members seeking flexibility on market access and are prepared to undertake additional obligations for such flexibility. The DBF takes into account the differences in the initial tariff profiles of different members and the relative effort each makes to reduce tariffs of sensitive products. While the notion of self-declaration of sensitive products is retained, there are built-in mechanisms to limit the use of this provision. At the same time, additional obligations for flexibility do not become a permanent feature of the system but go away automatically (on a product by product basis) as soon as a member is in full compliance with its member-specific obligations. SDT provisions, including the envisaged Special Product category for developing countries, are easily incorporated into the DBF so that the general formulation (with differentiated parameters) would be applicable to all countries. Annex II contains the specific amendments to the Derbez draft text to implement the DBF.

Annex A to the draft Cancún Ministerial Text (*Second Revision*,13 September 2003)

Framework for Establishing Modalities in Agriculture

Market Access

2.   The Doha Ministerial Declaration calls for "substantial improvements in market access." Negotiations should therefore provide increased access opportunities for all and in particular for the developing countries. To achieve this, commitments shall be based on the following parameters:

2.1   The formula applicable for tariff reduction by developed countries shall be a blended formula under which each element will contribute to substantial improvement in market access for all products. The formula shall be as follows:

> (i)   […]% of tariff lines shall be subject to a […]% average tariff cut and a minimum of […]%; for these import-sensitive tariff lines market access increase will result from a combination of tariff cuts and TRQs.

> (ii) […]% of tariff lines shall be subject to a Swiss formula with a coefficient […].

> (iii) […]% of tariff lines shall be duty-free.

[The resulting simple average tariff reduction for all agricultural products shall be no less than [...]%.]

2.2   For the tariff lines that exceed a maximum of […]%, developed-country participants shall either reduce them to that maximum, or ensure effective additional market access in these or other areas through a request-offer process that could include TRQs. [Within this category, participants shall have additional flexibility under conditions to be determined for a very limited number of [ ] products to be designated on the basis of non-trade concerns that would only be subject to the provisions of paragraph 2.1 above.]

2.3   The issue of tariff escalation will be addressed by applying a factor of […] to the tariff reduction of the processed product in case its tariff is higher than the tariff for the product in its primary form.

2.4   In-quota tariffs shall be reduced by […]%. Terms and conditions of any TRQ expansion/opening remain under negotiation.

2.5   The use and duration of the special agricultural safeguard (SSG) remain under negotiation.

Special and differential treatment

2.6   Having regard to their development, food security and/or livelihood security needs, developing countries shall benefit from special and differential treatment, including lower tariff reductions and longer implementation periods.

2.7   The formula applicable for tariff reductions by developing countries shall be as follows:

> (i)   […]% of tariff lines shall be subject to a […]% average tariff cut and a minimum of […]%; for these tariff lines market access increase will result from a combination of tariff cuts and TRQs. Within this category, developing countries shall have additional flexibility under conditions to be determined to designate Special Products (SP) which would only be subject to a linear cut of a minimum of […]% and no new commitments regarding

TRQs; however, where tariff bindings are very low (below [...]%) there shall be no requirement to reduce tariffs.

(ii) […]% of tariff lines shall be subject to a Swiss formula with a coefficient of […].

(iii) [...]% of tariff lines shall be bound between 0 and 5%, taking into account the importance of tariffs as a source of revenue for developing countries.

In implementing tariff reductions under paragraphs 2.7(ii) and 2.7(iii) above, developing countries should benefit from an additional implementation period of [...].

2.8   The applicability and/or extent of the provisions of paragraph 2.2 above to developing countries remain under negotiation, taking into account their development needs.

2.9   A special agricultural safeguard (SSM) shall be established for use by developing countries subject to conditions and for products to be determined.

2.10   All developed countries will seek to provide duty-free access for at least […]% of imports from developing countries through a combination of MFN and preferential access, including particularly all tropical and other products referred to in the preamble of the Agreement on Agriculture.

2.11   Participants undertake to take account of the importance of preferential access for developing countries. The further considerations in this regard will be based on paragraph 16 of the revised First Draft of Modalities for the Further Commitments (TN/AG/W/1/Rev.1 refers).

Self-regulating Dynamic Blended Formula (DBF)

Changes to **Annex A to the draft Cancún Ministerial Text** (amendments shown in **bold** type).

Market Access

2.   The Doha Ministerial Declaration calls for "substantial improvements in market access." Negotiations should therefore provide increased access opportunities for all and in particular for the developing countries. To achieve this, commitments shall be based on the following parameters:

2.1   The formula applicable for tariff reduction by developed countries shall be a **dynamic** blended formula under which each element will contribute to substantial improvement in market access for all products. The formula shall be as follows:

  (i)   **The minimum cut per tariff line shall not be less than […]%.**
  (ii)   […]% of tariff lines shall be duty-free.
  (iii)   **A member-determined number of tariff lines shall be subject to a […]% average cut, with a "ceiling" tariff <u>equal to the average initial tariff of all tariff lines in this category</u>. For tariff lines not reduced below that "ceiling" level paragraph 2.2 shall apply.**
  (iv)   **The remaining tariff lines shall be subject to a Swiss formula with a coefficient such that the <u>resulting overall average tariff for all agricultural products</u> shall be at least […]% below the initial overall average tariff level of each member.**

2.2   For the tariff lines not reduced below that "ceiling" level as defined under 2.1(iii) above, developed-country participants shall either reduce them to that "ceiling" level, or ensure effective additional market access as follows:

  (i)   **The maximum additional TRQ for non-compliance shall be […]% of the level of domestic consumption.**
  (ii)   **The <u>applicable</u> additional TRQ shall be prorated according to the percentage by which the "ceiling" tariff is not complied with[8].**

2.3   The issue of tariff escalation will be addressed by applying a factor of […] to the tariff reduction of the processed product in case its tariff is higher than the tariff for the product in its primary form.

2.4   In-quota tariffs shall be reduced by […]%. Terms and conditions of any TRQ expansion/opening remain under negotiation.

2.5   The use and duration of the special agricultural safeguard (SSG) remain under negotiation.

Special and differential treatment

2.6   Having regard to their development, food security and/or livelihood security needs, developing countries shall benefit from special and differential treatment, including lower tariff reductions and longer implementation periods.

2.7   The formula applicable for tariff reductions by developing countries shall be as follows:

  (i)   **The minimum cut per tariff line shall not be less than […]%.**
  (ii)   [...]% of tariff lines shall be bound between 0 and 5%, taking into account the importance of tariffs as a source of revenue for developing countries.

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[8] Defined as (new tariff – "ceiling" tariff) divided by (initial tariff – "ceiling" tariff).

(iii) **A member-determined number of tariff lines shall be subject to a […]% average cut, with a "ceiling" tariff <u>equal to the average initial tariff of all tariff lines in this category</u>.** Within this category, developing countries shall have additional flexibility under conditions to be determined to designate Special Products (SP) which would only be subject to a linear cut of a minimum of […]% and no new commitments regarding TRQs; however, where bound tariffs are below [...]% there shall be no requirement to reduce tariffs.

(iv) **The remaining tariff lines shall be subject to a Swiss formula with a coefficient such that the <u>resulting overall average tariff for all agricultural products</u> shall be at least […]% below the initial overall average tariff level of each member.**

In implementing tariff reductions under paragraphs **2.7(i) to 2.7(iv)** above, developing countries should benefit from an additional implementation period of [...].

2.8   The applicability and/or extent of the provisions of paragraph 2.2 above to developing countries remain under negotiation, taking into account their development needs.

2.9   A special agricultural safeguard (SSM) shall be established for use by developing countries subject to conditions and for products to be determined.

2.10   All developed countries will seek to provide duty-free access for at least […]% of imports from developing countries through a combination of MFN and preferential access, including particularly all tropical and other products referred to in the preamble of the Agreement on Agriculture.

2.11   Participants undertake to take account of the importance of preferential access for developing countries. The further considerations in this regard will be based on paragraph 16 of the revised First Draft of Modalities for the Further Commitments (TN/AG/W/1/Rev.1 refers).

<u>*Notes*</u>

There are several important <u>self-regulating dynamic effects</u> in the proposed formula:

1. *While category (ii) is self-declaratory in terms of the number and the choice of tariff lines, there is a <u>built-in incentive</u> for members to put the least number of tariff lines in that category. The more tariff lines they include, the less the average of that category becomes which is also the overall maximum they have to adhere to. Thus, in order to maintain a high tariff for their sensitive products, members would have to limit category (ii) to a minimum number of tariff lines; otherwise, they are penalized with a reduced maximum.*
2. *Category (iii) becomes a residual in two ways: <u>first</u> in terms of the number of tariff lines that would fall into it (which is what remains from the other two categories) and <u>second</u>, in terms of the coefficient of the Swiss formula which again is self-adjusting, such that the <u>resulting overall average tariff for all agricultural products</u> shall be no less than a negotiated overall percentage below the initial overall average.*
3. *Member-specific notional "ceiling" level of tariffs are specified with an automatic built-in reward and penalty for adhering or not to that level.*
4. *Finally, the formulation avoids having to negotiate a large number of often conflicting parameters. The <u>numbers to be negotiated are kept to a minimum</u> and the built-in self-regulating mechanisms offer members some flexibility but with trade-offs, so that the formula cannot be abused.*