Implications of the 2008 Doha Draft Agricultural and NAMA Market Access Modalities for Developing Countries

by

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Abstract

This paper uses detailed data on bound and applied tariffs to assess the consequences of the May 2008 Modalities for the tariffs levied and faced by developing countries. We find that the tiered formula proposed for agriculture would halve tariffs in industrial countries and lower them more modestly in developing countries. In non-agriculture (NAMA), the formula will reduce the tariff peaks facing developing countries and cut average industrial country tariffs by more than a third. We use a political-economy framework to assess the likely use of flexibilities to reduce the size of the tariff cuts required on particular products and find they are likely to substantially reduce the outcome. Despite these flexibilities, there are likely to be worthwhile gains, with applied tariffs facing developing countries falling by about 19 percent in agriculture and 27 percent in NAMA.

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The May 2008 draft modalities on Agriculture and on Non-Agricultural Market Access (WTO 2008a,b) reflect an enormous amount of negotiating effort since the launch of this negotiating round in 2001. They build on the negotiating framework of 2004 (WTO 2004), but are much more specific and detailed. While many key parameters remain undecided these decisions have been narrowed down, and the potential range of choices is much narrower than it was in the framework or in earlier draft versions of the modalities.

Despite, or perhaps because of, their detailed nature, it remains very difficult to assess the implications of the modalities for developing countries. While the negotiations involve line-by-line tariff cutting formulas, there is an enormous range of exceptions. This situation involves an important information asymmetry. It is relatively easy for countries to assess the implications of the modalities for the "pain" associated with the negotiations. They know the preferences and constraints on their policy makers, and have good information on their policies. Working out the "gain" side of the deal, in terms of their market access, is much more difficult. Even if policy makers in an individual country know what policy makers in their trading partners will do, they face a challenge in adding up the implications of these decisions for their countries. In this paper, we attempt to deal with these problems, to allow countries assess the "gain" as well as the "pain" associated with negotiating proposals.

Some key questions include. What are the implications of the current formulas for tariffs levied by WTO members, and for the tariffs facing developing countries? What would be the potential effects of such a proposal if the formulas on which it is based were adopted without exceptions? How would these benefits be affected by changes in particular parameters, such as the flexibilities in agriculture and non-agricultural market access (NAMA), and in preferences for the least-developed-countries? Answers to these questions are clearly of critical importance if informed decisions are to be taken to move the overall process of negotiations forward.

Key elements of the agricultural modalities include a 'tiered' formula for reductions in bound tariffs; a tiered formula for reductions in trade-distorting domestic support; and the abolition of export subsidies. Linked to what are often very deep cuts in protection are provisions for flexibility either for particular groups of countries, or for products that countries are free to choose to subject to smaller cuts than are provided under the formulas. The NAMA negotiations involve almost exclusively market access, and include very ambitious Swiss formula tariff-cutting formulas under which the highest tariffs are subjected to the largest cuts. As in agriculture, flexibilities are provided for particular WTO members and products.

The Doha Development Agenda is about much more than market access in agriculture and non-agricultural merchandise trade. We focus on the modalities for market access in agricultural and non-agricultural merchandise trade. The first reason is that these are complex proposals, whose impact requires careful evaluation if it is to be accurately assessed. The second is that the evaluation of these agreements will be an important determinant of whether it is possible to obtain a broader agreement—acceptance of something like these proposals is a necessary, but far from sufficient, condition for a broader agreement being reached. A third is that our ability to make informed assessments on agricultural and NAMA market access is much greater than in areas such as services or trade facilitation—areas in which analysis is under way in parallel.

In this paper, we begin by examining the key market access features of these negotiating documents, with a view to assessing their likely importance for policy. We emphasize the implications for market access, which Anderson, Martin and Valenzuela (2006) concluded accounted for the overwhelming majority of the potential welfare benefits from the negotiations. In doing this, we focus considerable attention on the way that flexibilities are likely to be applied.

Proposed Reforms in Agricultural and Non-Agricultural Merchandise Trade

The proposals on agriculture and non-agricultural trade reforms are being negotiated separately, although it is widely recognized that the outcomes in each negotiation will be linked.

Agricultural Market Access Modalities

In agriculture, we based our analysis on the tiered formula, which provides for larger proportional cuts on higher tariff rates. Key issues that were undetermined in the framework (WTO 2004) have now been resolved. There is agreement on their being four bands in each case, and on the boundaries between these tiers. The boundaries of the four tariff bands for developed and developing countries are given in Table 1, together with the proportional cuts to be made in bound agricultural tariffs in each band. Only in the top band is there a range in square brackets, indicating unresolved differences on this issue.

Table 1. The tiered formula for agricultural tariff cuts

	Developed		**Developing**	
Band	*Range*	*Cut*	*Range*	*Cut*
A	0-20	50	0-30	33.3
B	20-50	57	30-80	38
C	50-75	64	80-130	42.7
D	>75	66-73	>130	44-48.6
Average cut	**Min**	**54%**	**Max**	**36%**

The tiered formula requires that tariffs be available in *ad valorem* form. This involves an element of discretion in the case of agriculture because of the presence of tariff-rate-quotas (TRQs), for which the recorded price of imports may be inflated through inclusion of quota rents, thus resulting in underestimates of the true *ad valorem* equivalent. A consistent method for evaluation of ad valorem equivalents has been agreed and this methodology is used in assessing the bands in which tariffs are placed, and hence the tariff cuts required. Tariffs are to be simplified after cutting, but conversion to *ad valorem* form is not required.

As is evident from Table 1, the tariff cutting formula is quite aggressive, particularly relative to the approach used in the Uruguay Round negotiations. In the Uruguay Round, countries were required to meet a target only in terms of the average-cut in their tariffs, a procedure which encouraged them to make larger cuts in their smaller tariffs. The Doha tariff-cutting formulas have the economically desirable feature of making larger cuts in the higher—and hence more costly—tariffs. In line with long-standing practice, developing country cuts in each band are two-thirds those of the industrial countries. The bands are also wider, in part to allow for the fact that many developing countries would otherwise have more tariffs included in the higher bands.

Special provisions apply for tariff escalation products in a set of specified processing chains. Here the general principle is that processed products subject to tariffs higher than their raw or intermediate product counterparts are moved into the next higher band. If they are in the highest band, the cut imposed is 6 percentage points higher the usual cut in the highest band. If the gap between the processed and unprocessed product is less than 5 percentage points, then the tariff escalation procedure is not used, and the tariff cutting rule should not bring the tariff on the processed product below the tariff on intermediates.

A list of "tropical" and diversification products will be subjected to deeper-than-formula cuts. Two alternative treatments are proposed for these products. Under the first option, tariffs below 25 percent will be reduced to zero, and no sensitive product treatment will be permitted. Under the second alternative, tariffs below 10 percent will be reduced to zero, while higher tariffs will be reduced by the cut in the 69 to 73 percent range agreed for the top tier of the formula, except for products already in the top tier, which will be cut by the agreed cut in the top tier plus 8 percentage points. Under the second alternative, sensitive product treatment will not be ruled out. The cuts for these products are quite deep, so key issues include the scope of the list and whether sensitive product treatment is allowed on these products. One version of the list includes highly sensitive products such as rice, sugar and bananas. The alternative, Uruguay Round, list is more narrowly defined.

Several groups of developing countries are allowed smaller tariff reductions. Least Developed Countries are not required to make any reductions. Small and

Vulnerable Economies (SVEs)[1] can make reductions 10 percent smaller in each band than other developing members, or may make an average-cut of 24 percent. Recently-acceded members (RAMs) are allowed to: make cuts reduced by 5 percentage points in the first two bands and 10 percentage points otherwise; make zero cuts in tariffs below 10 percent; to delay their reduction commitments until one year after completion of their accession commitments; and have 1/10th more special products with cuts 2 percentage points smaller. A group of very recently acceded members (VRAMs) and transition economies is not required to make any cuts.

All countries are permitted to make smaller cuts on "sensitive" products. The modalities include a limit on the number of sensitive products, and provisions for increases in market access under Tariff-Rate-Quotas (TRQs) for products where smaller-than-formula cuts are made. In industrial countries between 4 and 6 percent of tariff lines can be classified as sensitive, except for countries with over 30 percent of bindings in the top band, or with tariffs scheduled at the six digit level, in which case this percentage can be increased by 2 percentage points. If the formula cut is reduced by 2/3, then TRQ access must be increased by 4-6 percent of domestic consumption; if the reduction is by half, then the TRQ increase can be 1 percentage point less; if the reduction is by 1/3, then the TRQ increase is 0.5 percentage points less. Developing countries have the right to one third more sensitive products than developed countries.

Developing countries will be able to self-designate a set of special products guided by indicators and to make smaller-than-formula cuts on these products. The number of these products is to be negotiated between 8 and 20 percent of agricultural tariff lines. Either forty percent or zero of Special Products would be subject to no cuts with the remainder cut by an average of 15 percent with a minimum cut of 12 percent and a maximum of 20 percent.

Sensitive products are likely to be selected from an agreed list of products nominated by members intending to use this type of flexibility—a process that means the list of products will not constrain the choice of products unless a country wishes to add a product after the list has been finalized. Special products are self-designated guided by a

[1] Defined in general as countries with less than 0.1 percent of world trade, with some countries such as Congo, Côte d'Ivoire and Nigeria treated on the same basis in agriculture.

set of indicators. These indicators cover a range of issues such as importance as a staple food; the proportion of demand met from domestic production; importance in employment; the share of output processed; and productivity levels. It seems likely that these indicators will allow countries considerable freedom to self-designate products.

A key question in forming an *ex ante* assessment of the implications of these flexibilities for tariff reductions and market access is how the sensitive and special products will be chosen. Some studies have assumed that the products likely to be chosen for smaller or zero cuts would be those with the highest bound tariffs (Sharma 2006); while others have assumed that they would be those with the highest applied tariffs (Vanzetti and Peters 2008) and still others have used a tariff-revenue-loss criterion under which the products selected tend to be large imports subject to large cuts in applied tariffs (Jean, Laborde and Martin (2006)). None of these approaches has any firm conceptual basis and Jean, Laborde and Martin (2008) show that an approach that takes into account the policy makers' preferences would try to reduce the tariff cuts on products that are important shares of total imports, that have high initial applied tariffs, and would face large cuts under the formula. They also show that the consequences of sensitive products selected on this basis are likely to be similar to those of the tariff-revenue loss rule—that is even small numbers of tariff lines are likely to cause large reductions in the cuts in average tariffs achieved.

The Modalities reflect agreement to eliminate or sharply reduce the use of the Special Safeguard (SSG) which currently allows countries that converted non-tariff barriers into tariffs by "tariffication" in the Uruguay Round (mostly developed countries) to impose duties above their Uruguay Round bindings. There is agreement to include a new Special Safeguard Mechanism (SSM) for developing countries that would allow members to impose tariffs above their Doha Agenda bindings and possibly above their Uruguay Round bindings. Two quite different models are presented as potential alternatives, making it difficult to assess the likely consequences for average tariff levels. The elimination or reduction of the SSG can be expected to increase market access, and to reduce the extent to which domestic prices in the industrial countries are insulated from world market prices (and hence increase the instability of world market prices (see Tyers and Anderson 1992)). The extent to which the introduction of the SSM will lead to

higher average tariffs and insulation in developing countries, and hence in world average tariffs and the volatility of world prices will depend on the specific parameters chosen.

Non-Agricultural Market Access

The draft modalities for NAMA (WTO 2008b) also involve a tariff formula with exceptions. The tariff formula in this case is the highly nonlinear Swiss formula, which reduces the highest tariffs by the most. The Swiss formula requires tariffs in *ad valorem* terms, and all tariffs are to be converted into *ad valorem* terms and bound in those terms.

The Swiss formula is:

(1) $$t_1 = \frac{a_i . t_0}{a_i + t_0}$$

where t_1 is the tariff after application of the formula; t_0 is the tariff rate before application of the formula, and a_i is a coefficient for group i.

There will be a specified value of a_i for industrial countries and three different choices for developing countries. The coefficient in equation (1) will be [7-9] for industrial countries, with no flexibility for individual products. For developing countries, the coefficient is to be based on a sliding-scale with a coefficient of x=[19-21], y=[21-23] or z=[23-26] depending upon the extent of flexibility to deviate from the formula chosen. Countries choosing an x =[19-21] coefficient could choose to keep [6-7] percent of tariffs unbound on products covering no more than [6-9] percent of imports or to make half-of-formula cuts in [12-14] percent of lines on products covering no more than [12-19] percent of imports. With a y=[21-23] coefficient, 5/5 percent of lines/imports would be allowed no cuts, or 10/10 percent of lines/imports with half-of-formula cuts. With a z=[23-26] coefficient no flexibilities would be available.

Several groups of developing countries are not required to use the Swiss formula. Least-Developed-Countries will not be required to make reductions, but are expected to increase their levels of binding coverage. Countries with binding coverage below 35

percent[2] are exempt from formula cuts but required to bind [70-90] percent of lines if their binding coverage is currently below [12] percent; [75-90] percent if their binding coverage is between [12] and [25] percent; and [80-90] percent if their binding coverage is between [25] and 35 percent.

SVEs are divided into three groups. The first group, with average bound tariffs of 50 percent or higher, is to bind at an average level not exceeding [22-23] percent, or to cut average bound tariffs by 40 percent. The second group, with an average bound tariff between 30 and 50 percent, is to bind at [18-28] percent or reduce average bound tariffs by 30 percent. A third group, with average bound tariffs below 30 percent, is to bind at an average level of [14-20] percent and apply a minimum line-by-line reduction of [5-10] percent on [90-95] percent of tariffs.

RAMs receive a grace period of [2-3] years and an extended implementation period of [2-5] years. In contrast with the case of agriculture, they do not receive smaller cuts in tariffs. The NAMA proposal includes provision for Sectoral Initiatives, for which participation is not mandatory, but agreement is to be reached when 90 percent of world trade is included. In most cases, it is proposed to move to zero tariffs on these products.

Specifying Cuts in Tariffs

While WTO negotiations are based on bound tariff rates, their implications for market access and for economic welfare depend largely on their implications for applied rates. To provide a preliminary assessment of the implications of the modalities for the applied protection, we begin with the MAcMapHS6 database for 2004 together with a set of bound tariff rates for which *ad valorem* equivalents have been calculated on the same basis. We first cut the bound tariff rates using the approaches considered in the modalities, and then assess their implications for applied rates. In those cases where the Modalities involve a range, we generally use the mid-point of that range. The specific choices of parameters used are set out in Table 2. In this analysis, we use the conventional assumption that applied rates are not reduced unless the new bound rate falls below the

[2] Frequently called Paragraph 6 countries because of the paragraph in the 2004 Framework Agreement that introduced this provision.

initial applied rate[3] (assumed to be the applied rate in the MAcMapHS6 dataset, which is for 2004).

The tariff reduction formulas and the flexibilities are intertwined in that countries are frequently willing to consider more ambitious formulas when they have the flexibility to make smaller cuts for some products (see Jean, Laborde and Martin 2008). A major problem for negotiators in this situation is that the "price" paid for the flexibilities—in terms of efficiency and market access—is difficult to evaluate. In our analysis, we make a distinction between the cuts without flexibility and those resulting from the formula with flexibility. This decomposition is useful in allowing some estimate to be made of the implications of the flexibilities, as long as it is recognized that agreement on the particular formulas was almost certainly contingent on the presence of flexibilities.

A number of categorizations had to be made before the tariff-cutting formulas could be applied. In agriculture, for instance, countries with more than 30 percent of agricultural tariffs in the highest band had to be identified[4] to allow for the additional sensitive products permitted these countries. Products subject to special treatment as tariff escalation products, and Tropical and diversification products also had to be specified.

In some cases, such as NAMA reforms in the industrial countries, the formula can simply be applied to the bound tariffs using the coefficients in Table 2. Other simple cases include the LDCs, who are not required to make any cuts. Initial investigation led us to conclude that the only SVEs required to undertake cuts in applied rates would be Gabon[5] and Mongolia. In most cases, however, it was necessary to take account of the flexibility options before the cuts to applied rates could be determined. In some cases, such as agricultural products in the industrial countries, the choice of sensitive products is independent of the coefficients so that the selection of sensitive products can be undertaken in one pass, although the minimum average-cut requirement may necessitate a second round calculation of the tariff rate cuts.

[3] This assumption neglects the important value that can arise from bindings above current applied rates, but ruling out incidents of higher tariffs in the future (Francois and Martin 2004).
[4] These countries were Bangladesh, Iceland, India, Lesotho, Myanmar, Nigeria, Norway, Switzerland, Tunisia, and Zimbabwe
[5] Gabon may renegotiate some of its bound tariffs since it is a member of the central Africa Custom Union, CEMAC, which other members are either LDCs or developing countries with low binding coverage and therefore free from any changes on their applied tariffs.

In many other cases, the selection of products to be accorded flexibility was a multi-stage process. For agriculture, it was assumed that developing countries would use special products—with their smaller tariff cut requirements—for the products with the strongest political support; then sensitive products[6]. In NAMA flexibilities, it was necessary to examine the full range of choices available under the before the regime involving the least political cost could be identified.

In agriculture, we could not explicitly represent the TRQ increases which are associated with sensitive product designation in the industrial countries. While these can have some liberalizing effect, the record of success appears to be relatively limited (de Gorter and Kliauga 2006). While we anticipate that most users of TRQs will adopt the option that allows them to reduce the formula cut by two-thirds, we allowed for the potential trade liberalizing consequences of TRQs by treating the combination of sensitive product tariff cut and TRQ expansion as equivalent to a tariff cut one-third less than the formula.

[6] With a priority for the category of sensitive products with a 25% deviation and no TRQ creation.

Table 2. Key elements of the tariff cuts used in the analysis

	Developed	**Developing**	**LDCs**	**SVEs**	**Para 6**
NAMA					
Formula	Swiss 8	*x* (i): Swiss 20 & 0 cuts on 6.5 8% of lines/imports; x (ii): Swiss 20 & ½ cuts on 13/15.5% of lines/ imports; y (i): Swiss 22 & no cuts on 5/5% of lines/imports; y (ii) Swiss 22 & ½ cuts on 10/10% of lines/imports; z: Swiss 24.5 with no flexibilities	No libn	No libn	No Libn
Flexibility	None				
Unbound	MFN 2001 + 30 % if the tariff is below half the coefficient; +20% if the tariff is above half the coefficient				
Agriculture					**RAMS**
Bands	0/20/50/75	0/30/80/130	no lib	no lib	
Proportional cut	50/57/64/70	33.3/38/42.7/48.7			-5% pts in bands 1 & 2; -10%pts if in bands 3,4
	Scaled proportionately if the average-cut (including sensitive, tropical & tariff escalation products) <54% in industrial countries; if > 36% in developing				
Sensitive products	5% of lines	6.7% of lines			
	If >30% in top tier, 2%pts more				
Special products		14% lines; 40% no cut & 60% with 15% cut			
Tariff Escalation Products	Cut from next higher tier applied. In top tier add 6 percentage points to the cut				
Tropical products	t ≤ 10, Cut to zero; 10 <t≤ 75, 70% cut; t>75, 78%				
Cotton	Cut to zero if originated in LDC countries				

Notes: Republic of Korea treated as a developing country for agriculture; a developed country for NAMA. LDCs are identified in the UN list of Least Developed Countries. Economies treated as Small and Vulnerable for NAMA were: Antigua & Barbuda, Barbados, Belize, Bolivia, Botswana, Brunei Darussalam, Cameroon, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Fiji, Gabon, Georgia, Ghana, Grenada, Guatemala, Guyana, Honduras, Jamaica, Jordan, Kenya, Macau, Mauritius, Mongolia, Namibia, Nicaragua, Panama, Papua New Guinea, Paraguay, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Sri Lanka, Trinidad and Tobago, Uruguay and Zimbabwe. Paragraph 6 economies (those with less than 35% tariff bindings) were identified as Cameroon; Congo, Cuba, Ghana, Kenya, Macau, China; Mauritius; Nigeria; Sri Lanka; Suriname; Zimbabwe. For SVE treatment in Agriculture, add Congo, Côte d Ivoire, Nigeria
RAM treatment: China, Croatia, Ecuador, Georgia (NAMA only) Jordan, Mongolia, Oman, Panama, and Chinese Taipei.
VRAM treatment in agriculture (no cuts). Albania, Armenia, Georgia, Kyrgyz Republic, Moldova, Former Yugoslav Republic of Macedonia, Saudi Arabia, Tonga, Ukraine, Vietnam. .

The choice of NAMA flexibility regime for developing countries proved to be a particularly interesting challenge. The political welfare gains associated with each of the potential five choices of regime were evaluated subject to the constraints identified in Table 1 and each of the 22 developing countries undertaking tariff reduction under the Swiss formula (without adjustment for SVE, RAM or Paragraph 6 status) was assigned to the categories identified in Table 3. This table also presents estimates of the initial and final bound tariffs for these countries. An interesting feature of the results presented in the table is the wide range of likely choices. For members with low and uniform tariffs, such as Chile, Hong Kong and Singapore, a choice of the highest coefficient with no

flexibilities is likely to yield the lowest political "pain". For countries with higher and less uniform applied tariffs, the choice is less obvious. Using our methodology, which takes into account the value of trade and the squared reduction in the price of each good, we find that twelve countries are likely to opt for the lowest coefficient, *x*=20. Of these, most would likely choose half-formula cuts on no more than 13 percent of tariff lines and 15 percent of trade. An additional seven members are assumed to opt for *y*=22, with all but one electing for no cuts on no more than 5 percent of tariff lines and 5 percent of trade.

Table 3. Choice of flexibility regime by Developing Countries using the Swiss Formula

	Coefficient/ Flexibility	Initial Bound Tariff %	Final Bound Tariff %
Argentina	y (i)	31.9	13.9
Brazil	y (i)	30.9	13.6
Chile	z	25.0	12.4
Colombia	y (i)	35.4	14.0
Costa Rica	y (i)	42.9	15.7
Egypt	x (i)	28.4	12.6
Hong Kong	z	13.9	7.6
India	y (ii)	36.7	14.1
Indonesia	x (ii)	35.8	13.4
Israel	x (ii)	21.5	11.3
Malaysia	x (ii)	17.5	9.0
Mexico	y (i)	34.9	13.7
Morocco	x (i)	42.8	14.2
Peru	x (i)	30.0	13.2
Philippines	x (i)	24.9	12.1
Singapore	z	11.2	6.9
Thailand	x (i)	29.1	12.1
FYR Macedonia.	x (ii)	11.4	6.1
Tunisia	x (i)	44.2	14.2
Turkey	x (ii)	22.3	11.1
United Arab Emirates	x (i)	13.1	8.4
Venezuela	y (i)	33.9	13.7

Note: Assumed coefficient values were *x*=20; *y*= 22; *z*=24.5

Before-and-after estimates of weighted average applied rates are reported in Table 4 for agricultural and food products, in Table 5 for NAMA, and in Table 6 for total merchandise trade. Tables 8, 9 and 10 provide similar measures of the average tariff barriers facing exporters from each region. The tariff scenarios reported are as follows:

Baseline: Tariffs that would apply in the absence of a DDA agreement in 2025. These estimates are based on tariffs in 2004, with adjustments for internationally-binding commitments to reform. In addition, the Japanese GSP for LDCs has been updated based on 2007 improvements in terms of product coverage. Due to its importance, the EU sugar reform has been integrated in terms of consequences on EU applied tariffs (Bureau and Gohin, 2007). Finally, Ukraine's accession commitments to the WTO have been fully implemented.

B: Tariffs following implementation of the DDA formula without flexibilities

C: Tariffs following implemention of the formula with country exceptions, such as those for LDCs, SVEs and RAMs..

D: Tariffs after the tariff-cutting formulas with flexibilities for countries and products

D1: With flexibility in developing countries only

D2: With flexibility in developed countries only.

Implications for Tariff Barriers Levied and Faced

In this section, we consider the implications of the formulas and scenarios discussed above for weighted-average tariffs levied and faced by different countries. As shown by Anderson and Neary (2006) and evaluated for agricultural sensitive products in Jean, Laborde and Martin (2008), this standard measure of tariff reduction is incomplete as a measure of market access, and particularly of economic welfare. However, it provides an initial indication of the economic effects—something that is not obtainable through reliance only on changes in bound tariff rates. We first consider the tariffs levied by countries, and then the tariffs they face on their exports.

Tariffs Levied

In Table 4, we see that the formulas applied without exceptions (scenario B) would result in a decline from 14.6 to 9 percent in average applied agricultural tariffs worldwide. In the WTO developed countries, the result is a cut of over 50 percent in applied rates, from 15.1 to 6.9 percent. In WTO developing countries other than the LDCs, the reduction is from 14 percent to 11.4 percent, a cut which is smaller than in the industrial countries partly because of key features of the formula—the smaller cuts and higher tier boundaries laid out in Table 1—and greater binding overhang in many developing countries.

Without exceptions, the cut in the EU 27 applied agricultural tariff is from 15.2 to 6.2 percent—a cut of almost sixty percent of its initial value. In the United States, the corresponding cut is from 4.8 to 2.1 percent—a reduction of 56 percent from its initial value. The cut in Japan's average applied agricultural tariff is almost 16 percentage points, from 29.8 percent to 14 percent—a reduction of over 50 percent. In Canada, the cut would be from 10.7 to 5.1 percent, a reduction of more than 53 percent. The impact of the basic developing country formula on applied rates differs considerably depending upon the initial level of binding overhang. In India, the formula would reduce average tariffs by almost 10 percent of their initial level while, in China, the reduction would be from 7.8 percent to 5.3, a cut of 32 percent. In Cambodia, another recently-acceded member, the cut in average agricultural tariffs from the basic developing-country formula would be from 16.5 to 12.7, a cut of roughly a quarter. By contrast, in many former GATT Contracting Parties, such as Brazil and Nigeria, binding overhang means that the full formula, without exceptions, would result in very small cuts in average applied rates.

For agriculture, the country flexibilities for members such as SVEs, RAMs and VRAMs included in scenario C are important for some countries and groups, such as China and the Central Asian region. The overall effect of these flexibilities on the global average tariff rate is, however, quite small, with this rate increasing from 9.0 to 9.1 following when these are introduced. Even for the non-LDC WTO developing countries,

the impact on the overall average is relatively small, increasing it from 11.4 to 11.8 percent.

The flexibilities for commodities—sensitive and special products-- included in scenario D more than halve the worldwide cut in tariffs, from 5.5 percent with country flexibilities to 2.7 percent with country and commodity flexibilities. Interestingly, it is in the industrial countries that the tariff cut is reduced the most—with the tariff after flexibilities declining from 7.5 percentage points to 4 percentage points. In developing non-LDCs, these flexibilities reduce the cut from 1.5 percent to 0.1 percentage points—a large proportional reduction in the cut than for high income countries, but a smaller one in percentage point terms.

Looking at the results for NAMA in Table 5, the cut in world average tariffs if the formulas were applied without exceptions[7] is from 2.9 to 2.1 percent. In the high income countries, the reduction is from 1.7 percent to 1.1 percent, a reduction of 0.6 percentage points. In developing non-LDC countries, the reduction is estimated to be from 6.4 percent to 4.8 percent 2.6 percentage points, a cut of 1.6 percentage points or one quarter of the original tariff. In some developing countries, such as Bangladesh, Pakistan and Thailand application of the formula alone would appear to result in substantial cuts in average tariffs. When we consider the group of countries that would apply the standard developing country formula, the reduction in tariffs is from 3.9 to 3.1 percent, a cut of 0.8 percentage points—a much smaller cut than would apply were this formula applied to the RAMs and SVEs.

The exceptions for country groups such as LDCs, SVEs and RAMs included in Scenario C reduce the cut in the weighted average NAMA tariff in developing countries as a group. With these exceptions, the average tariff is 5.3 percent after the cut, rather than 4.8 percent, implying a reduction of 1.1 percent in the average for non-LDC developing countries. The introduction of product flexibilities in Scenario C requires that countries choose a coefficient from the sliding-scale or menu of options between degrees of flexibility and coefficient values. Choosing greater flexibility means choosing a lower coefficient, introducing a "price" for using flexibilities through larger cuts on other tariffs, and resulting in quite different choices between countries, as noted in the discussion of

[7] Under this no-flexibilities scenario, coefficient z is chosen for all developing countries.

Table 3. Implementing these exceptions is found to reduce the size of the cut for developing countries as a group by 0.3 percentage points, as well as to allow countries the flexibility to choose a pattern of tariffs more consistent with their policy preferences.

Table 6 shows the overall tariff reductions resulting from the agricultural and NAMA cuts combined. From this table we see that the reduction in average overall tariffs resulting from application of the formulas without flexibility would be from 3.7 percent to 2.5 percent. In high income countries, the reduction would be from 2.5 to 1.4 percent, a cut of 1.1 percentage points or 44 percent of the initial tariff level. By contrast, in developing countries, the reduction would be from 7.0 percent to 5.4 percent, a reduction of 1.6 percentage points, or 23 percent of the initial tariff level. When flexibilities are introduced for agriculture in high-income countries, the average tariff ends at 1.7 percent, for a reduction of 0.8 percentage points or 32 percent of the initial tariff level. For developing countries other than LDCs, the resulting reduction in tariffs is from 7.0 to 6.3 percent, a decline of 0.7 percentage points, or 10 percent of the initial tariff level.

Table 4. Average tariffs levied on WTO agricultural products by scenario, %.

	Base	B	C	D	D1	D2
Australia NZ	2.5	1.5	1.5	1.9	1.5	1.9
Argentina	4.2	4.1	4.1	4.2	4.2	4.1
Bangladesh	16.5	16.4	16.5	16.5	16.5	16.5
Brazil	4.8	4.7	4.7	4.8	4.8	4.7
Canada	10.7	5.1	5.1	8.6	5.1	8.6
China	7.8	5.3	6.1	7.5	7.5	6.1
EU-27	15.2	6.2	6.2	9.6	6.2	9.6
Korea and Taiwan Pr.	27.8	18.5	19.1	27.1	27.1	19.1
HK & Singapore	0.2	0.2	0.2	0.2	0.2	0.2
India	59.2	54.6	54.6	59.2	59.2	54.6
Japan	29.8	14.0	14.0	20.4	14.0	20.4
Cambodia	16.5	12.7	16.5	16.5	16.5	16.5
Mexico	3.9	3.3	3.3	3.9	3.9	3.3
M.E. & N. Africa	15.5	12.9	13.4	15.5	15.5	13.4
Nigeria	24.0	24.0	24.0	24.0	24.0	24.0
Pakistan	20.9	20.7	20.7	20.9	20.9	20.7
Selected LDCs	9.7	9.7	9.7	9.7	9.7	9.7
South Africa	6.7	6.1	6.1	6.7	6.7	6.1
Sri Lanka	18.4	16.2	16.9	18.4	18.4	16.9
Thailand	20.6	15.3	15.3	19.6	19.6	15.3
Turkey	13.6	11.2	11.2	13.4	13.4	11.2
United States of America	4.8	2.1	2.1	3.0	2.1	3.0
Rest of Central Asia	17.0	13.2	16.7	16.9	16.9	16.7
Rest of East Asia	13.3	10.3	10.8	13.3	13.3	10.8
Rest of Europe	36.4	19.1	19.1	27.5	19.1	27.5
Rest of LAC	9.3	8.9	9.1	9.3	9.3	9.1
Rest of South Asia	12.4	11.9	12.4	12.4	12.4	12.4
Rest of SADC	11.7	11.4	11.6	11.7	11.7	11.6
Rest of SSA	14.4	13.7	13.9	14.4	14.4	13.9
World Bank Classification						
All countries	14.6	9.0	9.1	11.9	10.1	11.0
High income countries	15.0	7.5	7.6	11.0	8.3	10.4
Developing countries, non LDC	13.7	11.8	12.2	13.6	13.6	12.2
LDCs	12.5	12.2	12.5	12.5	12.5	12.5
WTO Classification						
Developed WTO	15.1	6.9	6.9	10.2	6.9	10.2
Developing WTO non LDCs	14.0	11.4	11.8	13.9	13.9	11.8
Normal Developing WTO	15.1	12.3	12.3	15.0	15.0	12.3
RAM WTO	10.1	6.7	7.7	9.8	9.8	7.7
SVE WTO	14.0	12.5	13.7	14.0	14.0	13.7

Table 5. Average tariffs levied on WTO non-agricultural products by scenario, %

	Base	B	C	D	D1	D2
Australia NZ	3.6	2.4	2.4	2.4	2.4	2.4
Argentina	6.1	5.2	5.2	5.4	5.4	5.0
Bangladesh	18.3	12.3	18.3	18.3	18.3	18.3
Brazil	8.5	7.4	7.4	7.8	7.8	7.2
Canada	0.9	0.5	0.5	0.5	0.5	0.5
China	5.6	3.9	3.9	4.4	4.4	3.9
EU-27	1.8	1.0	1.0	1.0	1.0	1.0
Korea and Taiwan Pr.	4.0	2.9	2.9	3.1	3.1	2.9
HK & Singapore	0.0	0.0	0.0	0.0	0.0	0.0
India	12.9	11.7	11.7	12.0	12.0	11.1
Japan	1.3	0.7	0.7	0.7	0.7	0.7
Cambodia	14.8	9.4	14.8	14.8	14.8	14.8
Mexico	3.0	2.5	2.5	2.5	2.5	2.4
M.E. & N. Africa	5.8	4.5	4.7	5.0	5.0	4.6
Nigeria	21.4	12.8	21.4	21.4	21.4	21.4
Pakistan	15.3	10.8	15.3	15.3	15.3	15.3
Selected LDCs	7.3	6.3	7.3	7.3	7.3	7.3
South Africa	4.9	4.9	4.9	4.9	4.9	4.9
Sri Lanka	5.3	4.8	5.3	5.3	5.3	5.3
Thailand	8.1	5.4	5.4	6.7	6.7	5.0
Turkey	1.1	1.0	1.0	1.1	1.1	1.0
United States of America	1.5	0.8	0.8	0.8	0.8	0.8
Rest of Central Asia	4.2	3.4	4.2	4.2	4.2	4.2
Rest of East Asia	5.0	3.4	4.0	4.7	4.7	3.9
Rest of Europe	0.2	0.1	0.1	0.1	0.1	0.1
Rest of LAC	6.9	6.0	6.6	6.7	6.7	6.6
Rest of South Asia	18.0	11.1	18.0	18.0	18.0	18.0
Rest of SADC	7.1	5.1	7.1	7.1	7.1	7.1
Rest of SSA	11.5	8.5	11.5	11.5	11.5	11.5
World Bank Classification						
All countries	2.9	2.1	2.2	2.3	2.3	2.2
High income countries	1.7	1.1	1.1	1.1	1.1	1.1
Developing countries, non LDC	6.4	4.8	5.3	5.6	5.6	5.1
LDCs	10.9	8.0	10.9	10.9	10.9	10.9
WTO Classification						
Developed WTO	1.7	1.0	1.0	1.0	1.0	1.0
Developing WTO non LDCs	4.8	3.7	4.0	4.3	4.3	3.9
Normal Developing WTO	3.9	3.1	3.1	3.4	3.4	3.0
RAM WTO	4.9	3.5	3.5	3.9	3.9	3.5
SVE WTO	8.9	6.7	8.9	8.9	8.9	8.9

Table 6. Overall average tariffs levied, %

	Base	B	C	D	D1	D2
Australia NZ	3.6	2.3	2.3	2.4	2.3	2.4
Argentina	6.0	5.1	5.1	5.4	5.4	5.0
Bangladesh	18.0	13.1	18.0	18.0	18.0	18.0
Brazil	8.3	7.2	7.2	7.6	7.6	7.0
Canada	1.5	0.8	0.8	1.0	0.8	1.0
China	5.7	4.0	4.0	4.5	4.5	4.0
EU-27	2.7	1.4	1.4	1.6	1.4	1.6
Korea and Taiwan Pr.	5.2	3.6	3.6	4.3	4.3	3.6
HK & Singapore	0.0	0.0	0.0	0.0	0.0	0.0
India	15.9	14.4	14.4	15.0	15.0	13.9
Japan	3.9	1.9	1.9	2.5	1.9	2.5
Cambodia	15.0	9.6	15.0	15.0	15.0	15.0
Mexico	3.1	2.5	2.5	2.6	2.6	2.4
M.E. & N. Africa	6.8	5.4	5.6	6.1	6.1	5.5
Nigeria	21.8	14.3	21.8	21.8	21.8	21.8
Pakistan	16.0	12.0	16.0	16.0	16.0	16.0
Selected LDCs	7.7	6.9	7.7	7.7	7.7	7.7
South Africa	5.0	4.9	4.9	5.0	5.0	4.9
Sri Lanka	7.0	6.2	6.8	7.0	7.0	6.8
Thailand	8.7	5.9	5.9	7.3	7.3	5.5
Turkey	1.9	1.6	1.6	1.8	1.8	1.6
United States of America	1.6	0.9	0.9	0.9	0.9	0.9
Rest of Central Asia	5.8	4.6	5.7	5.7	5.7	5.7
Rest of East Asia	5.7	3.9	4.5	5.4	5.4	4.4
Rest of Europe	2.5	1.3	1.3	1.9	1.3	1.9
Rest of LAC	7.2	6.3	6.9	7.0	7.0	6.8
Rest of South Asia	17.1	11.2	17.1	17.1	17.1	17.1
Rest of SADC	7.8	6.1	7.8	7.8	7.8	7.8
Rest of SSA	12.0	9.4	11.9	12.0	12.0	11.9
World Bank Classification						
All countries	3.7	2.5	2.6	2.9	2.8	2.7
High income countries	2.5	1.4	1.5	1.7	1.5	1.6
Developing countries, non LDC	7.0	5.4	5.8	6.3	6.3	5.7
LDCs	11.1	8.7	11.1	11.1	11.1	11.1
WTO Classification						
Developed WTO	2.4	1.3	1.3	1.5	1.3	1.5
Developing WTO non LDCs	5.5	4.2	4.5	5.0	5.0	4.4
Normal Developing WTO	4.7	3.8	3.8	4.3	4.3	3.7
RAM WTO	5.1	3.6	3.7	4.2	4.2	3.7
SVE WTO	9.5	7.4	9.5	9.5	9.5	9.5

Tariffs Faced

As noted earlier in the paper, estimates of the implications of the Modalities formulas for the tariffs facing individual members are probably more important for policy than estimates of the tariffs levied. Evaluating the former is quite straightforward for an individual country, while estimating the implications for barriers faced requires an assessment for all other countries.

Tables 7, 8 and 9 show some quite substantial reductions in the tariffs facing WTO members. Table 7 shows that the average tariff facing agricultural exporters would decline by more than one-third—from 14.6 to 9.0 percent—through application of the formula without exceptions (Scenario B). The reduction in the tariff facing industrial countries is quite similar to that facing developing countries—5.6 percentage points in the former and 5.6 in the latter. Even in the LDCs, for whom preference erosion imposes constraints on the gains from market access, the average tariff barrier faced falls from 7.4 percent to 6.5 percent. Under this scenario, the RAMs and SVEs would benefit from particularly large reductions in the unusually high tariff barriers they face. In some specific cases, such as Australia, Brazil, China, Pakistan and Thailand the benefits from reductions in tariffs faced would be even larger. For Thailand, the reduction in agricultural tariffs faced would be over 10 percentage points.

The country flexibilities included in Scenario C would reduce these gains in agricultural market access only slightly. This is a consequence of several factors. Since the LDCs and SVEs, the overall impact on market access was intended to be relatively small. Most of the VRAMs for which zero cuts are required are also relatively small. Finally, the RAMs group, which includes some much larger economies, is still required to make some tariff reductions.

In Scenario D, where flexibilities for commodity flexibility are incorporated along with those for countries, the reductions in tariffs are much smaller, with the reduction in global agricultural tariffs declining from a potential 5.6 to 2.7 percentage points. Part of this reduction in the tariff cut comes from the sensitive and Special Product flexibilities used by developing countries. Scenario D1 shows the post-cut tariff rising from 9.0 percent to 10.1 percent as these flexibilities are incorporated. However, the sensitive-

product flexibilities used by all countries results in a larger increase in the final tariff faced, with an increase from 9.0 to 11.0 when industrial countries use these flexibilities in Scenario D2. While these flexibilities are more constrained in their application, and require increases in market access resulting from TRQ expansion, they are superimposed on a situation in which the industrial country formula is more demanding and the industrial countries have much less binding overhang. The "pain" in terms of lost market access is spread between the industrial and developing countries, with the average tariff facing the high income countries rising by 2.9 percentage points and that facing the industrial countries rising by the same amount.

In NAMA, the average barrier falls from 2.9 percent to 2.1 percent for the world as a whole when the formulas are implemented without exceptions. For the high income countries, this reduction is 0.8 percentage points, from 3.0 to 2.2 percent, while the reduction for developing countries as a group is 1 percent. For LDCs, which face particularly high tariffs—even despite preferences—because of the composition of their exports, the reduction in the tariff they face is larger, at 1.3 percentage points. For some particular countries, such as Sri Lanka, the fall in the barriers is considerably larger, at 4.6 percentage points, from 9.0 to 4.4 percent. Pakistan also benefits from a particularly large reduction in the average tariff it faces.

Partly because the industrial countries have no flexibilities, and partly because the flexibilities for developing countries are subject to meaningful disciplines, the increases in NAMA tariffs faced when flexibilities are introduced are more modest than in the case of agriculture. For the high-income countries, the tariff after application of the formula increases from 2.2 percent to 2.4 percent, but remains far below its original level of 3.0 percent. For developing countries, the corresponding increase is from 1.9 percent to 2.1 percent, which remains well below its initial level of 2.9 percent. The same situation applies for countries such as Sri Lanka, Cambodia and the Rest of South Asia. While flexibilities result in higher tariffs faced, these remain much lower than before implementation. For Sri Lanka, the tariff faced post formula rises from 4.4 percent to 4.7 percent, remaining well below the initial level of 9.0 percent.

The situation for the overall average tariffs facing each exporter depends on its initial situation and the relative importance of agricultural and NAMA tariffs. For all

countries, the tariff faced falls from 3.7 percent to 2.5 from implementation of the formula alone. When flexibilities are introduced, the post-reform tariff rises to 2.9, which still involves a reduction of 22 percent from initial applied rates. For the high-income countries, the reduction is from 3.6 percent to 2.5 percent initially, with a rate of 2.9 percent after implementation with the formulas. This implies a reduction of 0.7 percentage points or almost twenty percent of the initial tariff rate. For developing countries, the reduction is from 3.9 percent to 2.9 percent, reduction of over 25 percent of the initial tariff. For a number of key developing countries, the reduction in applied tariffs faced would be considerably larger. For Bangladesh, the reduction would be over one half of the initial tariff rate of 3.8 percent. For Cambodia, the cut would be more than half the initial tariff rate, reducing it from 5.2 percent to 2.3 percent. For China, the reduction would be from 4.2 percent to 2.9 percent.

Table 7. Average tariffs facing exports of agricultural products, %

	Base	B	C	D	D1	D2
Australia NZ	17.0	10.0	10.2	13.6	11.4	12.3
Argentina	9.0	6.2	6.3	7.8	7.1	7.0
Bangladesh	14.8	12.6	12.7	14.5	14.2	12.9
Brazil	18.9	10.0	10.1	13.9	10.8	13.2
Canada	9.0	5.2	5.2	6.8	5.5	6.5
China	16.7	9.7	9.7	13.7	11.9	11.6
EU-27	16.9	10.9	11.2	13.9	12.1	13.0
Korea and Taiwan Pr.	16.0	10.8	11.0	12.8	11.8	12.1
HK & Singapore	18.4	12.6	14.4	17.2	16.6	15.0
India	10.1	7.2	7.4	8.9	8.1	8.2
Japan	14.0	9.9	10.2	12.7	12.5	10.4
Cambodia	12.8	8.5	8.6	12.2	12.2	8.6
Mexico	4.2	2.3	2.3	3.1	2.4	3.1
M.E. & N. Africa	9.7	5.9	6.2	7.8	7.2	6.8
Nigeria	2.6	2.4	2.4	2.5	2.5	2.4
Pakistan	13.2	8.5	8.5	11.8	10.0	10.4
Selected LDCs	5.9	4.7	4.7	5.4	5.1	5.1
South Africa	10.8	8.0	8.1	9.2	8.5	8.8
Sri Lanka	12.9	9.4	9.5	11.0	10.9	9.6
Thailand	23.7	13.3	13.6	19.3	15.3	17.6
Turkey	9.0	5.6	5.7	6.9	6.4	6.3
United States of America	14.0	8.5	8.7	11.4	9.5	10.5
Rest of Central Asia	20.6	12.8	13.7	18.0	14.7	17.0
Rest of East Asia	17.5	14.5	14.6	16.3	15.6	15.3
Rest of Europe	20.0	11.6	11.7	15.6	14.0	13.3
Rest of LAC	14.7	6.5	6.5	10.5	6.8	10.2
Rest of South Asia	18.7	17.3	17.5	18.3	18.3	17.5
Rest of SADC	20.4	9.5	9.6	16.9	9.9	16.6
Rest of SSA	4.8	3.7	3.7	4.6	3.8	4.5
World Bank Classification						
All countries	14.6	9.0	9.1	11.9	10.1	11.0
High income countries	15.0	9.3	9.5	12.2	10.5	11.2
Developing countries, non LDC	14.3	8.7	8.8	11.6	9.6	10.8
LDCs	7.4	6.5	6.5	7.1	6.9	6.7
WTO Classification						
Developed WTO	15.0	9.2	9.4	12.2	10.4	11.2
Developing WTO non LDCs	14.3	8.7	8.9	11.7	9.8	10.8
Normal Developing WTO	13.7	8.8	9.0	11.2	9.7	10.5
RAM WTO	15.8	9.2	9.3	13.1	11.3	11.0
SVE WTO	15.6	8.0	8.2	12.6	9.0	11.9

Table 8. Average tariffs facing exporters of non-agricultural goods,

	Base	B	C	D	D1	D2
Australia NZ	2.9	2.0	2.1	2.6	2.6	2.0
Argentina	2.1	1.6	1.7	1.9	1.9	1.7
Bangladesh	3.7	1.7	1.8	1.8	1.8	1.7
Brazil	2.6	2.0	2.1	2.2	2.2	2.1
Canada	0.4	0.3	0.3	0.3	0.3	0.3
China	3.8	2.3	2.5	2.5	2.5	2.4
EU-27	3.6	2.7	2.9	3.0	3.0	2.8
Korea and Taiwan Pr.	3.8	2.6	2.7	2.9	2.9	2.7
HK & Singapore	3.7	2.5	2.7	2.9	2.9	2.7
India	4.7	3.1	3.5	3.6	3.6	3.5
Japan	4.5	3.0	3.2	3.6	3.6	3.1
Cambodia	5.1	2.2	2.2	2.2	2.2	2.2
Mexico	0.3	0.3	0.3	0.3	0.3	0.3
M.E. & N. Africa	2.8	2.4	2.5	2.5	2.5	2.5
Nigeria	1.4	1.4	1.4	1.4	1.4	1.4
Pakistan	6.5	3.9	4.3	4.3	4.3	4.3
Selected LDCs	2.1	1.8	2.0	2.0	2.0	1.9
South Africa	3.2	2.5	2.8	2.9	2.9	2.8
Sri Lanka	9.0	4.4	4.6	4.7	4.7	4.6
Thailand	3.4	2.2	2.4	2.5	2.5	2.4
Turkey	2.1	1.4	1.5	1.5	1.5	1.5
United States of America	1.8	1.4	1.5	1.5	1.5	1.4
Rest of Central Asia	2.8	2.0	2.2	2.4	2.4	2.2
Rest of East Asia	2.5	1.6	1.6	1.7	1.7	1.6
Rest of Europe	1.3	1.0	1.0	1.0	1.0	1.0
Rest of LAC	2.5	1.8	1.9	1.9	1.9	1.9
Rest of South Asia	5.4	2.5	2.6	3.2	3.2	2.5
Rest of SADC	0.7	0.5	0.6	0.6	0.6	0.6
Rest of SSA	3.2	1.9	3.0	3.1	3.1	3.0
World Bank Classification						
All countries	2.9	2.1	2.2	2.3	2.3	2.2
High income countries	3.0	2.2	2.3	2.4	2.4	2.3
Developing countries, non LDC	2.9	1.9	2.0	2.1	2.1	2.0
LDCs	2.8	1.5	1.8	1.8	1.8	1.8
WTO Classification						
Developed WTO	2.9	2.1	2.2	2.4	2.4	2.2
Developing WTO non LDCs	3.0	2.0	2.2	2.2	2.2	2.1
Normal Developing WTO	2.4	1.7	1.9	1.9	1.9	1.8
RAM WTO	3.6	2.2	2.4	2.4	2.4	2.4
SVE WTO	3.5	2.6	2.7	2.8	2.8	2.7

Table 9. Overall average tariffs facing exporters, %.

	Base	B	C	D	D1	D2
Australia NZ	6.8	4.2	4.3	5.7	5.0	4.9
Argentina	5.2	3.7	3.7	4.5	4.2	4.0
Bangladesh	3.8	1.8	1.9	1.9	1.9	1.9
Brazil	6.8	4.0	4.2	5.2	4.4	4.9
Canada	1.0	0.7	0.7	0.8	0.7	0.8
China	4.2	2.5	2.7	2.9	2.8	2.7
EU-27	4.5	3.2	3.4	3.7	3.6	3.5
Korea and Taiwan Pr.	3.9	2.7	2.8	3.0	3.0	2.8
HK & Singapore	4.0	2.7	3.0	3.2	3.2	3.0
India	5.2	3.5	3.9	4.1	4.0	4.0
Japan	4.5	3.0	3.2	3.6	3.6	3.2
Cambodia	5.2	2.3	2.3	2.3	2.3	2.3
Mexico	0.5	0.4	0.4	0.4	0.4	0.4
M.E. & N. Africa	3.0	2.5	2.6	2.7	2.6	2.6
Nigeria	1.5	1.4	1.4	1.4	1.4	1.4
Pakistan	7.2	4.3	4.7	5.0	4.9	4.8
Selected LDCs	3.1	2.6	2.7	2.9	2.8	2.8
South Africa	3.9	3.1	3.4	3.5	3.5	3.4
Sri Lanka	9.5	5.1	5.3	5.5	5.5	5.2
Thailand	5.2	3.2	3.4	4.0	3.6	3.8
Turkey	2.7	1.7	1.9	2.0	2.0	1.9
United States of America	2.9	2.0	2.1	2.4	2.2	2.2
Rest of Central Asia	4.4	3.0	3.3	3.8	3.5	3.5
Rest of East Asia	3.6	2.5	2.6	2.8	2.7	2.6
Rest of Europe	1.7	1.3	1.3	1.4	1.4	1.3
Rest of LAC	4.6	2.6	2.7	3.4	2.8	3.3
Rest of South Asia	7.2	4.5	4.6	5.2	5.2	4.5
Rest of SADC	3.1	1.7	1.7	2.6	1.8	2.6
Rest of SSA	3.6	2.5	3.2	3.5	3.3	3.4
World Bank Classification						
All countries	3.7	2.5	2.6	2.9	2.8	2.7
High income countries	3.6	2.5	2.7	2.9	2.9	2.7
Developing countries, non LDC	3.9	2.5	2.6	2.9	2.7	2.8
LDCs	3.3	2.1	2.3	2.4	2.4	2.3
WTO Classification						
Developed WTO	3.6	2.5	2.7	3.0	2.9	2.7
Developing WTO non LDCs	3.8	2.5	2.6	2.9	2.8	2.7
Normal Developing WTO	3.5	2.4	2.5	2.8	2.6	2.6
RAM WTO	3.9	2.4	2.6	2.7	2.7	2.6
SVE WTO	4.5	3.0	3.2	3.6	3.3	3.5

Concluding Comments

In this initial assessment, we first considered the features of the current draft modalities. On the basis of our reading of these texts, and predictions of the likely implications of flexibilities, we assessed the consequences for applied tariffs.

When considering the tariffs levied by individual countries, we found that the formulas discussed in the modalities would—in the absence of flexibilities— result in substantial reductions in applied tariffs in the industrial countries. In agriculture, the reduction in industrial country tariffs would be by a factor of two, from 15 percent to 7.5 percent. While they may be needed to secure an agreement, the sensitive product provisions appear to result in a substantially smaller cut in these tariffs, and result in a final tariff of 11 percent. In NAMA, initial average tariffs in the industrial countries are low, although they include peak tariffs on products of particular interest to developing countries. The formula results in a cut from 1.7 percent to 1.1 percent, with no flexibilities allowed.

In developing countries, the cut in applied agricultural tariffs implied by the formula is much smaller, with the average falling from 13.7 percent to 11.8. When flexibilities for particular country groups and for Special and sensitive products are included, the average post-cut tariff is 13.6 percent. NAMA tariffs decline from 6.4 percent to 4.8 percent when the formula is applied without flexibilities. When flexibilities are factored in, the cut is from 6.4 percent to 5.6 percent.

In terms of tariffs faced, most countries would appear to see significant reductions in the agricultural tariffs they face if the formulas were implemented without exceptions. Worldwide, the average agricultural tariff would fall from 14.6 percent to 9 percent. Allowing for exceptions increases the final tariff to 11.9 percent. Most of this increase is accounted for by the sensitive product flexibilities for industrial countries, rather than by the more comprehensive flexibilities allowed to developing countries—these flexibilities have more impact because they are implemented in a context of deeper formula cuts. Most countries see reasonably significant changes in the tariffs they face, with the

smallest reductions in countries such as LDCs that benefit from preferences in the industrial countries, and see small tariff reductions in their developing country partners.

In NAMA, the average tariff levels are considerably lower. If the formulas were implemented without exceptions, most countries would see substantial reductions in the tariffs they face, with the world-wide average tariff falling from 2.9 percent to 2.1. In this case, flexibilities are confined to developing countries, and result in the final tariff increasing from 2.1 to 2.2 percent. A number of developing countries, such as Pakistan and Sri Lanka face much larger initial tariffs and experience much larger gains.

Considering agriculture and non-agriculture together, the applied tariffs facing developing countries would fall by around 35 percent—from 2.5 percent-- if the formulas were implemented without exceptions. The final tariff rises to 2.9 percent once flexibilities are introduced, for an overall reduction of 26 percent. The gain to the industrial countries is broadly similar. These final percentage reductions in applied rates are in the same order of magnitude as the 36 percent reductions sought in the Uruguay Round but of potentially greater impact because they are associated with reductions in tariff peaks and in the uncertainty about market access opportunities not measured in these averages. The key question is whether these gains in market access will be sufficient to outweigh the political pain associated with reductions in countries' own protection.

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