

The Implications of the Special Safeguard Mechanism for Developing Countries

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1. Introduction

The July 2008 breakdown in the WTO's Doha Round was triggered in part by disagreement over the parameters for remedies under agriculture's 'special safeguard mechanism' (SSM) for developing countries. The SSM is a device intended to help developing countries protect farmers by temporarily raising tariffs on products with pronounced increases in import volumes or decreases in import prices. There was no convergence on the fundamental issue of what conditions would need to be met in order for the SSM to be triggered in the first place. In addition to disagreements over alternative triggers, there was no agreement on the level of the resulting remedies. The most serious point of contention was unbridgeable differences regarding the triggers for breaching the pre-Doha bound tariff rate. More specifically, the critical issue that led to the breakdown of the talks was not only by how much imports are to increase or prices to decrease before such a remedy is triggered, but if allowed, by how much can developing countries raise tariffs beyond current (pre-Doha) 'bound' tariff ceilings, and on how many products.

The SSM for developing countries is a remarkably sensitive issue for both vulnerable, net importing developing countries and competitive, net exporting countries (developing or otherwise).

While the former have the legitimate concern of temporarily protecting underprivileged domestic producers from international commodity price volatility and import surges, the latter have the equally legitimate concern that the proposed mechanism may become an outright trade barrier if improperly designed. Efforts to design an SSM that would have afforded developing countries the needed protection from potentially disruptive price fluctuations and import surges

without substantive reductions in access to international markets failed. Many developing countries (especially those members of the G-33) have argued that the original mandate for the new safeguard never included a ceiling on remedial duties. They also argued that the SSM must be no less flexible than the Special Safeguards (SSG) for agriculture which has been used extensively and primarily by developed countries since the end of the Uruguay Round.

Since 2006, Ambassador Falconer, the chair of the WTO agriculture negotiations committee, formally released five revised versions of this draft ‘modalities’. The last attempt to agree on a set of ‘modalities’ by the group of ministers occurred in July 2008. For both the price and volume based remedies, this report compares the last two revised versions: the one released on May (May Modalities Rev.2)¹, and the most recent one released on July 10 (July Modalities Rev.3)² with the Original G-33 proposal³ and contrasts them with existing disciplines in the SSG.

For the volume based remedy only, we also analyze the implications of the ‘Lamy Package’, the compromise presented by WTO Director-General Lamy in his late July 2008 consultation in the negotiations with G-7 ministers (Australia, Brazil, China, the European Union, Japan, India and the United States). Lamy put together a package on several unresolved issues for the volume-based safeguard. The specifics included different exceptions to the July Modalities on the tariff cap, the threshold that would trigger the exception and the total number of tariff lines that would be allowed under the exception.⁴ In response to Lamy, an alliance of the G-33, African Group, ACP and Small and Vulnerable Economies (SVEs) presented a revised

¹ WTO, “Revised Draft Modality for Agriculture,” TN/AG/W/4/Rev.2, 19 May 2008.

² WTO, “Revised Draft Modality for Agriculture,” TN/AG/W/4/Rev.3, 10 July 2008.

³ WTO, (2006b) “G-33 Proposal on Article 5[...] Special Safeguard Provisions Mechanism for Developing Countries,” World Trade Organizations, Committee on Agricultural, Special Session, JOB(06)/64, 23 March 2006.

⁴ For a full description of the Lamy package, see ICTSD issue 6, July 2008.

version of the original G-33 proposal which we term here the “G-33 July Negotiation.”⁵

This report presents empirical results on the implications of these alternative proposals. The analysis includes the implications of various offers on the exceptions to the tariff cap (for example, we show the difference between the Lamy Package offer on the cap for the volume-based trigger and the G-33 July Negotiation position). The July Modalities Rev.3 stated that the pre-Doha bound tariffs should generally limit total duties. However, the July Modalities Rev.3 also provided exceptions for three different groups of countries—Least Developed Countries (LDCs), SVEs, and other developing countries. For other developing countries, the pre-Doha bindings could be exceeded by up to 15 percentage points or 15 percent of the initial tariff binding for 2 to 6 products at the six-digit HS level. The Lamy Package allowed for a volume-based safeguard remedy that exceeds bound rates when import volumes are 40 percent above a three-year rolling average. Developing countries other than LDCs and SVEs could then impose volume-based safeguards that are 15 percentage points or 15 percent of the bound tariff, whichever is higher, on up to 2.5 percent of tariff lines.

In response to the Lamy Package, the G-33 July Negotiation proposed safeguard duties that exceed bound rates when import volumes are 10 percent greater than the three-year rolling average. Under these circumstances, the safeguard remedies with exceptions on the cap could be up to 30 percentage points or 30 percent of the bound tariff, but limited to 7 percent of total tariff lines.

To determine the implications of all of this, we undertake an empirical investigation on imports by four developing countries: India, China, Indonesia and Korea. We determine the

⁵ G-33 et al, (2008) “Statement of G-33, African Group, ACP and SVEs on Special Products and Special Safeguard Mechanism”, July 27, 2008.

magnitude of the remedies in each case from three different groups of exporting countries: developed, least developed and other developing. The outcome depends in part on the cut in the bound tariff (which depends on the initial tariff level), the level of tariff binding overhang (the difference between bound and applied tariffs), the number of exceptions to the tariff cap and the degree to which the pre-Doha tariff can be exceeded, and the degree to which either world prices drop or imports surge. We show that developing country exporters are potentially more vulnerable to the effects of the proposed SSMs than developed countries. This scenario for developing countries is aggravated when the shipment-by-shipment basis of the SSM is applied to the price trigger.

This report is organized as follows: the next section provides an historical context for the SSM while Section 3 summarizes all of the key details in the alternative proposals under consideration in the empirical analysis of this report. Section 4 briefly summarizes the number of tariff lines and value of trade affected by different trigger thresholds for each of the price- and volume-based safeguards. Section 5 presents the empirical results while the final section concludes.

2. Historical Context of the SSM in the Doha Round⁶

The concept of a special agricultural safeguard for developing countries can be traced to the talks under the original mandate of Article 20 of the Uruguay Round Agreement on Agriculture. Although a number of negotiating proposals, notes and discussion papers alluded to the issue before and after the Doha Ministerial Conference, it only gained significant momentum with the submission of a detailed proposal by the G-33 in 2005 and subsequent papers by

⁶ For an alternative and perhaps more detailed synopsis of the negotiations, see Robert Wolfe (2009) "The special safeguard fiasco in the WTO: The perils of inadequate analysis and negotiation." Groupe d'Economie Mondiale, Sciences Po, Working Paper February 10, 2009.

Argentina-Paraguay-Uruguay (APU)⁷ and the United States⁸

At its origin, the call for a special safeguard for developing countries was linked to a general dissatisfaction with the Special Safeguard (SSG) established in Article 5 of the Agreement on Agriculture. The first negotiating proposal to address this issue, submitted by 11 developing countries in June 2000, argued that developed countries should be prohibited from using the SSG and that “this clause instead should be opened up to all developing countries. Developing countries should be allowed to invoke this based on low prices or excess volume.”⁹ Distinct parts of this proposal found immediate support in two different types of countries. While India stressed that the Special Safeguard clause was “a must for sustainable agricultural development in developing countries,”¹⁰ New Zealand supported “the call for the end of the special safeguard.”¹¹ Brazil believed that improved market access was necessary, as it felt that developing countries needed trade liberalization in order to develop. “Although special and differential treatment could accelerate this process, care was needed that suggestions for such treatment did not legitimize the exemptions already in place for developed countries or that such a proposal did not freeze existing distortions.”¹² As members of the Cairns Group, the two latter countries proposed the “preservation of the current special safeguard for developing countries to

⁷ WTO, 'Revised Consolidated Reference Paper on Possible Modalities on Market Access - SSM: Some unanswered Technical Issues [Argentina, Paraguay and Uruguay],' World Trade Organization, Committee on Agriculture, Special Session, JOB(06)/197/Rev.1, 21 June 2006.

⁸ WTO, 'United States Communication on Special Agricultural Safeguard (SSG) and the Special Safeguard Mechanism (SSM)--Article 5 of the Agreement on Agriculture,' World Trade Organization, Committee on Agriculture, Special Session: JOB(06)/120, 24 April 2006.

⁹ World Trade Organization, “Agreement on Agriculture: Special and Differential Treatment and A Development Box – Proposal to the June 2000 Special Session of the Committee on Agriculture by Cuba, Dominican Republic, Honduras, Pakistan, Peru, Haiti, Nicaragua, Kenya, Uganda, Zimbabwe, Sri Lanka, and El Salvador,” G/AG/NG/W/13, 23 June 2000.

¹⁰ World Trade Organization, “Second Special Session of the Committee on Agriculture, 29-30 June 2000, Statement by India,” G/AG/NG/W/33, 13 July 2000.

¹¹ World Trade Organization, “Second Special Session of the Committee on Agriculture, 29-30 June 2000, Statement by New Zealand,” G/AG/NG/W/29, 11 July 2000.

¹² World Trade Organization, “Summary Report on the Meeting of the Special Session Held on 29–30 June 2000, Note by the Secretariat,” G/AG/NG/R/2, 15 August 2000.

assist with domestic and international agricultural reform efforts and in countering subsidized competition.”¹³ ASEAN countries concurred that “developing countries must be allowed the flexibility to continue the application of special safeguards.”¹⁴

Other proposals catered to the special needs of specific subgroups of developing countries. They supported the extension of the right to have recourse to the special safeguard provision of the Agreement on Agriculture to: (i) net-food importing developing countries (NFIDCs) not having this possibility at present;¹⁵ (ii) small developing countries that need to protect local agricultural production from imports that threaten the existence of the local industry;¹⁶ (iii) least developed countries (LDCs);¹⁷ and (iv) LDCs, NFIDCs and other developing countries, including small island developing states (SIDS).¹⁸

Proposals could also be distinguished in the form to be given to the separate safeguard mechanism for developing countries: while some countries believed that the mechanism should be designed on the lines of the SSG,¹⁹ others envisaged a more flexible instrument.²⁰ Some argued that developing countries required safeguards to protect themselves from the injurious effects of developed country subsidies.

¹³ WTO, “WTO Negotiations on Agriculture: Cairns Group Negotiating Proposal – Market Access, Argentina, Australia, Bolivia, Brazil, Chile, Colombia, Costa Rica, Guatemala, Indonesia, Malaysia, New Zealand, Paraguay, Philippines, South Africa, Thailand and Uruguay,” G/AG/NG/W/54, 10 November 2000.

¹⁴ WTO, “Special and Differential Treatment for Developing Countries in World Agricultural Trade: Submission by ASEAN,” G/AG/NG/W/55, 10 November 2000.

¹⁵ WTO, “Note on Non-Trade Concerns, Barbados, Burundi, Cyprus, Czech Republic, Dominica, Estonia, EU, Fiji, Iceland, Israel, Japan, Korea, Latvia, Liechtenstein, Madagascar, Malta, Mauritania, Mauritius, Mongolia, Norway, Poland, Romania, Saint Lucia, Slovak Republic, Slovenia, Switzerland, and Trinidad & Tobago,” G/AG/NG/W/36/Rev.1, 22 September 2000, revised 9 November 2000.

¹⁶ WTO, “Market Access under Special and Differential Treatment for Small Developing Countries: Proposal by Swaziland,” G/AG/NG/W/95, 22 December 2000.

¹⁷ WTO, “Proposal by Burkina Faso on the Negotiations on Agriculture,” G/AG/NG/W/185, 16 May 2001.

¹⁸ WTO, “WTO Negotiations on Agriculture: Proposals by Small Island Developing States (SIDS): Communication from Dominica, Jamaica, Mauritius, St. Kitts & Nevis, St. Lucia, St. Vincent & the Grenadines, and Trinidad & Tobago,” G/AG/NG/W/97, 29 December 2000.

¹⁹ WTO, “Negotiations on WTO Agreement on Agriculture, Proposals by India in the areas of: (i) Food Security, (ii) Market Access, (iii) Domestic Support, and (iv) Export Competition,” G/AG/NG/W/102, 15 January 2001; WTO, “WTO Negotiations on Agriculture: Proposal by Turkey,” G/AG/NG/W/106, 5 February 2001.

²⁰ WTO, “Proposal by Morocco,” G/AG/NG/W/105, 5 February 2001.

With the incorporation of the agricultural talks into the Doha Round single undertaking, WTO members placed the needs and interests of developing countries at the heart of the work program. The 2001 Doha Ministerial Declaration called for comprehensive negotiations aimed at substantial improvements in agricultural market access in tandem with special and differential treatment (SDT) for developing countries in all elements of the negotiations.²¹ In this context, the SSM emerged as one of the forms of SDT in the agricultural market access talks. A special safeguard for developing countries already figured in the First Draft of Modalities circulated by former Chairman Stuart Harbinson in early 2003 (although proposed ending the SSG). At that time, very little was agreed to by WTO members in terms of the SSM.

In August 2003, the EU-U.S. paper before the Cancun ministerial simply proposed that a “SSM will be established for use by developing countries as regards import-sensitive tariff lines”.²² In February 2004, the CAIRNS Group endorsed the SSM while the June 2004 meeting of the “five interested parties” proposed the establishment of the SSM. The 2004 Framework Agreement stated that an SSM should “be established for use by developing country Members.” The SSM gained substantial momentum only after the G-33 submitted a proposal in June 2005 spelling out principles and practical details for the operationalization of such an instrument. The 2005 Hong Kong Ministerial Declaration further specified that developing countries would have the right to have recourse to an SSM based on import quantity and trigger prices, with precise arrangement to be further defined. Subsequent proposals by Argentina, Paraguay and Uruguay (APU) and the United States led to heated debate among the WTO membership. Ambassador

²¹ “We agree that special and differential treatment for developing countries shall be an integral part of all elements of the negotiations and shall be embodied in the schedules of concessions and commitments and as appropriate in the rules and disciplines to be negotiated, so as to be operationally effective and to enable developing countries to effectively take account of their development needs, including food security and rural development. WTO, “Doha Ministerial Declaration, November 2001.

²² WTO, 'EC-US Joint Text: Agriculture,' World Trade Organization, Committee on Agriculture, Special Session: JOB(03)/157, 13 August 2003.

Falconer has formally released five revised versions of this draft ‘modalities’ since 2006. The proposals under review in this report have evolved from this historical context.

3. The Key Issues

The July 2008 text represents a major advance in the effort to secure a consensus agreement in the Doha Development Round negotiations and many technical features of the SSM have by and large been resolved like applicability, base levels, duration and coverage. The most significant differences in regards to both the price- and volume-based SSM lie in details involving alternative triggers and remedies, and in particular, on the cap and if pre-Doha bound tariffs can be exceeded or not (and if so, on how many products).

Throughout the negotiations, the issue of applicability revolved around whether the SSM should apply to: (i) intra-quota trade (ii) non-MFN trade and (iii) imports coming from other developing countries. While the application of the SSM to intra-quota and/or non-MFN trade presented a series of technical difficulties, its application to imports originating in other developing countries had the potential to significantly limit South-South trade and hinder developmental opportunities. However, in the end, there is no mention of excluding imports from developing countries in the most recent proposals.

Intra-quota trade was debated at great length and in the end, para. 125 of the July Modalities Rev.3 allows imports under a tariff-rate quota (TRQ) for a volume based trigger, provided the import surge is not attributable to TRQ expansion (there is no mention of TRQ trade and the price-based trigger so presumably the price-based trigger includes tariff lines under the TRQ). However, no remedy can be applied to the in-quota tariff. This is consistent with the position of all other proposals except the SSG which applies to tariffied products only, generally implemented in the form of TRQs.

Non-MFN trade raises the following two issues: (i) whether preferential imports should count towards the base/trigger levels; and (ii) whether the additional SSM duty should apply to preferential imports. Both the May and July Modalities proposed the exclusion of non-MFN trade from the base levels of both the price and volume triggers. This highlights the fact that SSM remedial duty should not be applied to non-MFN trade since some preferential agreements exempt imports from the application of any additional duty. Preferential trade agreements have the potential to significantly increase trade flows among signatory countries due to the elimination or reduction of previous trade restrictions. It would therefore seem somewhat unreasonable to further penalize third-countries by counting such non-MFN trade towards the SSM trigger level. Although only MFN trade should be counted towards the activation of triggers, no consensus has been reached, however, as to whether the additional SSM duty would be applied to preferential trade.

As for the controversial issue of whether or not both the price and volume triggers are to be activated before any remedy is to be applied (i.e., a ‘cross-check’), both the May and July Modalities mention a “weak” cross-check where the volume trigger has no proviso on what import prices do but the SSM price trigger is subject to the situation where import volume is clearly not going down.²³ The Original G-33 does not mention a cross-check but the G-33 July Negotiation asks for the language used on the cross-check in paragraph 128 of July Modalities to be changed from “shall not normally” to “undertake, as far as practicable, not to”, the language used in the SSG.

Tables 1a and 1b summarize the features of the various proposals on the SSM’s price-

²³ The U.S. and APU proposals in the past had language that “In order for the volume trigger to be invoked, unit import values of MFN trade must also be falling, when compared against the volume trigger base period use.” Similarly, “[i]n order for the price trigger to be invoked, the MFN import volumes must also be rising, when compared against the price trigger base period used.” (WTO, “Revised Consolidated Reference Paper on Possible Modalities on Market Access – SSM: Some Unanswered Technical Issues,” JOB(06)/197/Rev.1, 21 June 2006).

based and volume-based triggers, respectively. The mathematical formulations of these alternative proposals are given in Tables 2a and 2b.

(i) Base Levels

Row [1] in Tables 1a and 1b summarize the proposed baselines on the SSM's price-based and volume-based triggers, respectively. All proposals agree that an average monthly price for the preceding three years should represent the base, except for the SSG which uses the average of prices in the 1986-88 time period as a base (Table 1a). All proposals are in agreement that the base volume should be a three year moving average of import volume (Table 1b) except the G-33 adds a proviso "for which the data are available".

(ii) Initial Threshold and Trigger Limits

Row [2] in Table 1a compares the initial *price* threshold among the proposals. The safeguard is triggered when current prices are depressed by more than some percent of the base price determined in Row [1]. These threshold prices vary between 10 and 30 percent among the various proposals, reflecting an important outstanding disagreement. The Original G-33 proposal and the SSG have a price threshold of 10 percent while the May Modalities Rev.2 proposal shows the highest initial price trigger threshold of 30 percent (the July Modalities has a threshold of 15 percent).

In Row [2] of Table 1b, the initial *volume* threshold in the May Modalities Rev.2 proposal is substantially higher than the G-33 July Negotiation and July Modalities Rev.3: 30 percent *versus* 10 percent (5 percent for the Original G-33 proposal and SSG). As we will show, the initial threshold has significant implications on the number of tariff lines triggered.

Row [3] in Tables 1a and 1b describe the proposed rules on trigger limits; that is, the intervals over which the additional duty shall be applied. Row [4] in each table gives the formula

for the proposed remedy for each interval. Row [3] in Table 1a shows that for price-based SSMs, there are no further trigger intervals for the July or May Modalities or for the Original G-33 proposal but the SSG has four trigger intervals. For volume-based SSMs, on the other hand, Table 1b shows three trigger intervals for the July and May Modalities, and for both G-33 proposals but the SSG has no further trigger intervals. However, the SSG has three possible initial thresholds, depending on the share of imports in domestic consumption.

(iii) Remedy Level and Cap

The level of remedy varies among proposals, as described in Row [4] of Tables 1a and 1b. The remedy formula for *price*-based safeguard is straightforward for the two Modalities and the Original G-33 proposals but the SSG formula is very complicated. The original G-33 proposal has a remedy equal to the Base price minus the Import price while the May Modalities Rev.2 remedy is 50 percent of that and the July Modalities Rev.3 remedy is 85 percent of that in the Original G-33 proposal.

The SSG remedy is determined according to a complex five-tiered schedule. The difference between trigger and import prices (B-P) relative to the trigger price determines which tier applies. In the first tier, where the deviation of the import price from the trigger price corresponds to less than 10 percent of the latter, no additional duty is applied. As you move into further tiers, the additional duty increases. A multipart formula gives distinct weights to different parts of the price differential. In the second tier, the additional duty consists of 30 percent of the amount by which (B-P) exceeds the first threshold, i.e. $R_2 = [0.3 \cdot (B - P - 0.1B)] = (0.27B - 0.3P)$. In the third tier, the additional duty consists of 50 percent of the amount by which (P) exceeds the second threshold plus the corresponding amount for the part of the price differential that is in the second tier, i.e. $R_3 = \{[0.3 \cdot (0.9B - 0.6B)] + [0.5 \cdot (0.6B - P)]\} = (0.39B - 0.5P)$.

Applying the same progressive differentiation of tiers, additional duties in the fourth and fifth tiers are respectively $R4 = \{[0.3 \cdot (0.9B - 0.6B)] + [0.5 \cdot (0.6B - 0.4B)] + [0.7 \cdot (0.4B - P)]\} = (0.47B - 0.7P)$ and $R5 = \{[0.3 \cdot (0.9B - 0.6B)] + [0.5 \cdot (0.6B - 0.4B)] + [0.7 \cdot (0.4B - 0.25B)] + [0.9 \cdot (0.25B - P)]\} = (0.52B - 0.9P)$.

As shown in Row [4] of Tables 1a and 1b, the formulas determining the remedy for the *volume*-based safeguard are complex for all proposals except for the SSG which has a very simple formula: the remedy is to be one third of the post-Doha tariff.

The mathematical formulation of the remedies is specified in Tables 2a and 2b.

Details on the caps (limits on the remedy and whether the pre-Doha tariff will be exceeded or not) are given in Rows [5] and [6] of Tables 1a and 1b. For the *price*-based safeguard, the limit on the remedy for both the May and July Modalities is the pre-Doha Round bound tariff which constitutes a limit on the total level of tariff protection after the application of an additional safeguard duty. The SSG and the Original G-33 proposals have no limits.

As for the limit on the *volume*-based safeguard, the cap on the remedy is built into the remedy formula given in Row [4] of Table 1b.

Row [6] of Tables 1a and 1b gives details for each proposal as to whether the pre-Doha tariff will be exceeded or not.

(iv) Duration

Row [7] in Tables 1a and 1b summarize the proposed date of expiration once the SSM is triggered. As for when the SSM as a policy instrument would expire, the May and July Modalities do not call for a defined time period, although Falconer had clearly concurred earlier with proposals that had specified the SSM should expire at the end of the Doha Round implementation period.

(v) Coverage

Row [8] in Tables 1a and 1b summarizes the coverage. Except for the May Modalities Rev.2 (which calls for remedies to be limited to 3-8 tariff lines at a time) and the SSG (which applies to tariffied products only, generally implemented in the form of TRQs), all other proposals argue that all tariff lines should be eligible for either the price or volume triggered remedy.

Theoretical properties of proposals

To get an idea of the theoretical properties of the alternatives proposed, we set up an empirical example using the average initial and final tariffs for China and India, and simulate hypothetically over an ever increasing level of import price depression or import surge.

The results for the *price*-based trigger in China are given in Figure 1. The horizontal axis plots price depression in percent while the vertical axis gives the percent remedy. The Original G-33 proposal generates the highest remedies while the July Modalities Rev.3 is only slightly below that without the tariff cap. Adding the tariff cap (as called for in the July Modalities Rev.3) reduces the remedy to negligible levels compared to not only the Original G-33 proposal but to all other proposals as well (even compared to the SSG). The threshold for the July Modalities remedy is somewhat higher than the Original G-33 proposal but then increases in one step and flattens out with the tariff cap which is the difference between the pre-Doha bound tariff and the applied tariff. For China, this difference is very low (unlike for India which we show in the next figure). Meanwhile, note that remedies under the May Modalities follow the same pattern as that of the SSG but at somewhat higher levels.

Figure 2 shows that the remedies under a *price*-based trigger for India follow a similar pattern and are proportionally close to those for China except for the specific case of a cap under

the July Modalities Rev.3. Remedies are far higher for India in this case because India's initial tariff averages 116 percent and the post-Doha tariff averages 64 percent, and the average applied tariff is 40 percent (China has an average initial tariff of 16 percent, and a final tariff equal to the applied tariff of 10.3 percent). The reason that the other four proposals generate similar remedies for India and China is that the value of the tariff only enters the calculus on the cap (the tariff is not part of the remedy and the cap is the pre-Doha bound tariff). As we will show below, this is not the case for the volume-based remedies.

Remedies under the July Modalities with a cap are well above those of the SSG. The remedy under the July Modalities flattens out at the difference between the pre-Doha bound tariff and applied tariff at a price suppression threshold of 47 percent and crosses the SSG at 68 percent. What the China-India comparison reveals in Figures 1 and 2 is that the degree to which the July Modalities with a cap is very binding relative to the SSG and the Original G-33 formulas, the extent to which depends critically on the initial tariff levels.

Figures 3 and 4 depict the theoretical properties of the volume-based safeguard proposals by using the average tariffs for China and India, respectively. For China, the gap between the remedy of the Original G-33 proposal is far higher than that for all other proposals. The remedies for all other proposals are not only close to each other but are relatively low. For India, the relative values of the volume-based remedies mirror those for the price-based remedy except the SSG remedy is slightly higher than the May Modalities (the reverse of the price-based remedy). Notice that the volume-based remedies flatten out (unlike the price-based remedy except for the July Modalities). This is because a cap is built into all of the remedy formulas for the volume-based safeguard, with the specifics of the cap varying with the threshold levels.

Comparing the situation for China (Figure 3) to that of India (Figure 4) highlights several significant features of the Original G-33 proposals compared to all other proposals. In Figure 3, remedies for China under the Original G-33 proposal are, for example, significantly higher than those under the July Modalities but this is not the case for India as shown in Figure 4. There are two explanations for this difference in outcomes. First, applied tariffs are equal to bound tariffs in China, unlike in India. Second, initial tariffs in China are much lower than in India. In other words, it is not necessary that remedies are lower in China because of no tariff binding overhang. It is possible to have higher remedies in China even though there is no gap between applied and bound tariffs if initial tariffs are higher than those in India. Nevertheless, due to tariff binding overhang in India, there will always be a larger gap between remedies under the original G-33 proposal and all other proposals for China compared to India.

Notice that that Figures 3 and 4 do not include exceptions to the cap (the cap itself is built into the remedy formulas). Although not shown, the remedies under the G-33 July Negotiation would be equal to that of the July Modalities in Figures 3 and 4 if exceptions to the cap were ignored. However, the G-33 July Negotiation calls for more exceptions. An analysis of these exceptions is not included in the theoretical analysis of Figures 3 and 4 but is presented in the empirical results below.

4. The Number of Tariff Lines and Value of Trade Affected by Different Thresholds

In this report, we empirically analyze agricultural imports for four major developing country importers: India, China, Korea and Indonesia (see Annex A for a brief description of our methodology). The number of tariff lines and value of trade triggered under alternative threshold levels are presented in Tables 3 and 4, respectively.

Table 3 shows the percentage of all agricultural tariff lines that would be subject to a SSM in each case of a price- and volume-based safeguard. At a threshold level of 5 percent for the price trigger, 29 percent of all tariff lines on average would have a safeguard invoked (i.e., tariff lines where the per unit price falls below the base price). This average declines significantly to 11 percent at a threshold of 30 percent.

For the volume trigger, 39 percent of all tariff lines would have a safeguard at a 10 percent threshold, and the total number of tariff lines triggered declines slightly to 32 percent if the threshold is 30 percent. Hence, for the years and countries under investigation in this report, differing threshold levels are more important for the price-based safeguard than the volume-based safeguard.

Table 4 presents the same results except for the share of the total value of trade that is affected by each type of safeguard. The share of trade affected at the 5 percent threshold for the price trigger averaged 31 percent but that drops by a wide margin to 4 percent with a 30 percent threshold. On the other hand, 66 percent of the value of trade is affected under the volume trigger at the 10 percent threshold, more than double that of the price trigger (at a 5 percent threshold), but the share of trade affected at the 30 percent threshold drops to only 51 percent (compared to 4 percent of the value of trade for the price-based trigger).

Figures 5 and 6 provide a summary of the averages given in the final row of Tables 3 and 4, respectively. The number of tariff lines and value of trade subject to a *price*-based safeguard falls considerably more than a *volume*-based safeguard when the thresholds increase from 5 (10) percent to 30 percent. Over 50 percent of the value of trade was affected by the volume trigger even at a 30 percent threshold.

5. An Empirical Analysis of Remedies by Proposal

Because there is a lot of evidence that developing country exports have lower unit prices than exports from developed countries, we analyze whether or not the price-based safeguard makes developing country exporters more vulnerable because the remedy is based on a shipment by shipment basis (para. 127 of July Modalities Rev.3) rather than on the value of all imports at that time.²⁴ The base is defined as the average monthly CIF unit value MFN-sourced price over the past three years for which data are available (the base includes developed and developing country export prices). If developing country exports have lower unit prices, then the SSM is more likely to be triggered against exports from developing countries when the remedy is determined on a shipment by shipment basis.

To analyze the implications of a price trigger based on each shipment, we separate out unit import prices for developing *versus* developed countries. Unit import prices for India, China, Korea and Indonesia are higher from developed country exports in 64, 71, 81 and 68 percent of the tariff lines, respectively. The value of trade associated with these tariff lines are \$937 mil. for India, \$11.4 bil. for China, \$6.1 bil. for Korea and \$3.3 bil. for Indonesia. Because developing countries have lower export prices, the price-based remedy may not only be invoked for relatively more tariff lines against developing country exports but the level of the remedy may also be higher. This will be one of several issues we analyze in the empirical analysis to follow.

5.1 *The price-based trigger*

Table 5 summarizes the average price-based remedies for each of the four importing countries under consideration. The remedies are differentiated between three different groups of exporting countries: developed, least developed and other developing. We provide the overall

²⁴ It should be noted that the SSG price trigger is also based on each shipment. An option might be to base it on the average prices of all imports.

average remedy for the July Modalities Rev.3 proposal (with and without exceptions for the cap on a shipment by shipment basis) and the Original G-33 proposal. We ignore the May Modalities and SSG in Table 5 because we are illustrating the importance of exceptions to the cap and if the pre-Doha tariff is exceeded or not. The May Modalities does not allow for the pre-Doha tariff to be exceeded while the SSG says nothing about caps. The Lamy Package and G-33 July Negotiation are irrelevant because they refer to a volume-based trigger (see analysis below in section on volume-based remedies).

Table 5 shows that the simple average remedy facing developing country exporters is higher than that of developed country exporters (significantly higher for exports to India, China and Indonesia, and much higher for Korea).

The picture changes somewhat if analyzing trade weighted average remedies. Remedies are slightly higher for developing country exporters for India, lower for China, significantly higher for Korea and the results are mixed for Indonesia.

The impact of having exceptions on the tariff cap can be assessed by comparing the first two columns of Table 5. Overall, both the simple average remedy and trade weighted remedy is significantly higher with exceptions compared to no exceptions on a tariff cap.

The final column of Table 5 shows how much higher remedies would be under the original G-33 proposal.

While the analysis in Table 5 above analyzed the remedy levels, Table 6 summarizes the number of tariff lines triggered and the value of trade affected. The first column of Table 6 gives the percent of total bilateral trade tariff lines that are triggered under the price-based safeguard. With one exception (least developed country exports to Indonesia), a higher share of tariff lines from developing country exports are triggered compared to developed country exports. The

remaining columns of Table 6 shows the value of trade triggered against developed *versus* developing country exporters under the price-based trigger. In all importing countries, more developing country exports face remedies than developed country exports (except for China where it is almost a tie).

Indonesia has the highest share of developing country exports triggered (81.7 percent). The fourth column in Table 6 shows that overall, 30.8 percent of all imports triggered are from developed country exports. This means 69.2 percent of that trade triggered is from developing country exports. The last column shows that a much higher share of total exports from developing countries are triggered (25 and 10.3 percent for least developed and developing countries, respectively) while only 5.6 percent of total developed country agricultural exports faced a remedy.

Table 7 summarizes the average price-based remedies in four different dimensions. First, we compare the remedies between those triggered on prices based on “shipment by shipment” *versus* on “total imports”. Second, we present the average remedy “overall” (the average remedy for all tariff lines including those not triggered which receive a value of zero) *versus* the average remedy “levied” (the average remedy for only those tariff lines with a positive remedy). Third, the remedies under the July Modalities compare exceptions on the tariff cap *versus* no exceptions on the cap. Finally, we compare the July Modalities with the Original G-33 proposal and the SSG.

Looking at the trade weighted averages, the shipment by shipment method generates a higher overall remedy across the board (and the relative gap between the two methods rises when tariff cap exceptions are allowed, and rises even more with the original G-33 proposal). In most cases, the average remedy “levied” is higher on a shipment by shipment basis *versus* on a total

trade basis.

5.2 *The volume-based trigger*

Table 8 summarizes the volume-based remedies under the July Modalities Rev.3 for four different cases regarding exceptions on the cap: July Modalities with no exceptions, the July Modalities (that call for exceptions), the Lamy Package and the G-33 July Negotiation. The final column gives the results for the SSG.

Looking at the trade weighted average remedies, the remedy for India is generally very high and does not increase very much as you go from left to right (however, the SSG remedy for India drops in half). The opposite is the case for China – the exceptions result in progressively higher remedies as the caps become less restrictive (although the SSG remedy, like that for India, falls well below the July Modalities remedy with no exceptions on the cap). The situation for Korea is more similar to China (but less pronounced) while that of Indonesia is similar to India (except for the remedies in the first and last columns which are much lower than the remedies with exceptions on the tariff cap). The reason for why caps make little difference for India is India's high level of bound tariffs and the associated high remedy (see the fourth line of Table 1b on the general formula for the remedies). Note how the SSG remedies are relatively much lower. This is important because one reason the G-33 insists on the SSM is to have access to a safeguard like developed countries have in the Uruguay Round with the SSG.

Table 9 shows the value of trade triggered for the volume-based SSM for exceptions on the tariff cap under the Lamy Package (with an import surge of 40 percent or more) and the G-33 July Negotiation (with an import surge of 10 percent or more). The final column gives the value of trade triggered under the price-based SSM under the July Modalities but based on total trade (not shipment by shipment).

For the volume-based remedy, for example, 12.2 and 9.1 percent of the total value of imports by India is triggered against developed country exporters under the Lamy Package and G-33 July Negotiation, respectively. This means around 90 percent is triggered against developing country exporters. The situation is similar for China but the opposite occurs for Korea and Indonesia. Overall, 62.2 percent of total trade triggered is against developing countries for the volume-based safeguard under the July Modalities and 54.3 percent under the Original G-33 proposal.

The fourth row for each country provides the total value of trade, with the number in bold representing the percent of total trade triggered. Approximately 43, 58 and 48 percent of total agricultural imports by India, China and Indonesia, respectively, are triggered with the volume-based SSM under the Lamy Package while 11 percent of Korea's value of imports is triggered. The numbers for the G-33 July Negotiation are significantly higher. Overall, 42 percent of total trade is triggered with the volume-based trigger under the Lamy Package, with a substantially higher share (66 percent) triggered under the G-33 July Negotiation.

The last column in Table 9 presents the results for the price-based safeguard under the July Modalities. Only 7.2 percent of India's total value of imports that was triggered came against developed country exporters while 92.8 percent of total trade triggered was against developing country exporters. A similar pattern occurred for Indonesia while the opposite occurs for imports by China and Korea. However, overall, 62.7 percent of the total value of trade triggered under the price-based SSM is from developing country exporters.

5.3 The impact of calculating the price-based SSM on a shipment by shipment basis

To assess the implications of having a shipment by shipment based price trigger, we compare the share of total trade value triggered on a shipment by shipment basis to that based on total trade. The results are summarized in Table 10. Overall, 8.6 percent of the total value of imports by the four countries under consideration is triggered on a shipment by shipment basis, compared to 5.9 percent if based on total trade. This represents a 46 percent difference.

In Table 11, we provide more detailed data. First, we give the total trade triggered in each situation: prices based on total imports and on a shipment by shipment basis. Second, we show that 69 percent of the trade that was triggered on a shipment by shipment basis was on exports from developing countries (63 percent if not on a shipment by shipment basis). The final column shows that the value of trade is triggered 2.25 times more against developing countries on a shipment by shipment basis than against developed country exports (but still 1.68 times as much against developing country imports if the price trigger was not on a shipment by shipment basis).

To conclude, not only do the share of tariff lines triggered and the magnitude of the remedy show the vulnerability of developing country exporters but also the value of trade triggered is substantially higher for developing countries. Because developing country exporters have lower prices, price-based remedies are more likely to be triggered against developing countries than developed countries and with higher levels of remedies.

6. Conclusions

It is widely held that the WTO trade negotiations in the Doha Round broke down in July 2008 because of disagreements over the ‘special safeguard mechanism’ (SSM) for agriculture. Although the July 2008 text represents a major advance in securing a consensus agreement, especially for several technical details like applicability, base levels, duration and coverage, our

empirical analysis finds there are many significant differences in details involving alternative triggers and remedies, and the degree to which pre-Doha bound tariffs can be exceeded (and under what conditions and for how many products).

For example, India's price-based remedy for the Original G-33 proposal is about 50 percent higher than that of the July Modalities (and 3 times the July Modalities for China and Korea and two times the July Modalities for Indonesia). Volume-based remedies are particularly sensitive to the level of tariff binding overhang and initial levels of tariffs. Because China (unlike India) has no tariff binding overhang and low initial tariffs, remedies are typically far lower than those for India. Volume-based remedies can also be notably different for the July Modalities, depending on whether exceptions to the cap are allowed or not. For example, the remedy for China is 2 percent without exceptions on the cap versus 14 percent with exceptions (9.3 percent versus 14.2 percent for Korea). However, the differences are small for India and Indonesia.

As for the value of trade affected, 69 percent of the overall trade triggered under the price-based safeguard is from developing country exporters. Developing country exporters have about twice the share of their total value of trade triggered compared to their developed country counterparts. For the volume-based safeguard, 62.2 percent of the total value of trade triggered under the July Modalities is from developing country exporters.

As for the total value of trade triggered (from both developed and developing country exporters), the volume-based safeguard under the July Modalities triggers about 42 percent of the total value of imports by the four major developing country importers under consideration. Under the G-33 July Negotiation, 60 percent of the total value of trade is triggered with the volume-based safeguard. However, 8.6 percent of the total value of imports is triggered for the price-based safeguard under the July Modalities.

Interestingly, although developing countries have used the special safeguard for agriculture (the SSG) as a primary political motive for the SSM, we show empirically that most remedies under the SSG are significantly lower than all other proposals. For example, the average trade-weighted volume-based remedies for the July Modalities (without exceptions to the tariff cap) for India is 35.5 percent (*versus* 20.7 percent for the SSG), 2.0 for China (*versus* 1.3 for the SSG), 9.3 for Korea (*versus* 5.1 for the SSG), and 20.5 for Indonesia (*versus* 5.3 for the SSG).²⁵ The discrepancy for the price-based remedies is similar but less pronounced, where the remedy under the July Modalities for India is 39.3 percent (*versus* 14.6 percent for the SSG), 7.9 for China (*versus* 14.6 for the SSG), 14.4 for Korea (*versus* 14.5 for the SSG), and 25.7 for Indonesia (*versus* 7.1 for the SSG).

Finally, we show that using the import price on shipment by shipment (rather than on total imports) to determine the price-based safeguard makes developing country exporters more vulnerable to the SSM because their unit export prices are lower than developed country exports. Not only is the total value of trade triggered 43 percent higher on a shipment by shipment basis, the ratio of developing country exports triggered to developed country exports triggered rises from 1.68 to 2.25 when adopting the shipment by shipment method.

It is difficult to compare our results to other studies because of the different approaches taken. Grant and Meilke (2009)²⁶ analyze one commodity (wheat) for many importers (large and otherwise) while we analyze all commodities for four major developing country importers. Furthermore, Grant and Meilke (2009) do not analyze exceptions to the cap which is central to

²⁵ These discrepancies in remedies relative to those under the SSG get progressively larger if compared to proposals with exceptions to the tariff cap (the July Modalities, Lamy Package and G-33 July Negotiation) and even larger compared to the Original G-33 proposal.

²⁶ Jason H. Grant and Karl D. Meilke. (2009). "Triggers, Remedies and Tariff Cuts: Assessing the Impact of a Special Safeguard Mechanism for Developing Countries." *The Estey Centre Journal of International Law and Trade Policy* 10(1):223-226.

the three key proposals we analyze for the volume-based trigger (July Modalities, Lamy Package and G-33 July Negotiation), nor do they evaluate the effect on developing *versus* developed country exporters or the shipment by shipment feature of the price-based safeguard. However, some of our findings are consistent with theirs such as the value of trade triggered under the volume-based safeguard is less sensitive to the level of threshold compared to the price-based safeguard, and that the volume-based remedy is significantly higher than the price-based remedy. Our analysis is also consistent with Montemayor (2008)²⁷ who finds that imposing caps has a very significant effect.

²⁷ Raul Q. Montemayor (2008). "How Will the May 2008 'Modalities' Text Affect Access to the Special Safeguard Mechanism, and the Effectiveness of Additional Safeguard Duties?". International Center for Trade and Sustainable Development, Issue Paper No.15, June 2008.

Table 1a: Summary of Price-based Triggers

	July Modalities Rev.3	May Modalities Rev.2	Original G-33	SSG
[1] Base price	-----Average monthly price for preceding 3 years-----			Average price 1986-88
[2] Initial Threshold	Import price reduction of more than 15%	Import price reduction of more than 30%	Import price reduction of more than 10%	Import price reduction of more than 10%
[3] Trigger limit(s)	no further triggers (only initial threshold)	no further triggers (only initial threshold)	no further triggers (only initial threshold)	10-40% import price reduction 40-60% import price reduction 60-75% import price reduction >75% import price reduction
[4] Remedy	$0.85 \cdot (\text{Base Price} - \text{Import Price})$	$0.5 \cdot (\text{Base Price} - \text{Import Price})$	$(\text{Base Price} - \text{Import Price})$	$.27 \cdot \text{Base Price} - .3 \cdot \text{Import Price}$ $.39 \cdot \text{Base Price} - .5 \cdot \text{Import Price}$ $.47 \cdot \text{Base Price} - .7 \cdot \text{Import Price}$ $.52 \cdot \text{Base Price} - .9 \cdot \text{Import Price}$
[5] Cap on remedy plus t_{final}	Pre-Doha bound tariff t_{initial}	Pre-Doha bound tariff t_{initial}	None	None
[6] Will the pre-Doha tariff be exceeded?	No (except for 2 to 6 products that can exceed t_{initial} but not more than the maximum of 15 percentage points or 15% of t_{final})	No	Possible	Possible
[7] Duration	----- None -----			Rest of calendar year
[8] Coverage	All tariff lines	3-8 products 6-digit level of HS (maximum 4-8 tariff lines < 6-digit)	All tariff lines	Tariffied products

Table 1b: Summary of Volume-based Triggers

	July Modalities Rev.3	G-33 July Negotiation	May Modalities Rev.2	Original G-33	SSG
[1] Base volume	-----3-year moving average imports-----				
[2] Initial Threshold	110% of the base volume	110% of the base volume	130% of the base volume	105% of the base volume	105% of the base volume (if imports > 30% of cons.)
[3] Trigger limit(s)	110-115% 115-135% >135%	110-115% 115-135% >135%	130-135% 135-155% >155%	105-110% 110-130% >130%	110% of the base volume (if imports 10-30% of cons.) 125% of the base volume (if imports < 10% of cons.)
[4] Remedy	MAX[.25;.25·t _{final}] MAX[.40;.40·t _{final}] MAX[.50;.50·t _{final}]	MAX[.25;.25·t _{final}] MAX[.40;.40·t _{final}] MAX[.50;.50·t _{final}]	MIN[.20; .2·t _{final} ; t _{final} - t _{applied}] MIN[.25; .25·t _{final} ; (t _{initial} - t _{final})/2 - t _{applied}] MIN[.30; .3·t _{final} ; t _{initial} - t _{applied}]	MAX[.40;.5·t _{final}] MAX[.50;.75·t _{final}] MAX[.60; t _{final}]	.33·t _{final}
[5] Cap on remedy plus t_{final}	-----Cap is built in the remedy formula-----				
[6] Will the pre-Doha tariff be exceeded?	No (except for 2 to 6 products that can exceed t _{initial} but not more than the maximum of 15 percentage points or 15% of t _{final})*	No (except for 7% of tariff lines if developing country that can exceed t _{initial} but not more than the maximum of 30 percentage points or 30% of t _{final} and only if import surge by 10% or more)	No	Not in 105-110% interval nor in the 110-130% interval if tariff cut > 38%; otherwise, possible	No
[7] Duration	-----12 month period-----				Rest of calendar year
[8] Coverage	-----All tariff lines-----		Calendar year 3-8 products @ 6-digit level of HS (maximum 4-8 tariff lines < 6 digit)	All tariff lines	Tariffed products

* The Lamy 'package' offered an exception on the tariff cap: max. 2.5% of tariff lines can exceed t_{initial} but by no more than the maximum of 15 percentage points or 15% of t_{final} and only if imports surge by 40% or more.

Table 2a: Summary of Price Trigger Formulas (per unit or percent)

Original G-33

$$R_{G-33}(P, B) = \begin{cases} B - P & \text{if } 1 - P/B > 0.1 \\ 0 & \text{otherwise} \end{cases}$$

(per unit)

where B is base price and P is import price

July Modalities Rev.3

$$R_{\text{July}}(P, B) = \begin{cases} 0.85(B - P) & \text{if } 1 - P/B > 0.15 \\ 0 & \text{otherwise} \end{cases}$$

(per unit)

May Modalities Rev.2

$$R_{\text{May}}(P, B) = \begin{cases} (B - P)/2 & \text{if } 1 - P/B > 0.30 \\ 0 & \text{otherwise} \end{cases}$$

(per unit)

SSG

$$R_{\text{SSG}}(P, B) = \begin{cases} 0 & \text{if } 1 - P/B < 0.1 \\ 0.27B - 0.3P & \text{if } 0.1 < 1 - P/B \leq 0.4 \\ 0.39B - 0.5P & \text{if } 0.41 < 1 - P/B \leq 0.6 \\ 0.47B - 0.7P & \text{if } 0.61 < 1 - P/B \leq 0.75 \\ 0.52B - 0.9P & \text{if } 1 - P/B > 0.75 \end{cases}$$

(per unit)

Table 2b: Summary of Volume Trigger Formulas (percent)

Original G-33

$$R_{G-33}(V, M) = \begin{cases} 0 & \text{if } V/M - 1 < 0.05 \\ \text{Max } [40, 0.5 \cdot t_f] & \text{if } 0.05 < V/M - 1 \leq 0.1 \\ \text{Max } [50, 0.7 \cdot t_f] & \text{if } 0.1 < V/M - 1 \leq 0.3 \\ \text{Max } [60, \cdot t_f] & \text{if } 0.3 < V/M - 1 \end{cases}$$

where V is actual import volume, M is import base volume and t_f is Doha bound tariff.

July Modalities Rev.3 and G-33 July Negotiation

$$R_{\text{July}}(V, M) = \begin{cases} 0 & \text{if } V/M - 1 < 0.1 \\ \text{Max } [25, 0.25 \cdot t_f] & \text{if } 0.1 < V/M - 1 \leq 0.15 \\ \text{Max } [40, 0.40 \cdot t_f] & \text{if } 0.15 < V/M - 1 \leq 0.35 \\ \text{Max } [50, 0.50 \cdot t_f] & \text{if } 0.35 < V/M - 1 \end{cases}$$

where t_i and t_f are the final URAA and Doha bound tariffs, respectively.

May Modalities Rev.2

$$R_{\text{May}}(V, M) = \begin{cases} 0 & \text{if } V/M - 1 < 0.3 \\ \text{Min } [20, 0.2 \cdot t_f, t_f - t_a] & \text{if } 0.3 < V/M - 1 \leq 0.35 \\ \text{Min } [25, 0.25 \cdot t_f, (t_i - t_f)/2 - t_a] & \text{if } 0.35 < V/M - 1 \leq 0.55 \\ \text{Min } [30, 0.30 \cdot t_f, t_i - t_a] & \text{if } 0.55 < V/M - 1 \end{cases}$$

where t_i and t_f are the final URAA and Doha bound tariffs, respectively.

SSG

$$R_{\text{SSG}}(V, M) = \begin{cases} 0.33 \cdot t_f & \text{if } V/M - 1 > 0.1 \\ 0 & \text{otherwise} \end{cases}$$

Table 3: The number of tariff lines subject to an SSM under alternative thresholds

	Tariff lines		% of tariff lines subject to SSM price trigger:				% of tariff lines subject to SSM volume trigger:			
	Total	% with trade and tariffs > 0	5	10	15	30	10	20	25	30
India 2001	770	68	28	25	22	14	35	32	31	31
India 2003	770	63	22	19	18	11	40	38	37	37
China 2000	1,046	72	29	25	21	13	43	40	39	36
China 2001	1,046	74	29	24	20	13	41	37	35	34
China 2002	1,046	67	24	20	16	9	35	31	29	28
China 2003	1,046	64	18	14	11	7	35	31	29	27
Korea 2000	1,515	69	40	33	26	12	43	39	36	34
Korea 2001	1,515	69	36	30	23	11	44	40	38	36
Korea 2002	1,515	63	30	23	19	8	39	34	31	30
Indonesia 2001	1,076	67	29	26	22	13	35	31	30	29
<i>Average</i>			29	24	20	11	39	35	34	32

Source: calculated.

Table 4: The percent of trade subject to an SSM under alternative thresholds (percent)

	Trade (bil. US\$)	% of trade value subject to SSM price trigger:				% of trade value subject to SSM volume trigger:			
		total	5	10	15	30	10	20	25
India 2001	6.6	46	35	28	18	70	70	69	69
India 2003	4.9	23	21	13	2	68	65	64	54
China 2000	9.8	24	15	8	2	84	74	71	62
China 2001	11.4	41	12	9	2	61	52	52	47
China 2002	10.7	21	15	10	1	34	31	31	28
China 2003	18.2	5	2	1	0	82	78	75	70
Korea 2000	8.3	65	54	33	6	72	53	48	45
Korea 2001	8.3	36	25	16	4	60	47	42	40
Korea 2002	8.2	33	27	16	2	61	46	43	39
Indonesia 2001	4.1	19	12	9	2	66	60	55	55
<i>Average</i>		31	22	14	4	66	58	55	51

Source: calculated.

Table 5. Price Trigger Remedies (Shipment by Shipment Basis) (percent)

Simple Average	July Modalities Rev.3		Original G-33
	No exceptions on cap*	Exceptions on cap**	
<i>India</i>			
developed	9.0	10.0	15.0
least developed	17.3	19.4	30.8
other developing	13.7	15.3	23.9
<i>China</i>			
developed	1.0	3.6	14.3
least developed	1.1	4.4	19.0
other developing	1.5	5.5	21.8
<i>Korea</i>			
developed	1.7	3.5	10.2
least developed	5.4	9.8	26.2
other developing	5.2	9.9	29.7
<i>Indonesia</i>			
developed	8.5	10.5	20.1
least developed	8.6	10.7	19.9
other developing	13.4	16.6	31.9
Trade Weighted Average			
<i>India</i>			
developed	8.2	9.1	13.8
least developed	8.8	9.5	14.2
other developing	9.3	10.1	15.9
<i>China</i>			
developed	1.4	3.6	11.5
least developed	0.05	0.2	0.6
other developing	1.26	3.9	9.6
<i>Korea</i>			
developed	1.9	3.5	10.2
least developed	2.9	4.8	14.5
other developing	3.5	6.4	17.2
<i>Indonesia</i>			
developed	4.3	4.9	7.5
least developed	1.5	1.5	2.1
other developing	6.9	7.7	11.2

* Pre-Doha tariff is not exceeded.

** Based on July Modalities Rev.3 (Lamy Package does not mention exceptions on the cap for price-based trigger).

Source: calculated

**Table 6. Value of Trade under the Price-based Safeguard for the July Modality Rev.3
(Shipment by Shipment Basis)**

	<i>% of bilateral trade tariff lines triggered*</i>	<i>Value of trade ('000US\$)</i>		<i>Percent triggered</i>	
		Triggered	Not triggered	of total trade triggered	of total trade**
India					
developed	20	62,499	428,959	9.8	12.7
least developed	39	258,875	448,734	40.6	36.6
other developing	31	315,622	2,972,014	49.5	9.6
<i>subtotal</i>	<i>26</i>	<i>639,996</i>	<i>3,849,707</i>	<i>100</i>	<i>14.2</i>
China					
developed	22	398,035	7,119,073	52.9	5.3
least developed	33	8,997	258,502	1.2	3.4
other developing	31	345,747	7,384,710	45.9	4.5
<i>subtotal</i>	<i>25</i>	<i>752,769</i>	<i>14,762,285</i>	<i>100</i>	<i>4.9</i>
Korea					
developed	15	287,046	4,259,383	35.6	6.3
least developed	42	4,027	46,555	0.5	8.0
other developing	41	514,692	3,067,017	63.9	14.4
<i>subtotal</i>	<i>24</i>	<i>805,765</i>	<i>7,373,955</i>	<i>100</i>	<i>9.9</i>
Indonesia					
developed	28	104,658	2,682,075	18.3	3.8
least developed	27	14,112	106,049	2.5	0.34
other developing	43	453,126	780,470	79.2	36.7
<i>subtotal</i>	<i>33</i>	<i>571,896</i>	<i>3,568,593</i>	<i>100</i>	<i>13.8</i>
Total					
developed		852,237	14,489,490	30.8	5.6
least developed		286,012	859,840	10.3	25.0
other developing		1,629,177	14,204,210	58.9	10.3
<i>subtotal</i>		<i>2,767,426</i>	<i>29,553,540</i>	<i>100</i>	<i>8.6</i>

* Total bilateral tariff lines analyzed: India 5,550; China 5,469; Korea 6,206; and Indonesia 5,026.

** Percent of total trade triggered and not-triggered (based on a 15 percent initial threshold).

Source: calculated

Table 7. Price-based Remedies on a Shipment by Shipment versus Total Trade Basis (percent)

	<i>July Modalities Rev.3</i>							
	No exceptions on cap*		Exceptions on cap**		Original G-33		SSG	
	Overall	Levied	Overall	Levied	Overall	Levied	Overall	Levied
Simple Average								
India								
Shipment by shipment	11.4	47.3	12.8	52.8	19.6	72.4	5.4	19.9
Total imports	11.9	43.8	13.1	48.2	18.2	60.0	4.6	5.3
China								
Shipment by shipment	1.17	5.6	4.2	20.3	16.8	72.0	4.6	19.7
Total imports	0.75	5.2	2.9	19.8	10.4	53.6	2.6	13.5
Korea								
Shipment by shipment	2.9	13.3	5.7	26.3	16.9	68.2	4.6	18.4
Total imports	3.0	17.8	6.1	28.3	14.1	51.4	3.5	12.7
Indonesia								
Shipment by shipment	10.0	34.7	12.5	43.2	23.8	74.8	6.6	20.7
Total imports	9.9	31.9	11.8	38.2	20.7	57.0	5.2	14.4
Trade Weighted Average								
India								
Shipment by shipment	8.8	39.3	9.6	42.7	13.8	57.9	3.7	14.6
Total imports	3.7	29.3	3.9	31.3	6.2	30.2	1.2	5.8
China								
Shipment by shipment	1.21	7.9	3.4	22.0	9.7	57.4	2.5	14.4
Total imports	0.04	2.8	0.2	17.7	0.9	54.7	0.2	7.9
Korea								
Shipment by shipment	2.5	14.4	4.6	26.5	12.9	56.5	3.3	14.5
Total imports	1.3	17.0	1.7	22.1	2.9	26.3	0.5	4.3
Indonesia								
Shipment by shipment	4.8	25.7	5.4	28.7	7.9	35.2	1.6	7.1
Total imports	2.4	27.3	2.6	29.0	3.7	32.2	0.7	6.1

*Pre-Doha tariff is not exceeded (based on a 15 percent initial threshold).

** Based on July Modalities Rev.3 (Lamy Package does not mention exceptions on the cap for price-based trigger).

Source: calculated

Table 8. Volume-based Remedies (percent)

	July Modalities (no exceptions on cap)*	<i>Exceptions on Cap</i>			SSG
		July Modalities	Lamy Package**	G-33 July Negotiation***	
Simple Average					
India	16.6	17.8	17.9	18.7	8.0
China	2.0	8.0	11.4	14.0	1.3
Korea	8.6	13.9	15.8	18.2	4.5
Indonesia	15.2	15.2	18.8	18.9	4.0
Trade Weighted Average					
India	35.5	37.8	38.6	39.2	20.7
China	2.0	14.0	18.0	25.4	1.3
Korea	9.3	14.2	16.6	17.5	5.1
Indonesia	20.5	20.5	28.3	30.8	5.3

* Pre-Doha tariff is not exceeded.

** Lamy Package requires a 40 percent import volume surge (not 10 percent as in July Modalities Rev.3).

*** The G-33 July Negotiation requires a 10 percent import surge and the cap on the remedy plus t_{final} cannot be exceeded by more than the maximum 30 percentage points or 30 percent of t_{final} .

Source: calculated

Table 9. Value of Trade Triggered with Volume-based versus Price-based SSM for July Modalities Rev.3 and G-33 July Negotiation. ('000 US\$)

	Volume Trigger*				Price Trigger**	
	Lamy Package		G-33 July Negotiation		<i>Not shipment by shipment under July Modalities Rev.3</i>	
India						
Developed	238,847	12.2%	270,214	9.1%	44,315	7.2%
Developing	1,713,609	87.8%	2,686,817	90.9%	568,558	92.8%
<i>Subtotal</i>	<i>1,952,456</i>	100%	<i>2,957,031</i>	100%	<i>612,873</i>	100%
Total VOT	4,513,175	43%	4,513,175	66%	4,486,703	14%
China						
Developed	3,061,167	34.1%	5,159,631	42.2%	166,492	70.1%
Developing	5,919,166	65.9%	7,069,248	57.8%	70,975	29.9%
<i>Subtotal</i>	<i>8,980,333</i>	100%	<i>12,228,879</i>	100%	<i>237,466</i>	100%
Total VOT	15,560,636	58%	15,560,636	79%	15,515,054	1.5%
Korea						
Developed	604,017	64.9%	2,589,449	71.4%	405,384	58.4%
Developing	326,995	35.1%	1,034,750	28.6%	288,724	41.6%
<i>Subtotal</i>	<i>931,012</i>	100%	<i>3,624,200</i>	100%	<i>694,108</i>	100%
Total VOT	8,568,631	11%	8,568,631	42%	8,178,720	8.5%
Indonesia						
Developed	1,315,105	67.4%	1,790,713	67.8%	96,696	26.5%
Developing	637,351	32.6%	848,746	32.2%	267,888	73.5%
<i>Subtotal</i>	<i>1,952,456</i>	100%	<i>2,639,459</i>	100%	<i>364,485</i>	100%
Total VOT	4,045,466	48%	4,045,466	65%	4,140,489	8.8%
Total						
Developed	5,219,136	37.8%	9,810,008	45.7%	712,787	37.3%
Developing	8,597,121	62.2%	11,639,562	54.3%	1,196,145	62.7%
<i>Subtotal</i>	<i>13,816,257</i>	100%	<i>21,449,569</i>	100%	<i>1,908,932</i>	100%
Total VOT	32,687,909	42%	32,687,909	66%	32,320,967	5.9%

* Exceptions on tariff cap.

** Triggered by total trade (not on a shipment by shipment basis) with an initial threshold of 15 percent.

Numbers in bold are the percentage of total trade that is triggered for each proposal.

Source: calculated

Table 10. Percent of Total Value of Trade Triggered with Price-based SSM under July Modalities Rev.3

	Shipment by Shipment?	
	<i>Yes</i>	<i>No</i>
India	14.2	14
China	4.9	1.5
Korea	9.9	8.5
Indonesia	13.8	8.8
Total	8.6	5.9
Difference	46%	

Source: calculated

Table 11. How Developing Country Exporters are affected by the Price-based Safeguard (July Modalities proposal)

<i>Price Based on</i>	Total value of trade triggered (000's US\$)	Percent of trade triggered against least developed and other developing country exporters	Ratio of least developed and other developing to developed country exports triggered
Total Imports	1,908,932	63	1.68
Shipment by shipment	2,767,426	69	2.25

Source: calculated

Figure 1: China Price Trigger Remedy (percent of price)

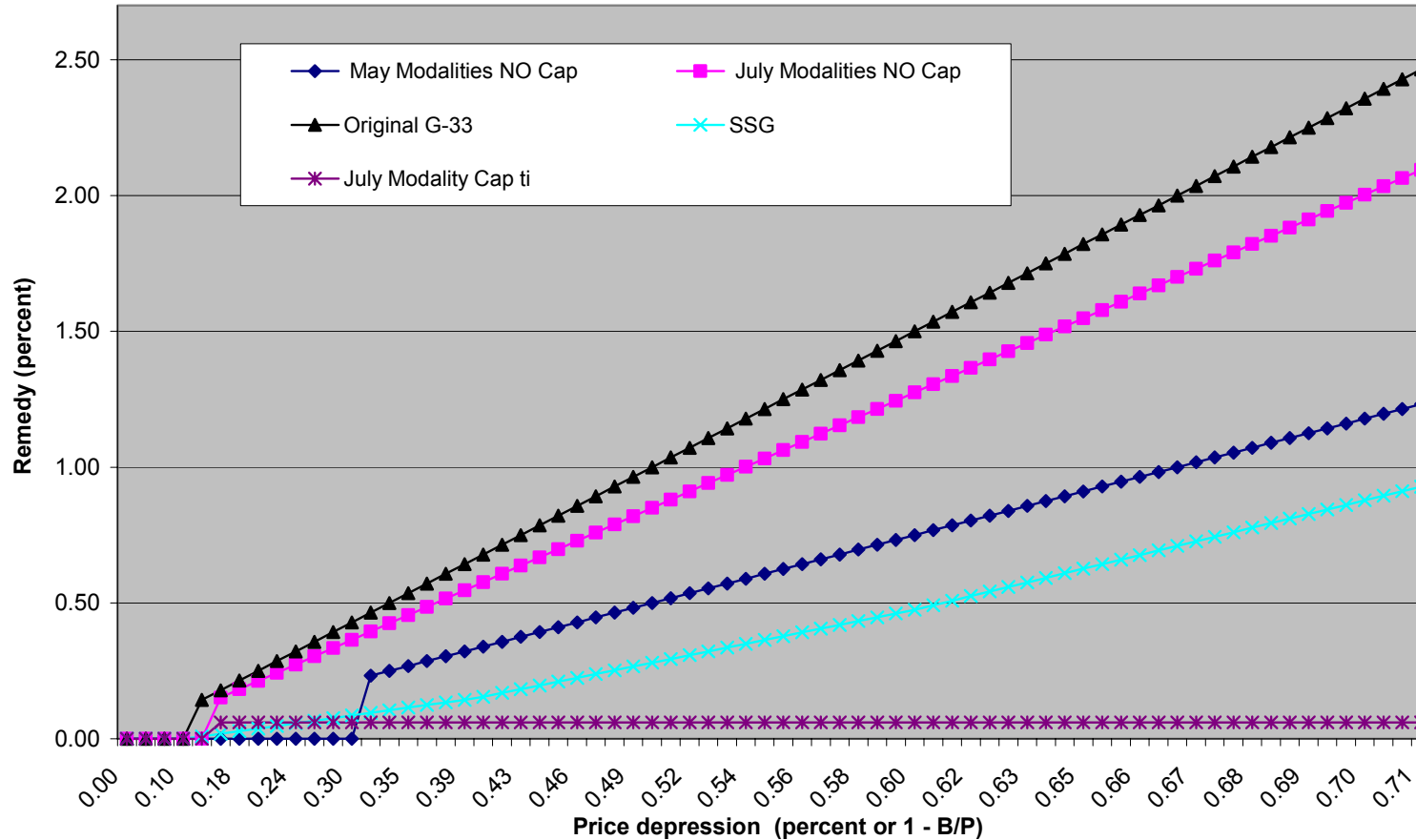


Figure 2: India Price Trigger Remedy (percent of price)

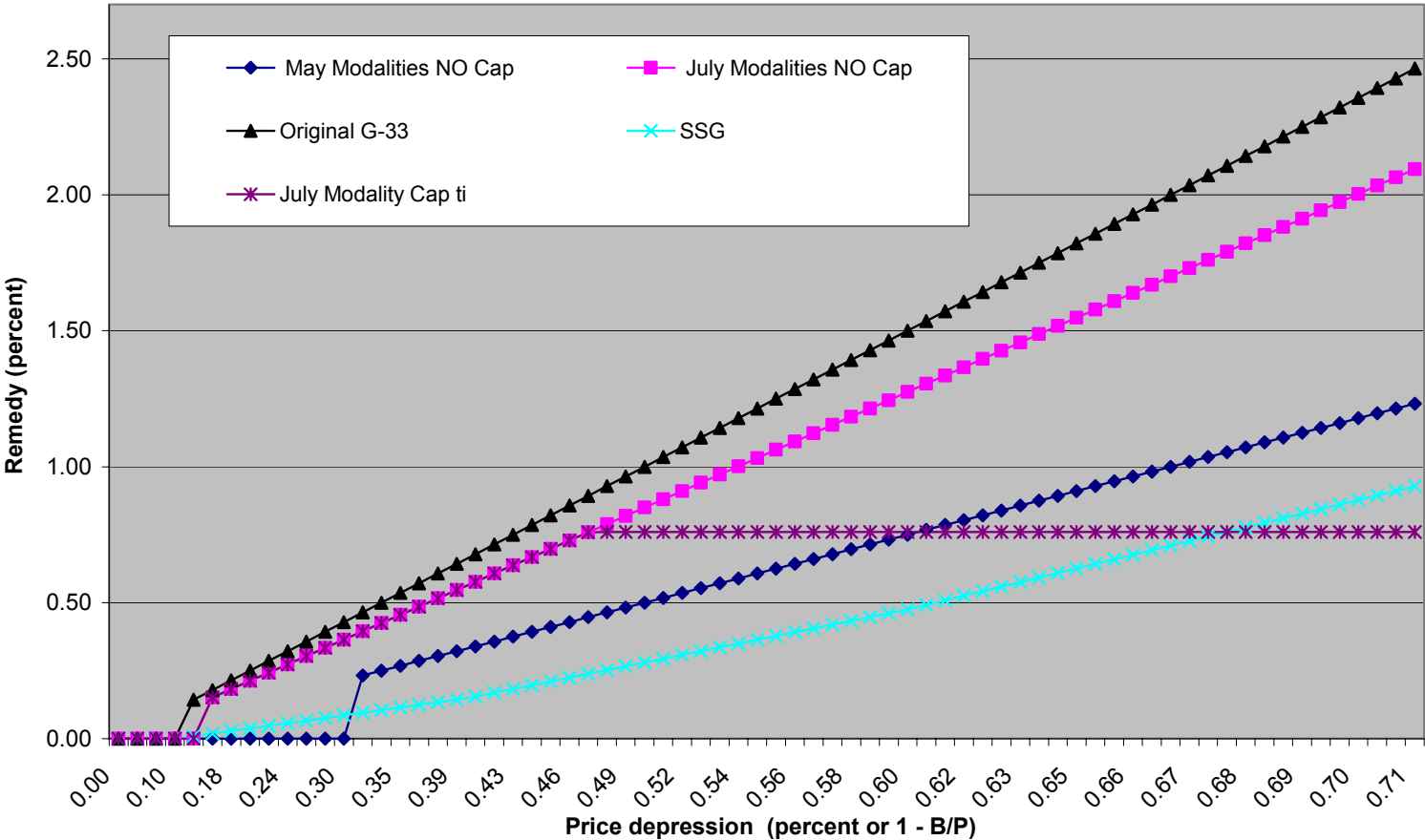


Figure 3: China Volume Trigger Remedy

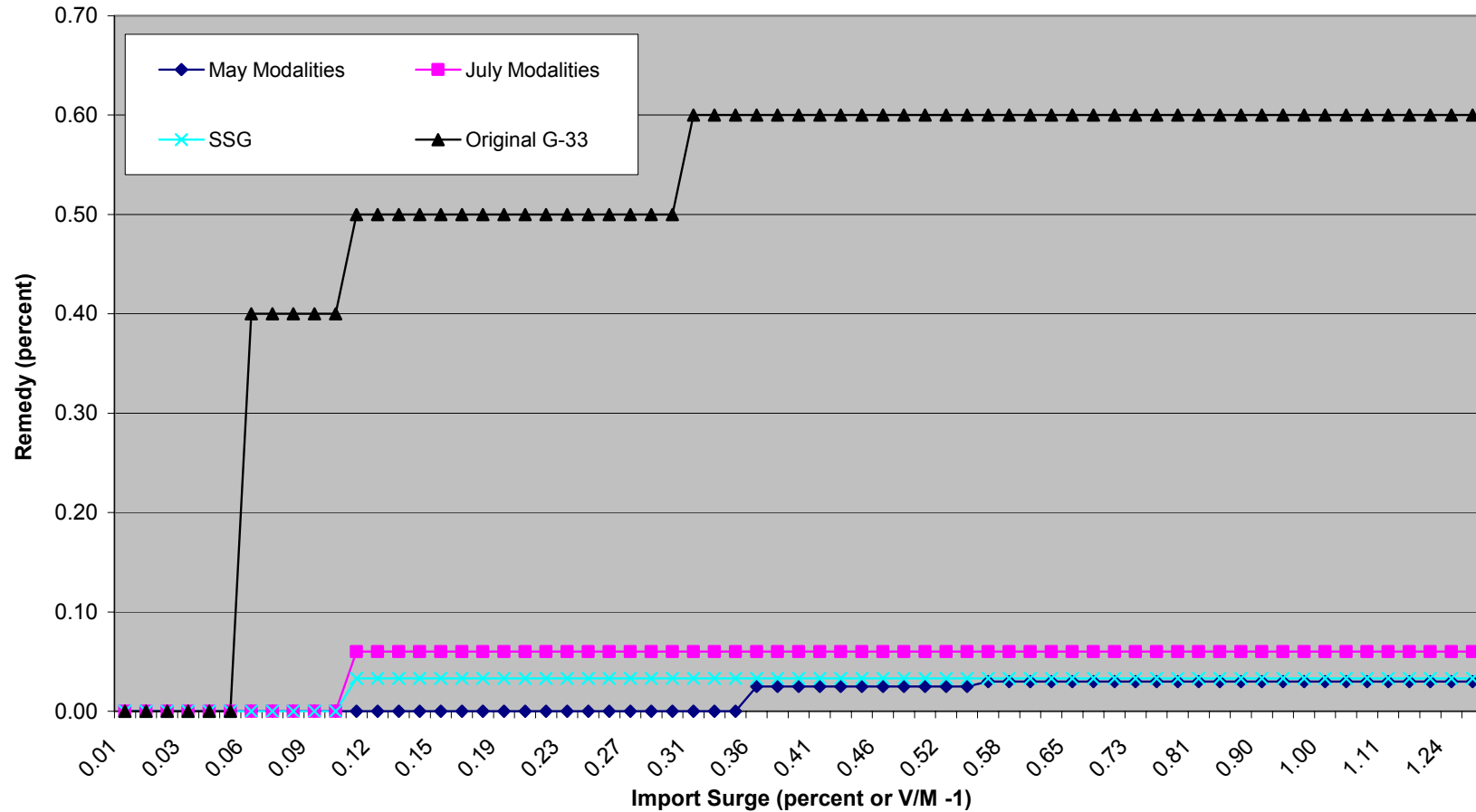


Figure 4: India Volume Trigger Remedy

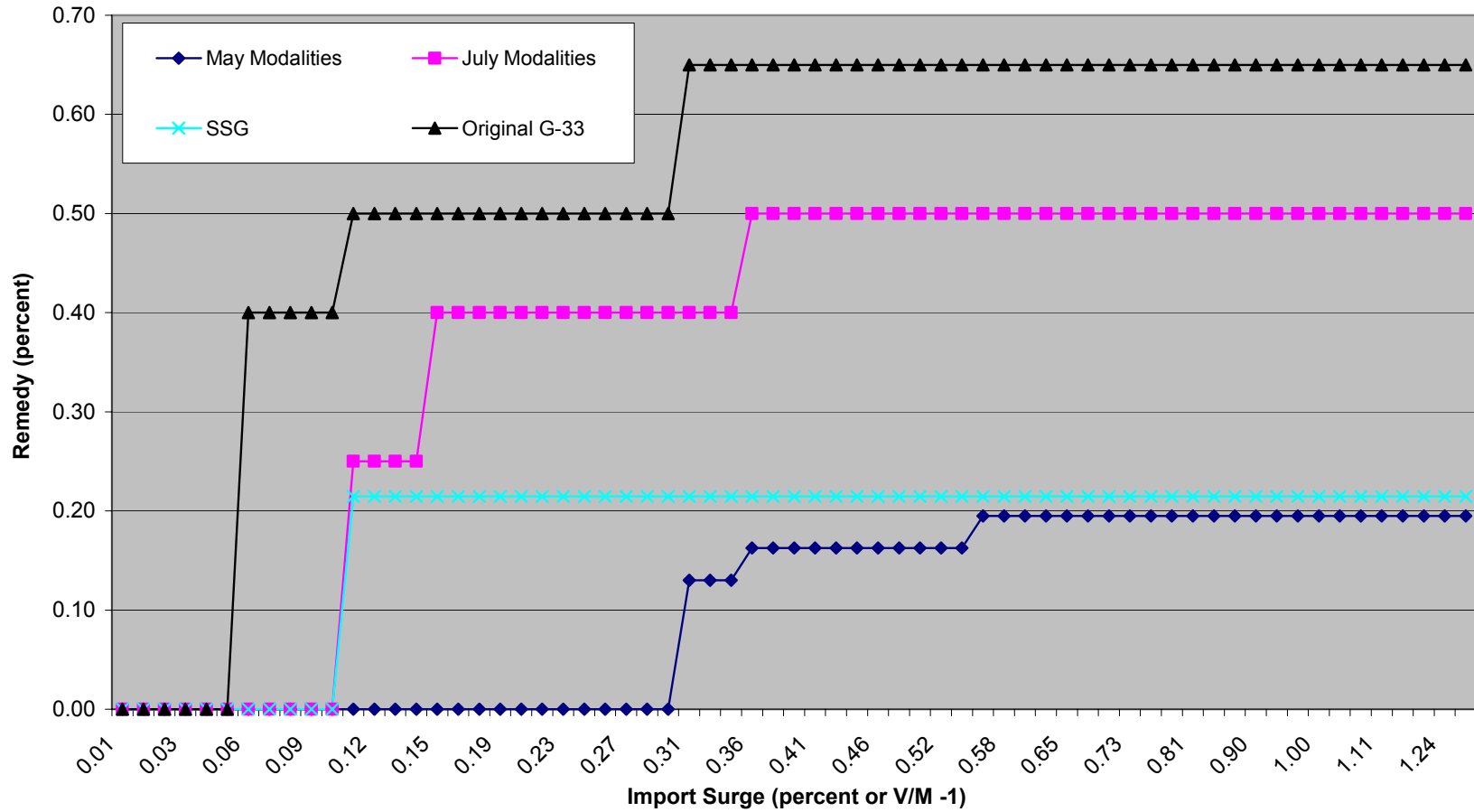


Figure 5: The *Number of Tariff Lines* Affected by Different Thresholds

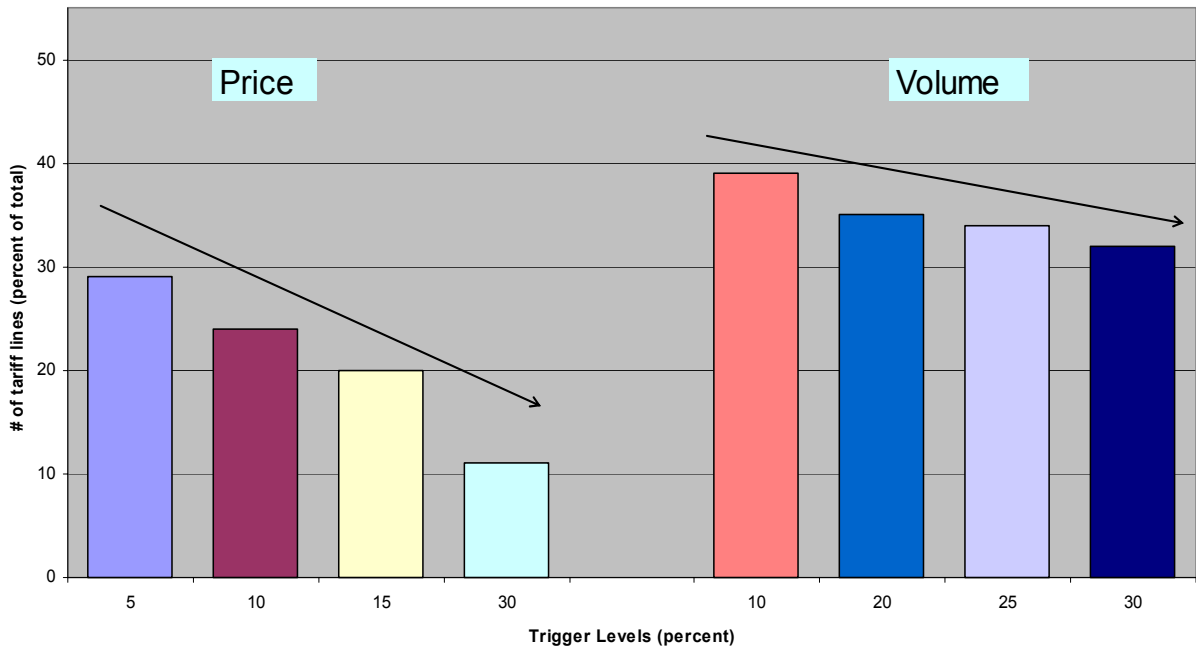
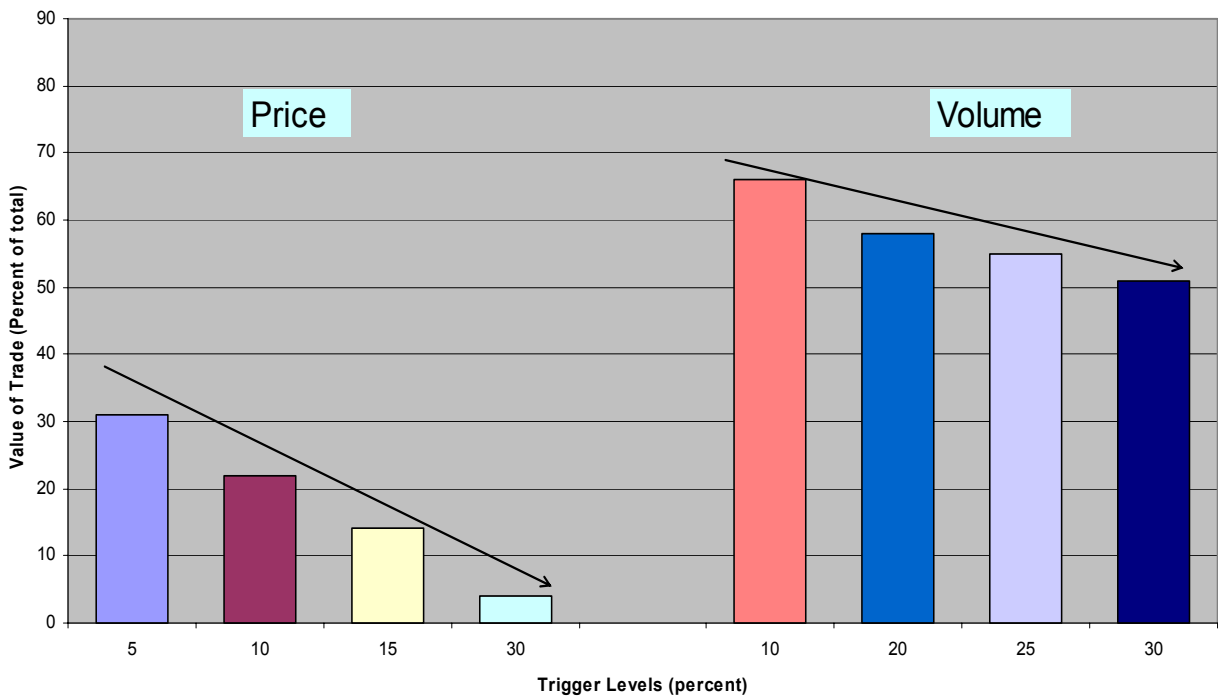


Figure 6: The *Value of Trade* Subject to Different Thresholds



Annex A

Methodology

A model was developed in EXCEL to simulate the impact of the SSM as described in the Revised Modalities TN/AG/W/4/Rev.3 on July 10 (July Modalities Rev.3). This was compared to the Original G-33 proposal, the May Modalities Rev.2, the G-33 July Negotiation, and the SSG, using historical data on import volumes and prices for selected products for India, Korea, China and Indonesia.

The analysis was limited to data from 1998 to 2003. In all cases, the data for the actual per unit import price and import volume is from the WTO's Integrated Database (IDB)²⁸ and is for the year 2003 except for Indonesia which uses data for the year 2001.

In analyzing the price trigger, we covered 448 agricultural tariff lines in India out of 770 total lines at the 6 digit level Harmonized System (HS) nomenclature. For China, we covered 701 tariff lines out of 1,046 at the 8 digit HS, 1,025 out of 1,515 tariff lines for Korea at the 9 digit HS digit and 709 out of 1,076 tariff lines for Indonesia at the 9 digit HS. For those tariff lines with positive trade, some were excluded in three situations: data unavailability; changes in tariff codes; and tariff lines are excluded when the import price is lower than the base price by more than 70 percent.

For the volume trigger, 325 agricultural tariff lines were covered for India, 590 for China, 823 for Korea and 709 for Indonesia. Tariff lines were excluded for the same reason as above for the price trigger analysis (tariff lines are excluded when the volume of imports is higher than the base volume by more than 200 percent).

In order to compare the analyses on total imports to the analyses on shipment by shipment basis, we simulated our model twice. In the first simulation, we used total imports to determine a common per unit import price while in the second simulation, we used bilateral trade flows to obtain an estimate of what happens if the remedy is based on a shipment by shipment basis.

²⁸ IDB- Integrated Database. Available at <https://sft.wto.org/>