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Legislation

Contents

I Acts whose publication is obligatory

- ★ **Council Regulation (EC) No 1480/2003 of 11 August 2003 imposing a definitive countervailing duty and collecting definitively the provisional duty imposed on imports of certain electronic microcircuits known as DRAMs (dynamic random access memories) originating in the Republic of Korea** 1
- Commission Regulation (EC) No 1481/2003 of 21 August 2003 establishing the standard import values for determining the entry price of certain fruit and vegetables 39
- Commission Regulation (EC) No 1482/2003 of 21 August 2003 fixing the A1 and B export refunds for fruit and vegetables (tomatoes, oranges, lemons, table grapes and apples) 41
- Commission Regulation (EC) No 1483/2003 of 21 August 2003 fixing the conversion rate applicable to certain direct aid with an operative event on 1 July 2003 44
- ★ **Commission Regulation (EC) No 1484/2003 of 21 August 2003 amending Annexes IIIB and VI to Regulation (EC) No 517/94 as regards quotas for Serbia and Montenegro** 46

II Acts whose publication is not obligatory

Commission

2003/613/EC:

- ★ **Commission Recommendation of 6 August 2003 concerning the guidelines on the revised interim computation methods for industrial noise, aircraft noise, road traffic noise and railway noise, and related emission data ⁽¹⁾ (notified under document number C(2003) 2807)** 49

⁽¹⁾ Text with EEA relevance

I

(Acts whose publication is obligatory)

COUNCIL REGULATION (EC) No 1480/2003

of 11 August 2003

imposing a definitive countervailing duty and collecting definitively the provisional duty imposed on imports of certain electronic microcircuits known as DRAMs (dynamic random access memories) originating in the Republic of Korea

THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community,

Having regard to Council Regulation (EC) No 2026/97 of 6 October 1997 on protection against subsidised imports from countries not members of the European Community ⁽¹⁾, and in particular Article 15 thereof,

Having regard to the proposal submitted by the Commission after consulting the Advisory Committee ⁽²⁾,

Whereas:

(4) The Commission continued to seek and verify all information deemed necessary for the definitive findings.

(5) All parties were informed of the essential facts and considerations on the basis of which it was intended to recommend the imposition of a definitive countervailing duty and the definitive collection of amounts secured by way of the provisional duty. They were also granted a period within which they could make representations subsequent to this disclosure.

(6) The oral and written arguments submitted by the parties were considered, and, where appropriate, the provisional findings have been modified accordingly.

A. PROVISIONAL MEASURES

(1) Pursuant to Commission Regulation (EC) No 708/2003 ⁽³⁾, (hereinafter referred to as 'the provisional Regulation'), a provisional countervailing duty was imposed on imports into the Community of certain electronic microcircuits known as DRAMs (dynamic random access memories) originating in the Republic of Korea.

(2) It is recalled that the investigation of subsidisation and injury covered the period from 1 January 2001 to 31 December 2001 ('IP'). The examination of trends relevant for the assessment of injury covered the period from 1 January 1998 to the end of the IP ('period under consideration').

C. PRODUCT UNDER CONSIDERATION AND LIKE PRODUCT

(7) As no comments were received following disclosure of the provisional findings regarding the definition of the product concerned and the like product, the conclusions as set out in recitals 8 to 11 of the provisional Regulation are confirmed.

B. SUBSEQUENT PROCEDURE

(3) Subsequent to the disclosure of the essential facts and considerations on the basis of which it was decided to impose provisional measures, several interested parties submitted comments in writing. In accordance with the provisions of Article 11(5) of Regulation (EC) No 2026/97 (hereinafter referred to as 'the basic Regulation'), all interested parties who requested a hearing were granted an opportunity to be heard by the Commission.

D. SUBSIDIES

(8) Following the publication of the Regulation imposing the provisional countervailing duty, the Community producers, Samsung Electronics Co., Ltd ('Samsung'), Hynix Semiconductor Inc. ('Hynix'), the Government of Korea ('GOK'), Korea Exchange Bank ('KEB'), Korea Development Bank ('KDB'), Citibank Seoul, Woori Bank, National Agricultural Cooperative Federation ('NACF') and Shinhan Bank submitted comments concerning the Commission's findings as regards subsidies. The measures commented are the syndicated loan of

⁽¹⁾ OJ L 288, 21.10.1997, p. 1. Regulation as amended by Regulation (EC) No 1973/2002 (OJ L 305, 7.11.2002, p. 4).

⁽²⁾ Proposal of 25 July 2003 (not yet published in the Official Journal).

⁽³⁾ OJ L 102, 24.4.2003, p. 7.

KRW 800 billion, the KEIC guarantee for export credits in the amount of USD 600 million, the KDB Debenture Programme, purchase by the creditor banks of KRW 1 trillion worth of convertible bonds in May 2001 and the October 2001 restructuring package. Since some general issues are important for the assessment of all measures investigated, these issues are set out in an introductory chapter below.

1. INTRODUCTION

(i) *Financial contribution by a government*

(9) The issue of what constitutes a 'financial contribution by a government' is central to this investigation, and it is worth restating some guiding principles on the matter. According to Article 2 of the basic Regulation, for a subsidy to exist there is a need to establish as a first step that there is a financial contribution by a government. Article 1(3) of the basic Regulation defines 'government' as a government or any public body within the territory of the country of origin of exports. According to Article 2(1)(a)(iv) of the basic Regulation, a financial contribution by a government shall be deemed to exist also when a government entrusts or directs a private body to carry out measures which would constitute a contribution by a government pursuant to points (i), (ii) and (iii) of the same Article.

(10) A financial contribution by a government or public body is a subsidy per se if it confers a benefit. If an entity is not determined to be a public body, it is by default a private body, and government direction must be shown under Article 2(1)(a)(iv) of the basic Regulation for there to be a subsidy.

(11) Government ownership, even 100 % ownership, does not in itself mean that a company concerned is considered to be a 'public body'. Nor does government ownership, at whatever level, create a 'rebuttable presumption' of a public body. However, the level of government ownership is an important, in some cases the most important, component of a determination of whether a public body exists. The higher the government's share, the more likely a finding of a public body.

(12) Where companies are 100 % private and where the government is not the main shareholder, it will normally be difficult to establish that a company is a public body,

unless convincing evidence to the contrary exists. In both of these cases, the company would be considered to be a private body, and 'direction' from the government to provide financial contributions would have to be shown under Article 2(1)(a)(iv) of the basic Regulation.

(13) Conversely, if the government is the largest, and especially if it is the majority shareholder in a company, the company in question may well be considered to be a public body if other relevant criteria are fulfilled. These criteria take account of the notion, implicit in dictionary definitions, that a public body is an institution authorised to act on behalf of a community as a government entity, as distinct from a private body which is presumed to act in the interests of its owners.

(14) The relevant criteria which can be taken into account in determining whether a given company does indeed qualify as a public body include:

(a) the pursuance of public policy objectives which go beyond the normal remit of a private organisation and include, for instance, a requirement to take account of national or regional economic interests, promotion of social objectives, etc. These criteria may be non-commercial, in the sense that they compromise the normal objective of profit maximisation;

(b) government control going beyond ownership. The higher the government ownership, the more likely it is that control exists. This can be demonstrated by government influence in appointments, the right of the government to review results and to determine objectives, and the extent to which the government has to be involved in individual investment or business decisions.

(15) With regard to the notion of 'direction' in Article 2(1)(a)(iv), this exists where the government requires a private body to carry out functions normally vested in the government and the practice does not differ from practices normally followed by governments. It is not sufficient to show that a government merely encouraged or facilitated such actions, although such encouragement or facilitation may be a factor to be considered.

(ii) *Non-cooperation*

(16) When determining the existence of a public body or of government direction, the investigating authority bears the burden of proof when making a positive finding. Such findings must be made on the basis of positive evidence, taking account of the totality of the facts on the record and available to the authority, and weighing these facts in accordance with the considerations above. In appreciating the facts in question, due account must be taken, in accordance with Article 28 of the basic Regulation, of the failure of certain parties to cooperate fully with the investigation, which has in some cases necessitated the use of information from other sources. In this particular case, it has become apparent that the GOK failed to provide a number of requested documents on meetings relating to the future of Hynix. The GOK also failed to inform the Commission that such meetings took place, in spite of clear requests being made to this end in the questionnaire and at the on-the-spot verification. The GOK has been made aware of the consequences of non-cooperation in accordance with Article 28(1) and (6) of the basic Regulation. In view of this lack of cooperation, it has been necessary, in addition to taking account of relevant GOK documents submitted by other parties, to use information from secondary sources, including from the Korean press. Such information has been viewed with special circumspection, the GOK and Hynix given the opportunity to comment on it, and, where practicable, it has been cross-checked with other independent sources.

(17) In its comments on the final disclosure the GOK objected to the conclusions made that it had withheld important information in relation to certain documents and meetings and had not fully cooperated with the investigation. The GOK claimed that the Commission had posed imprecise questions and that the documents and meetings were not covered by the Commission's requests. It is noted that the questions posed in the questionnaires as regards each individual measure investigated as well as during the verification visits, were clear and unambiguous and referred specifically to any GOK involvement in any meetings concerning the measures under investigation. Thus the assertion of the GOK that they did not consider this information to be covered by the questions asked is not found to be convincing.

(18) It is also recalled that a number of Korean banks failed to cooperate with the Commission in the investigation. In particular, KorAm Bank and Citibank failed to

respond to deficiency letters concerning their response to the questionnaire and, therefore, to provide necessary information. Kookmin Bank, Korea First Bank and Shinhan Bank refused to accept on-the-spot verification of their responses to the questionnaire. All banks were informed that their non-cooperation might have adverse effects on the outcome of the investigation with regard to their client Hynix and that any findings might be made on the basis of the facts available in accordance with Article 28 of the basic Regulation. They were also given an opportunity to comment and the consequences of the non-cooperation were made known to them. Similarly, Hynix has to be considered as a partial non-cooperator in this investigation. Its failure to allow its financial adviser to cooperate seriously impeded the investigation.

(iii) *Financial situation of Hynix*

(19) As a general remark it is recalled that the financial situation of Hynix was critical during recent years including the investigation period. The company was loss-making even during 2000, a year generally considered to have been very good for the DRAMs industry. It is noted that at the end of 2000, Hynix had accumulated more than USD 9,46 billion of liabilities. This was almost twice its net worth and more than four times the value of the market capitalisation of the company⁽¹⁾. Moreover, the majority of these liabilities were maturing throughout 2001 when the company was facing serious liquidity problems. Even the GOK recognised already in November 2000 'the cash crunch of Hyundai Electronics'. At the beginning of 2001, investment analysts like Morgan Stanley and UBS Warburg predicted that the company would not be able to generate cash from internal cash flow or asset disposals to pay off its maturing liabilities. In October 2001, when the bailout measures subject to this investigation were decided upon, Hynix's debts were six times its equity.

(20) The financial ratios of Hynix according to the so-called Altman Z-score model, designed specifically to predict the likely failure of Korean companies, were in 1999 to 2001 far worse than other Korean companies that actually did fail. The Hynix scores were 700 % higher than the threshold level of a company in severe financial distress⁽²⁾. Hynix's current and quick ratios were indicative of a company with totally inadequate liquidity to

⁽¹⁾ Hynix business plan for 2001 filed with the FSC, 21 March 2002.

⁽²⁾ Expert Report of Professor Anthony Saunders in the Matter of the Countervailing Duty Petition on behalf of Petitioner: Micron Technology, 10 March 2003 ('Saunders Report'), p. 30-35.

cover obligations ⁽¹⁾. Hynix's net profit margin, return on assets, and return on equity were negative in nearly every year since 1997, with net margins reaching negative 24,3 % in 2000 and a negative 93,83 % in 2001. In every year from 1997 to 1999, the company's cash flow from operations was not enough to cover even one sixth of its debt or total liabilities. Hynix would have required additional cash flows of KRW 2 trillion in 2000 and KRW 4,5 trillion in 2001 merely to meet its debt repayment schedule during that period. In January 2001 in a UBS Warburg report, the firm reported that bankruptcy concerns had depressed Hynix shares and that investors were concerned that Hynix would have insufficient cash flow to repay maturing debt and be faced with potential bankruptcy should it not be able to refinance its debt.

- (21) The 2001 financial accounts also discounted the possibility of future financial success for Hynix, stating that the 'entire normalisation of the company's operation requires the continuous support from creditor banks until the selling price of semiconductor products sufficiently recovers'. These facts indicate that both the history and the future of Hynix was characterised by its dependency on financial assistance from its creditors. Hynix had during the IP reached a point where it was unable to finance its operations by the returns generated by its activities.

- (22) The deteriorating situation of Hynix in 2001 was also reflected in its credit rating. At the beginning of January 2001 the rating of Hynix was investment grade BBB- according to the Korean rating agencies and a speculative grade B by Standard and Poor's. The Korean agencies downgraded Hynix to speculative BB+ grade on 22 January 2001. The Standard and Poor's rating was downgraded to B- in March 2001, CCC+ in August 2001 and 'selective default' ('SD') in October 2001.

- (23) The highest rating assigned by Standard and Poor's is AAA. This indicates an extremely strong capacity to meet financial commitments. AA rating indicates that this capacity is very strong. A is more susceptible to the adverse effects of changes in circumstances and economic conditions, but the capacity to meet financial commitments is still strong. BBB indicates that adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity to meet the

financial commitments. Ratings BB, B, CCC, CC and C are regarded as having significant speculative characteristics. A BB rated company already faces major ongoing uncertainties or exposure to adverse business, financial, or economic conditions that could lead to the company's inadequate capacity to meet its financial commitments. As regards B, adverse business, financial, or economic conditions will likely impair the company's capacity to meet its financial commitments. CCC is currently vulnerable to non-payment and dependent on favourable business, financial and economic conditions to meet its commitments. CC means that the company thus rated is currently highly vulnerable to non-payment. The rating C may be used to cover a situation where a bankruptcy petition has been filed or similar action has been taken but payments on this obligation are being continued. SD or D indicates a failure to pay a financial obligation. SD is assigned to a company which can be expected to default selectively, namely continue to pay certain classes of obligations while not paying others. The worst rating is D, which is normally used only where a default has actually occurred. It is not prospective as are the other ratings. The ratings from AA to CCC may be modified by the addition of a plus or minus sign to show relative standing within the major rating categories. The four highest categories, AAA, AA, A and BBB are generally recognised as being investment grade. Debt rated BB or below generally is referred to as speculative grade. The term 'junk bond' is merely a more irreverent expression for this category of more risky debt ⁽²⁾.

(iv) *Public interest considerations*

- (24) The financial difficulties of Hynix considerably increased following the acquisition and subsequent merger with LG Semicon Co., Ltd in 1999. The information on the record indicates that the 1999 acquisition and subsequent merger between LG Semicon and Hynix was not based on market principles, but was forced upon them by the GOK as a part of the so called 'big deal' policy. The GOK felt that three semiconductor companies would be too many in a weakening market situation, and wanted to reduce them to two to consolidate and streamline the core competencies of the companies. As a result of the forced acquisition and merger Hynix had to

⁽¹⁾ Saunders Report, p. 20-21.

⁽²⁾ Standard and Poor's, Corporate Ratings Criteria, www.standardandpoors.com.

take over LG debt and pay to it a considerable amount as an acquisition price, which almost doubled its own liabilities. The GOK itself could be said to have contributed to the ever-worsening financial situation of Hynix. As Hynix situation worsened further after the merger, it was widely perceived that the GOK felt compelled to protect Hynix from failure since it had a responsibility to take care of the 'big deal' companies ⁽¹⁾.

official stated that the GOK was only doing what was necessary to save companies that were strategically important to Korea.

2. TAX RESERVES, TAX EXEMPTION AND TAX CREDIT

(25) The information on the record also indicates that the GOK considered Hynix far too important for the Korean economy to be left to fail. Hynix accounted for 4 % of the Korean exports in 2001. It employed 24 000 people and a far greater number in upstream and downstream industries. Semiconductors was nominated as one of the strategic export oriented industries of Korea, which also was the reason of the forced merger following the GOK 'big deal' policy.

(27) Following the imposition of provisional measures, no comments which could alter the findings set out in recitals 17 to 25 of the provisional Regulation were made. Therefore, these findings are hereby confirmed. Since any subsidy found for Samsung was *de minimis*, no definitive countervailing measures should be imposed on this company.

3. SYNDICATED LOAN OF KRW 800 BILLION (JANUARY 2001)

(26) In November 2002, Korea's Grand National Party ('GNP') completed a study regarding GOK mismanagement of funds in recent years. It included an extensive section on the bailout of Hynix and other Hyundai companies ⁽²⁾. The GNP declared the bailout of Hynix and other Hyundai companies as a major setback to its efforts to bring about market-based reform. The GNP observed that if market principles were to be kept, the Hyundai group's subsidiaries including Hynix should have been bound by the same market principles as other troubled businesses. Nevertheless, the administration forced financial institutions to extend loans to the Hyundai Group and mobilised GOK-invested banks and other GOK-funded or invested institutions to extend considerable amounts to the Hyundai group. With respect to Hynix in particular, the GNP determined that the GOK had steered some KRW 13,7 trillion (USD 10,3 billion) in public funds to Hynix. The GNP also attributed Hynix's later difficulties to the GOK-forced merger of Hynix and LG Semicon, an action, which according to it was undertaken with total disregard for market principles. In defending the GOK measures to finance Hynix, a GOK

(28) As set out in the provisional Regulation, it was provisionally concluded that there was insufficient evidence to make a positive finding of a subsidy and it was therefore decided not to countervail this programme. Some interested parties disagreed with this conclusion and have asked for the provisional finding to be reviewed. They argue that under normal market conditions, a company in a comparable financial situation to Hynix would not have obtained financing from commercial sources.

(29) One interested party argued that Hynix was not credit-worthy at the time of the measure and therefore the GOK direction is the only possible explanation for the creditors' decision to extend new lending to Hynix. Hence, they argued, the loan conferred a benefit to Hynix and should be countervailed in full. Furthermore, that interested party argued, the syndicated loan also conferred a benefit to Hynix because the loan itself could not have been granted without the Financial Supervisory Commission's ⁽³⁾ ('FSC') selective waiver of legal lending limits. The GOK directed the FSC to raise the legal lending limits of certain banks to ensure the existence of enough participants to raise the KRW 800 billion loan.

⁽¹⁾ Private financial experts Verification Report, Meeting 6, point 14.

⁽²⁾ Public Fund Mismanagement Report, Special Committee on Parliamentary Inspection of Public Fund Administration, Grand National Party, November 2002.

⁽³⁾ The FSC was established under the Act on Establishment of Financial Supervisory Agencies in 1996. It supervises financial institutions and also enacts or amends separate supervisory regulations for different financial sectors. It is funded by the GOK. It is considered as a public body in the meaning of Article 1(3) of the basic Regulation.

- (30) Since the publication of the provisional Regulation, new information of the GOK directing the FSC to raise the legal lending limits of some banks participating in the syndicated loan has been obtained. The Commission's provisional findings as regards this measure should therefore be reassessed in the light of the new information. The interested parties, Hynix and the GOK, were specifically invited to comment on the new information and their comments have been taken into account in the reassessment of this measure.
- (31) According to Article 35 of the Banking Act of Korea, 'no financial institution shall extend credits exceeding 25/100 of the relevant financial institution's equity capital to the same individual, corporation and person, or 20/100 to the same individual or corporation' ⁽¹⁾. The FSC can, however, approve exceeding these ceilings on the basis of Article 20(3) of the Enforcement Decree of the Banking Act, which lists specific cases in which such approval can be granted. Without FSC approval, banks cannot exceed the legal lending limits laid down in the Banking Act.
- (32) On 28 November 2000, a letter from the Ministry of Finance and Economy, signed by the Minister of Finance and Economy, was sent to the President of the Korea Export Insurance Corporation ('KEIC') and the President of the KEB. The letter transmits the results of the discussion on 'alleviating the cash crunch of Hyundai Electronics' ⁽²⁾, which was on the agenda of the Economic Ministers' meeting held on the same day (November 28). The letter orders the recipients to make sure that the measures decided would be 'carried out perfectly'. The letter also states that the measures to help Hynix were initiated by the Financial Supervisory Service. The letter orders KEB to request an extension of the credit ceilings on behalf of the creditor financial institutions, which according to the results of the Economic Ministers' discussions would be subject to special approval by the FSC. The Minister thereby imposed an obligation on KEB to apply for the extension and on the FSC to approve such an application.
- (33) In December 2000, KEB filed the request for approval of this extended credit limit for Hynix financing and submitted similar requests for Korea First Bank ('KFB') and KDB. In the FSC decision it was explained that these banks intended to grant a syndicated loan and a D/A facility (documents against acceptance-backed loans) to Hynix. FSC approved these requests on the basis of Article 20(3)1.3. of the Enforcement Decree. This provision allows FSC to extend the ceilings 'when it recognises that it is inevitable for the industrial development ... or the stability of the national life'. This provision is a public interest provision and shows that from the GOK point of view, the granting of the extra credit was a public interest issue.
- (34) It is noted that according to the minutes of the relevant FSC meeting, the FSC Commissioners approved the increase in the credit ceiling for Hynix financing because Hynix was too big and too important to fail. In the minutes the following is explained: 'The semiconductor industry is a strategic industry; after Hynix's merger with LG Semicon in 1999, the company accounted for 20 % of the world semiconductor market and 4 % of the Korean exports. Hynix employs 24 000 employees in the industry, and other involved companies exceed 2 500 with over 150 000 employees. To support the syndicated loan and D/A financing would improve Korea's international competitiveness. Therefore, for the promotion of the electronics industry policy, the FSC finds it in the best interest to increase the ceiling' ⁽³⁾.
- (35) It is noted that without the extension of the credit ceilings it would have been impossible for the three above-mentioned banks to participate in the syndicated loan. They would have breached their obligations under the Banking Act. The GOK, by directing the FSC to approve the extension and by directing KEB to apply for such extension, had effectively directed the banks to extend the loans in a way that they would not otherwise have been able to do under Korean banking laws. It was evident that the credit limits needed to be lifted in order to provide the financing to Hynix. Indeed, when the GOK and Hynix were invited specifically to comment on the new information indicating the GOK direction as regards the lifting of the credit limits, neither of them indicated in their comments that there would have been another source of funding available to Hynix at the time of the measures. Moreover, neither party invoked any such probability at any other stage of the investigation.

⁽¹⁾ English Translation of the Korean text.

⁽²⁾ The name of Hyundai Electronics was changed to Hynix Semiconductor on 29 March 2001.

⁽³⁾ GOK Verification Report, p. 16-17.

(36) In accordance with the findings set out in recitals 55 to 59 of the provisional Regulation which are hereby confirmed, KDB is considered to be a public body within the meaning of Article 1(3) of the basic Regulation. As regards KEB and KFB, their participation in the syndicated loan for an amount of KRW 100 billion each is considered to be directed by the GOK in pursuing the public policy goal of alleviating the difficult financial situation of Hynix for reasons of industrial development. Therefore, they are in this case considered to be directed by the GOK to carry out a function normally vested in the GOK. The fact that the particular provision of the Enforcement Decree was evoked also demonstrates that lifting the credit limits was considered as a question of public interest. Moreover, the GOK intervention shows that the granting of the extra credit was a question of public interest, which falls within the practices normally followed by governments. Therefore, the participation of the banks in the syndicated loan fulfils the criteria explained in recital 15. Consequently, these measures constitute a financial contribution by government within the meaning of the basic Regulation in Article 2(1)(a)(i) for KDB and Article 2(1)(a)(iv) for KEB and KFB.

4. KEIC GUARANTEE FOR EXPORT CREDITS IN THE AMOUNT OF USD 600 MILLION (JANUARY 2001)

(38) As set out in the provisional Regulation, it was provisionally concluded that there was insufficient evidence to make a positive finding of a subsidy and it was therefore decided not to countervail this measure. Some interested parties disagreed with this conclusion and asked for the provisional finding to be reviewed.

(39) One interested party argued that the countervailable benefit of the measure should not be based on the premiums charged to Hynix, as was done in the provisional Regulation. Instead the party argued that the benefit should be based on the fact that the increase of the credit limit would not have been obtained by Hynix on the market. It was only able to obtain an increase in its credit limit because the GOK instructed KEIC (Korea Export Insurance Corporation) to guarantee the increase.

(37) According to Article 5 of the basic Regulation, the amount of countervailable subsidy shall be calculated in terms of the benefit conferred to the recipient. The participation of the three banks in the syndicated loan confers a benefit to Hynix to the amount by which the legal lending limits have been exceeded, since this is the amount that Hynix was able to receive only due to the lifting of the limits. Without the lifting of the limits these amounts would not have been granted to Hynix by the banks in question. There was no indication that any other source of similar financing was available to Hynix at the time of the measures. The amounts exceeding the credit limits are therefore considered as subsidies. Since these subsidies are ad hoc measures granted to only one company, they are specific pursuant to Article 3 of the basic Regulation and therefore countervailable. It is noted, however, that the shares of KDB and KEB of the syndicated loan are already countervailed as part of the October 2001 measures. Therefore, in order to avoid double counting, these measures are not countervailed in the context of the January 2001 syndicated loan. As regards the KFB share of the loan exceeding the legal lending limit, the information on the record indicates that any benefit resulting from the lifting of the loan limits would be negligible. Therefore, it is not countervailed in this context.

(40) It is noted that according to the information on the record, the banks extended the D/A (documents against acceptance) ceiling only because this extension was guaranteed by KEIC. The additional credit was dependent on the guarantee. In the provisional Regulation the premium paid by Hynix for the guarantee was examined but no subsidy was found on this basis. At the time of the provisional measures, there was no convincing evidence on the record indicating that the GOK had directed the KEIC to issue the guarantee in question. In the questionnaires the GOK had been requested to give details of the involvement of the GOK or public officials in the process of providing the guarantee to Hynix, including details of relevant meetings. An explanation was in particular requested on the role of the Financial Supervisory Service ⁽¹⁾ ('FSS') in the process. The same questions were put to the GOK, the FSC/FSS and the KEIC during the verification visit. In their replies these parties explained that neither the GOK nor the FSC/FSS were allowed to interfere in the decision-making process on underwriting the Hynix guarantee.

⁽¹⁾ The FSS is a public agency whose main task is to carry out financial supervision under the FSC's guidance. It is considered as a public body in the meaning of Article 1(3) of the basic Regulation.

- (41) However, since the publication of the provisional Regulation, new information concerning the GOK's role in directing KEIC to provide the guarantee for the extension of the D/A facility by USD 600 million has been obtained. The provisional findings as regards this measure should therefore be reassessed in the light of the new information. The interested parties, Hynix and the GOK, were specifically invited to comment on the new information and their comments have been taken into account in the reassessment of this measure.
- (42) In accordance with the findings set out in recital 32 of the provisional Regulation which are hereby confirmed, KEIC is considered to be a public body. Furthermore, as described under recital 32, the Minister of Finance and Economy sent a letter to the President of the KEIC and the President of the KEB. The second item in the letter reads as follows: 'As for the provision of D/A backed loans, the KEIC will temporarily resume the insurance for the balance of the non-negotiated D/A'. A similar letter requesting KEIC to 'take actions accordingly' was sent to the CEO of KEIC on 30 November 2000 by the Minister of Commerce, Industry and Energy.
- (43) A further letter was sent to the same persons, the President of the KEIC and the President of the KEB, on 10 January 2001. This letter was signed by three Korean Ministers: the Minister of Finance and Economy, the Minister of Commerce, Industry and Energy and the Minister of Planning and Budget. The letter submitted the results of the discussions on the acquisition of Hynix D/A at the Economic Ministers' Meeting held on 9 January 2001. The results were the following: '(1) Have the KEIC insure the Hynix D/A acquired by creditor banks by 30 June 2001, up to a total of USD 600 million. (2) As for the shortage of reserve payment capacity of the KEIC fund that might occur in relation to this matter, support will be provided from a separate source of funding'. The GOK thereby committed itself to compensate KEIC in case it needed to pay out the guarantee and could not do so out of its own risk reserves.
- (44) Information on the record indicates that the KEIC position at the time was that Hynix was in a state of a technical insolvency. However, a high-level executive of the KEIC stated at the 1 December 2000 board meeting that 'we came to support this transaction at the direction of the Minister of Industry and Resources' ⁽¹⁾. Consequently, several Ministers ordered KEIC to ensure the D/A extension. In recital 35 the public policy reasons of this decision are explained, as expressed by the FSC in the meeting where the measures were discussed. KEIC supported these measures only due to the GOK direction. Since the banks who extended the ceiling only did so on the condition that the extension was guaranteed, the guarantee was an essential precondition for the loan. Therefore, the loan was given as a result of the guarantee.
- (45) Thus the guarantee was given by KEIC due to specific GOK direction in pursuing the public policy goal of alleviating the difficult financial situation of Hynix for reasons of industrial development. Therefore, KEIC, despite being a public body, was specifically directed by the GOK to carry out a function and follow practices normally vested in the GOK. Consequently, the guarantee is a financial contribution by government within the meaning of Articles 2(1)(a)(iv) and (i) of the basic Regulation. This guarantee conferred a benefit to Hynix, since without the guarantee Hynix was not able to receive the D/A extension of USD 600 million. At the same time, the GOK's assurance that KEIC would be compensated in case of default showed that the premium paid by Hynix could not cover the risk undertaken by KEIC to guarantee the D/A extension and, therefore constituted a non-commercial act. The GOK effectively underwrote the risk of failure of payment by Hynix without asking for any compensation for it. According to the information on the record, the banks would not have granted the D/A facility without the guarantee. Moreover, there is no information that Hynix could have obtained comparable financing from other sources. This coverage of the guarantee, without any adequate premium being paid, is therefore considered to have conferred a benefit to Hynix within the meaning of Article 2(2) of the basic Regulation. In view of the provisions of Article 6(c) of the basic Regulation, since no comparable commercial loan could have been obtained without the guarantee, the coverage of the D/A extension is effectively a grant. The benefit to Hynix and thereby the amount of the subsidy is the amount of the D/A extension, USD 600 million.
- (46) In its comments on the final disclosure the GOK and Hynix argued that KEIC did not provide funds to Hynix, only insurance, and that Hynix paid market interest rates to banks for the D/A financing. Therefore, the benefit conferred on Hynix by the measure should have been the difference in costs between what Hynix paid for the D/A financing and what it would have paid without the KEIC guarantee. It is noted that the benefit to Hynix is

⁽¹⁾ The Korea Economic Daily, 28 August 2001, following the disclosure of official correspondence by Members of the National Assembly of Korea.

the whole amount of the loans which would not have been granted in whole or in part without the KEIC guarantee which was underwritten by the GOK. There was no indication that an alternative financing without guarantee was available to Hynix at the time, and Hynix never raised such a possibility. Therefore there is no benchmark for the cost comparison requested by the parties. In addition, Hynix paid no extra premium for the complete underwriting of the full amount of the loans by the GOK. Under these circumstances, the benefit for Hynix is considered to be the full amount of the guarantee underwritten by the GOK.

loan in January 2001 and new capital via GDR (global depository receipt) issuance in May 2001, it cannot be claimed that it could not refinance its bonds via the market.

(47) Since the D/A facility is an export credit facility, and is therefore contingent upon export performance, the subsidy of USD 600 million is specific in the meaning of Article 3(4)(a) of the basic Regulation and therefore countervailable. Since the subsidy is an export subsidy, its amount should be allocated over the export turnover in accordance to section F(b)(i) of the Community Guidelines for the Calculation of the amount of Subsidy in Countervailing Duty Investigations ('the Guidelines')⁽¹⁾. Using the same calculation method as that explained in recitals 67 and 108 of the provisional Regulation, but allocating the subsidy over the export turnover instead of the total turnover since the subsidy in question is an export subsidy, the subsidy amounts to 5,1 %.

(50) As regards the argument that the KDB programme did not confer any benefit to Hynix since the programme was allegedly undertaken at prevailing market rates, it is noted that according to the information submitted by KDB in its questionnaire replies, the interest rate after conversion to new bonds issued under the KDB programme was substantially lower than the original interest rate. In case of the bonds issued in January 2001 the difference was around 50 % lower, representing 10 percentage points. This was despite the fact that under normal market conditions, bonds which are refinanced due to anticipated failure of the company to pay them out have higher interest rates than the original bonds, reflecting the higher anticipated risk of the issuing company concerned to honour them⁽²⁾. Consequently, the evidence on the record indicates that the interest rates applied for the KDB programme were not in conformity with market rates.

5. KDB DEBENTURE PROGRAMME (JANUARY 2001)

(48) Following the publication of the Regulation imposing the provisional countervailing duty, Hynix, the GOK and KDB submitted comments concerning the Commission's findings as regards the KDB Debenture programme.

(a) Benefit conferred by the measure

(49) Firstly, Hynix, the GOK and KDB argued that the KDB programme was aimed at temporarily providing a measure with a view to normalising the bond market and did not confer a benefit to Hynix. They argued that there was no benefit, since the programme was extended to Hynix on prevailing market terms and interest rates. Hynix also argued that since it obtained the syndicated

(51) As regards the argument that Hynix could refinance its bonds via the market, in particular via the syndicated loan and the GDR issuance of May, it is noted that bonds and loans are very different instruments and cannot be directly compared. The Korean bond market applied extremely strict conditions in 2001 and companies with moderate credit ratings were not able to refinance their bonds in the market. As explained in recital 61 of the provisional Regulation, the GOK itself acknowledged this in its questionnaire reply. This fact is also evidenced by other documents on the record⁽³⁾. From July 2000 onwards financing conditions in the bond market tightened considerably. This reflected the greater investor sensitivity to corporate credit risk in the face of the sharp downturn in economic growth and the overhang of bonds issued in 1998 or earlier approaching maturity. This resulted in a widespread 'fight for quality' in the local bond market⁽⁴⁾. The GOK also stated in its

⁽¹⁾ OJ C 394, 17.12.1998, p. 13.

⁽²⁾ The Kyunghyang Shinmun Daily, 9 January 2001; The Joong'ang Daily, 7 January 2001.

⁽³⁾ GOK Verification report, p. 14.

⁽⁴⁾ Structural Change in the Corporate Bond Market After the Currency Crisis, BIS Papers No 11, Sungmin Kim and Jae Hwan Park, June-July 2002.

questionnaire reply that the very reason for setting up the KDB Programme was to help some companies with moderate credit ratings to refinance their maturing bonds, since this would not have been possible for them in the market. In addition, it is noted that the rating of Hynix was downgraded from the investment grade BBB- to the speculative grade BB+ on 22 January 2001, which made its position even more difficult in this respect.

(52) The question as to whether Hynix could have refinanced its bonds in a foreign bond market also has to be addressed. However, there is no information on the record indicating that this would have been possible. During the investigation, Hynix has not raised such a possibility nor has it ever suggested that it tried to refinance its bonds in a foreign bond market. It is noted that the speculative rating B given to Hynix by the international rating agency Standard and Poor's in January 2001 does not support such a possibility either.

(53) Hynix had more than KRW 3 trillion worth of bonds maturing in 2001⁽¹⁾. It received a syndicated loan of KRW 800 billion from its creditor banks in January 2001. However, it is noted that it had requested a loan of KRW 1 trillion, but the banks were only willing to grant it KRW 800 billion. Part of this amount, KRW 300 billion, as explained under recitals 30 to 37, was given under GOK direction whereby it ordered FSC to raise the legal lending limits of some banks who were not allowed to lend money to Hynix without this GOK intervention. The same applies to these banks also after the syndicated loan was granted: they were prohibited from lending money to Hynix, unless their lending limits were lifted again for a specific transaction. It is noted that among these three banks were the two major creditors of Hynix, KEB and KDB. This illustrates that Hynix had reached the limit of its possibilities for receiving bank loans. There is no indication that Hynix would have been able to borrow additional funds given the very considerable amount it would have needed to pay its maturing bonds. Indeed, during the investigation Hynix has never raised the possibility of obtaining or even having tried to obtain the needed financing in the form of a loan from other banks in the market at the time of the measures.

⁽¹⁾ It is interesting to note that the investigated measures KRW 800 billion syndicate loan, KRW 1,2 trillion refinanced by the KDB programme and KRW 1 trillion CB purchase by creditor banks in June 2001 result in KRW 3 trillion.

(54) As regards the participation of the banks in the KDB programme, it is noted that the information on the record indicates that on 4 January 2001 the FSC granted a collective waiver of the lending limits to all banks participating in the KDB programme. The FSC stated that the January 2001 waiver given for participation in the KDB Fast Track Programme was different from other waivers in that the FSC gave pre-approval for all banks based on a blanket application filed by KDB, a GOK entity⁽²⁾. The banks' participation in the KDB programme was thereby only possible because of the waiver, which in this particular case was granted by using great flexibility in interpreting the text of the Enforcement Decree which enabled the FSC to waive the lending limits under certain conditions.

(55) Information available also indicates that the banks did not participate on the KDB programme on the basis of commercial considerations, but were directed to do so by the GOK which was concerned at the macroeconomic consequences of a possible bankruptcy of Hynix⁽³⁾. This can be shown at the example of KFB: KFB, 51 % owned by US Newbridge Capital, rejected the GOK's call for participation in the KDB Programme on 4 January 2001. KFB assessed that increased credit to Hynix was not commercially warranted. KFB's CEO stated that their decision was based on strict principles of profit making. The purchase of the bonds of insolvent firms would push the bank into further managerial hardship⁽⁴⁾. The FSS stated that it would ask KFB to undertake Hyundai's bonds one more time. If the bank was to reject again and this led to the collapse of related companies, FSS would hold the bank responsible⁽⁵⁾. When KFB continued to resist, FSS warned that by not complying KFB might be putting itself at risk of losing its clients⁽⁶⁾. The next day after KFB rejected the GOK demand, the GOK agency pulled USD 77 million from the KFB account⁽⁷⁾. According to Bloomberg, the GOK even threatened to demand that KFB's main corporate customers cease doing business with the bank⁽⁸⁾. Finally KFB gave in to the GOK demands and participated in the measures. It is recalled that KFB has not cooperated with the investigation by not allowing on-the-spot verification of its replies to the questionnaire (see recital 18 above).

⁽²⁾ GOK Verification Report, p. 16-17.

⁽³⁾ In January 2001 a GOK official has been recorded as having stated the following: 'Hyundai is different from Daewoo. Its semiconductor and constructions are Korea's backbone industries. These firms hold large market shares of their industries and these businesses are deeply linked with other domestic companies. Thus, these firms should not be sold off just to follow market principles.'

⁽⁴⁾ Korea Times, 29 January 2001.

⁽⁵⁾ Korea Economic Daily, 6 January 2001.

⁽⁶⁾ Wall Street Journal, 29 January 2001.

⁽⁷⁾ Business Week Online, 9 April 2001.

⁽⁸⁾ Bloomberg, 31 January 2001.

- (56) As regards the GDR issuance, it is accepted that Hynix raised money in the capital market through this instrument in June 2001. However, by that time 80 % of its bonds financed via the KDB programme had already matured and they had been taken over by KDB before that date. The GDR issuance was therefore not helpful as regards these bonds and another way had to be found for their financing, already as from January 2001. As such, the GDR issuance is not, therefore, an indication that Hynix would have had access to the capital markets in January 2001. Furthermore, without the KDB programme Hynix would already have been bankrupt due to failure to pay these bonds by the time of the GDR issuance. It is also noted that as explained under recitals 73 to 76 of the provisional Regulation, the Hynix stock price collapsed almost immediately after the issuance in June 2001 and the investors who bought Hynix stocks suffered considerable losses. Therefore its possibilities to raise money in such a way were ruled out, in particular considering that its total liabilities still reached KRW 7,2 trillion in July 2001.
- (57) Indeed, the timing of the measures is an important factor. It needs to be stressed that the decision of the investors to buy Hynix GDR in June might have been influenced by the very fact that most of Hynix's maturing liabilities were abolished by the GOK-inspired KDB programme between January and June 2001. The KDB programme was well known and attracted a great deal of public comment. The Hynix GDR offering memorandum also refers to the 'KRW 2,9 trillion anticipated continued availability under the KDB Programme to provide refinancing for maturing bonds in 2001'. Consequently, the investors' decision to invest in Hynix in June 2001 might well have been influenced by the belief that the GOK would continue making sure that Hynix did not fail⁽¹⁾. This point is referred to also in recital 44 of the provisional Regulation. Therefore, the information on the record indicates that the KDB programme might have influenced the decisions of the investors to invest in Hynix in June 2001.
- (58) As regards the Hynix argument that its bonds were resold into the CBO/CLO programme on the same terms as other participating companies' bonds, it is noted that the terms of the existing CBO/CLO⁽²⁾ programme were very different, and were not available to Hynix.
- (59) The CBO programme was created in order to increase the bond financing going to relatively small firms with lower credit ratings. The programme could not have been available to Hynix because of its size. In addition,
- Hynix could not have sold the same amount of bonds to the programme because of the concentration limits, which only allowed a maximum of 10 % of the pool of bonds backing any CBO/CLO to be from any one company. It is also noted that KDB bought all Hynix bonds, even those allegedly intended for the CBO programme. Even after the KDB programme ended, KDB still held Hynix bonds designated for sale to CBO funds. KDB also delayed the sale of the bonds into CBO funds and retained control over the bonds in the KDB programme even after they were placed in CBO funds, and directed their roll-over into new long-term bonds when Hynix was unable to pay them upon maturity. The Korea Credit Guarantee Fund ('KCGF')⁽³⁾ also increased the guarantee level on CBOs from 34 % to 53 % to account for the inclusion of the KDB programme. Consequently, it cannot be claimed that the normal terms and conditions of the programme were applied to Hynix bonds. Indeed, they were treated very differently.
- (60) The way the KDB programme was carried out is also very different from the way comparable transactions would have been carried out in the market. According to the KDB programme, KDB bought all the maturing bonds, converted them to much lower interest rates than that held by the original bonds, placed 20 % of them to creditor banks and 70 % to CBOs/CLOs. Moreover, the conditions applied differed significantly from those of the CBO/CLO programme, including the application of increased State guarantees. The bonds were not sold by public offering but through private placement to existing creditors. This does not correspond to refinancing of bonds under market terms.
- (61) KDB also argued that the KDB programme is not a subsidy since KDB makes its decisions on funding and fund utilisation on a commercial basis and is engaged in profit-earning business focused on corporate finance.
- (62) As regards the KDB argument that the KDB programme is not a subsidy due to the nature of the activities of KDB, it is noted that recitals 55 to 59 of the provisional Regulation set out the reasons why the financing provided by KDB constitutes a financial contribution by a Government within the meaning of Article 2(1)(a)(i) of the basic Regulation. Since KDB has not provided any new evidence in its comments that would alter the assessment made in the provisional Regulation, the conclusions set out in recitals 55 to 59 of the provisional Regulation are hereby confirmed.

⁽¹⁾ Reuters English News Service, 13 June 2001.

⁽²⁾ 'Collateralised bond obligations' and 'collateralised loan obligations'.

⁽³⁾ KCGF is a special institution owned by the GOK.

(63) Considering the explanations in recitals 50 to 62, the KDB programme can be seen to have conferred a benefit to Hynix also bearing in mind that no comparable financing was available to it in the market. Hynix was not able to finance its maturing bonds through bank loans, since it had exhausted its possibilities of receiving loans due to its already high exposure in its creditor banks and its weak financial situation which did not allow further credit to be granted to it by any other bank. Refinancing of the bonds in the bond market was not possible due to its weak credit rating which did not allow the market to accept its maturing bonds, as admitted by the GOK in its questionnaire response. For these reasons, the conclusions on the point of existence of benefit and thereby the existence of a subsidy, in recital 61 of the provisional Regulation are hereby confirmed.

(b) Specificity

(64) Secondly, Hynix, the GOK and KDB argued that the KDB programme was not specific. According to Hynix, the Commission had not explained by means of analysis of the terms and conditions of the programme, why it considered that the mere fact that several Hyundai companies participated in the programme can be considered evidence of specificity as regards Hynix. Hynix also argued that the KDB programme was not specific since Hynix bonds were resold into the CBO/CLO programme on the same terms as other participating companies' bonds.

(65) As explained under recitals 62 to 64 of the provisional Regulation, it was concluded that, whilst the KDB programme was not specific in law under Article 3(2)(a) of the basic Regulation, it was nevertheless de facto specific under Article 3(2)(c) of the basic Regulation, since three of the four criteria of that provision were fulfilled: the use of the programme by a limited number of companies, predominant use by certain companies and the granting of disproportionately large amounts of subsidy to certain companies. Since specificity in law was not claimed, further analysis of the terms and conditions of the programme is not relevant. However, the number of firms potentially eligible under such criteria

is relevant. Regarding de facto specificity, it is concluded that the programme was only used by six companies, four of which belonged to Hyundai Group, and that Hynix used 41 % of the funds of the programme. It is noted that the information on the record indicates that more than 200 companies in Korea would have fulfilled the selection criteria of the programme. Against the background of this group of potential recipients, the large proportion of Hyundai Group of companies in the participants and the predominant use by Hynix of the total funding of the programme clearly fulfils the specificity criteria under Article 3(2)(c) of the basic Regulation.

(66) The GOK and KDB also argued that the selection of participating companies was conducted in a transparent and objective manner and the large number of Hyundai companies participating in the programme was merely coincidental.

(67) In the questionnaires both the GOK and KDB were requested to submit the minutes of the meetings in which the selection of the companies to the programme were discussed and the copy of the decision by which Hynix was selected, stating the reasons for selecting it. Both the GOK and KDB stated that no such documents were ever prepared and that therefore they were not available⁽¹⁾. Therefore it was not possible to verify how the selection process was conducted and how the selection body, Creditor Financial Institutions Council⁽²⁾ ('CFIC') used its discretion when selecting the participants.

(68) In fact the information on the record indicates that GOK discretion was openly used to preselect Hynix as a beneficiary and to concentrate the benefit on Hyundai companies. It is noted that KDB announced in a press release that it would buy Hynix's maturing bonds both in January and in the coming months even before Hynix was officially selected to participate in the programme⁽³⁾. In addition, according to the information given by KDB, a decision on which bonds to refinance is taken separately every month by the CFIC. It is remarkable that KDB could announce already at the beginning of January that it would refinance Hynix bonds in the coming months.

⁽¹⁾ The document 'Summary of the meeting' of 4 January 2001 to discuss the KDB Fast Track Programme describes the functioning of the programme. It does not explain how the selection of participants was carried out and on what basis the companies were selected.

⁽²⁾ The Council consists of the representatives of KDB, The Korea Credit Guarantee Fund and the creditor banks.

⁽³⁾ KDB to acquire Hyundai Electronics bonds, KDB press release, 3 January 2001.

(69) After the participants in the programme were announced, a lot of criticism was voiced concerning the lack of transparency and absence of review of eligibility as regards the selection process ⁽¹⁾. Other companies, for example subsidiaries of the Hanwha and Hanjin group and Dongkuk Steel, were in a similar situation to Hynix as regards credit ratings (BBB) and the number of bonds maturing at the same time, but they were not selected for the programme. No explanation or justification for this was given by the selecting authorities.

Regulation by the programme being terminated, because it had already been granted and this grant will continue to confer a benefit during the allocation period.

(70) For the reasons explained above, it is concluded that in addition to the criteria of Article 3(2)(c) of the basic Regulation fulfilled in the present case as concluded by the Commission under recitals 63 and 64 of the provisional Regulation, the KDB programme is also concluded to be de facto specific on the basis of an additional criterion of Article 3(2)(c), namely the manner in which discretion has been exercised by the granting authority in the decision to grant a subsidy.

(d) Calculation of the subsidy

(74) As regards the calculation of the subsidy, both Hynix and the GOK argued that the Commission should have compared the interest rates of the programme with the market rates and not treated loans as grants. Secondly, Hynix argued that KDB only assumed 10 % of the refinanced bonds and only those bonds should be considered as subsidy. In addition, since the KDB bonds were later restructured in October 2001, these should not be counted twice in the subsidy amount.

(c) Withdrawal of a subsidy

(71) Thirdly, Hynix claims that since the KDB programme only lasted for one year, this constitutes a withdrawal of the programme and hence the programme cannot give rise to the imposition of countervailing duties pursuant to Article 15(1) of the basic Regulation.

(72) It is noted that the KDB programme constitutes a one time, non-recurring subsidy which benefits the company as such. Hence there cannot be a question about withdrawal as such in this context. In the case of PET Chips from India ⁽²⁾, invoked by Hynix as a relevant precedent, the subsidy was a recurring subsidy tied to the export of the product under investigation. When the export subsidy programme was terminated, the exported product did not benefit from the subsidy any longer. The nature of the subsidy is therefore very different and the PET Chips case is not relevant for the assessment of the KDB programme.

(75) As regards the first submission concerning the comparison of interest rates, the Commission explained under recital 66 of the provisional Regulation the reasons for its conclusion not to use the interest rate comparison for determining the amount of the subsidy. According to Article 5 of the basic Regulation, the subsidy is determined on the basis of the benefit conferred on the recipient. As explained under recitals 50 to 63, the benefit received by Hynix was not conferred by the interest rates applied by the KDB programme, but the fact is without the KDB programme it would have been forced to pay back its bonds and since it had no liquidity to do so, it would have gone bankrupt. There was no other source of funding available to Hynix, and according to the information on the record, this appears to be the reason for setting up the KDB programme in the first place. The benefit to Hynix was conferred by KDB buying its maturing bonds in its place when no market operator was willing to provide Hynix the means to finance this operation. For these reasons the amount of KDB financing for purchasing Hynix bonds is determined to constitute the subsidy.

(73) For the above reasons, given that the benefit conferred under the KDB Programme is a non-recurring subsidy allocated over the period of five years, the subsidy is not withdrawn in the meaning of Article 15(1) of the basic

(76) As regards the treatment of loans as grants, the situation has to be assessed from the point of view of the granting authority at the time of the measures. Section E(b)(v) of the Guidelines stipulates that if at the time of the granting of a loan it is already evident to the granting authority that it will not recover its money, the loan should be considered as a grant. In the present case, although the KDB financing under the programme is not

⁽¹⁾ Chosun Daily, 7 January 2001; The Kyunghyang Shinmun Daily, 9 January 2001.

⁽²⁾ Regulation (EC) No 2603/2000, OJ L 301, 30.11.2000, p. 1.

entirely the same as a 'loan', it is a very similar transaction so that the same principles should apply. The question is whether KDB had a reason to believe that it would recover its financing or not. The information on the record shows that at the time KDB assumed the Hynix debt, it was evident that KDB would not recover the money it had spent on buying the Hynix bonds. In fact the information on the record indicates that KDB did not even foresee a recovery of its expenditure. Indeed, the amount budgeted for the KDB total programme was originally KRW 6,2 trillion, of which KDB had already allocated nearly half, KRW 2,9 trillion, for the purchase of Hynix bonds. The programme was not established on the basis of earning profit or even breaking even, but there was just a considerable amount of money set aside to be spent on the purchasing of maturing bonds of the selected companies. Moreover, even if KDB had expected to recover its expenditure, it was evident at the time the financing was granted that Hynix would not be able to repay the amounts to KDB. Hynix had already huge debts and the reason why KDB had to interfere was that Hynix had no money to pay its maturing bonds and had no possibility to raise such amount in the market at the time when the maturity was due. It also needs to be noted that the amount foreseen to be spent on Hynix bonds from the start was considerable in comparison to Hynix's turnover; KRW 2,9 trillion was more than 70 % of the Hynix 2001 turnover.

reflected in the decrease of its rating. Moreover, the record contains no evidence indicating that KDB had in fact recovered more than those amounts that Hynix was supposed to pay under the conditions of the programme ⁽¹⁾. In the provisional findings these amounts were taken into account and deducted, as explained under recital 65 of the provisional Regulation.

- (77) That Hynix was not going to be able to repay this new financing became evident during the course of the programme, as its position was reviewed monthly in the context of decisions by the banks on which bonds should be purchased each month. Hynix's rating was already downgraded on 22 January 2001, immediately after it was accepted to the programme and again in March, during the running of the programme. The speculative grade given to Hynix at the end of January should have already been taken into account when the January decision on purchasing bonds was taken. In March 2001, Hynix was downgraded to B- which in fact should have disqualified it from the KDB Programme according to the criteria of the Programme. However, in both these months Hynix bonds were financed by KDB regardless of the deteriorating situation of the company

- (78) In respect of the second argument submitted, Hynix argued that KDB only held 10 % of the refinanced bonds and only those bonds should be considered as a subsidy. It is recalled that subsidy is a financial contribution from a government which confers a benefit on the recipient. As already indicated under recital 48 of the provisional Regulation, the first step in the programme is that KDB buys all the matured bonds falling under the programme directly ⁽²⁾. The benefit conferred to Hynix by this financial contribution is bestowed in the fact that KDB buys these bonds for Hynix: the financial contribution of KDB should, under a normal market transaction, be assumed by Hynix. The amount of the benefit determines the amount of the subsidy. The fact that according to the terms of the programme KDB itself is supposed to hold eventually only 10 % of the bonds cannot change this conclusion since KDB provided a much greater amount up-front and in doing so, assumed the risks and liabilities connected with the buying of all the refinanced bonds.

- (79) Hynix thirdly argued that since the KDB bonds were later restructured in October 2001, these should not be counted twice in the subsidy amount. It is noted that verification of the information on the record indicated that KRW 59,4 billion of the bonds falling under the programme were indeed included in the debt to equity swap. This amount was deducted from the total amount of the October 2001 ⁽³⁾ measures as explained below in recital 166. Hynix also argued that part of the KDB bonds held by banks were included in the CBs purchased by the banks in June 2001. The amount of KDB bonds should therefore be deducted from the CB amount in order to avoid double-counting. It is noted that the total amount of CBs purchased in June 2001 was swapped for equity in October 2001 and that the whole amount of the CBs, inclusive of the KDB bonds, is therefore deducted from it, as explained below in recital 166.

⁽¹⁾ The participating company had to repurchase 3 %/5 % of any CBO/CLO issued under the programme. See recital 48 of the provisional Regulation.

⁽²⁾ Bonds falling under the programme are 80 % of the bonds maturing under certain period. Hynix pays the 20 % of its maturing bonds under the conditions of the programme.

⁽³⁾ The information on the record also indicates that in June 2002 KDB still held KRW 82,4 billion of bonds falling under the KDB programme.

(80) For the reasons explained in recitals 50 to 79, it is concluded that the KDB programme conferred a benefit on Hynix since a comparable financing was not available to it in the market. Hynix was not able to finance its maturing bonds through bank loans, since it had exhausted its possibilities for receiving bank loans and refinancing of the bonds in the bond market was not possible due to its weak credit rating. The financing provided through the KDB programme therefore constitutes a subsidy within the meaning of Article 2 of the basic Regulation. The subsidy is found to be *de facto* specific to Hynix, and therefore countervailable pursuant to Article 3(2)(c) of the basic Regulation. Pursuant to Article 5 of the basic Regulation the amount of the subsidy is the amount of the benefit, which is the amount of the financing provided under the programme. Therefore, the conclusions and the subsidy amount of 4,9 % laid down in recital 67 of the provisional Regulation as regards the KDB programme are hereby confirmed.

6. BOND PURCHASE BY CREDITOR BANKS IN THE AMOUNT OF KRW 1 TRILLION AND THE FIRST ROLL-OVER OF DEBT (MAY 2001)

(81) In the provisional Regulation, it was provisionally concluded that there was insufficient evidence to make a positive finding of a subsidy and it was therefore decided not to countervail this programme. Some interested parties disagreed with this preliminary finding and asked for it to be reviewed. One interested party argued that the conditions applied to Hynix were not in conformity with its financial situation at the time and were therefore not market-based. According to this party, the GOK also influenced the creditor banks and the success of the measures.

(82) Another interested party argued that Hynix would not have obtained the May 2001 bailout without GOK intervention due to its weak financial condition and that the GOK specifically directed Hynix's creditors to participate in the bond purchase. In support of this claim, this party referred to a meeting convened by the GOK on 10 March 2001 between GOK officials, presidents of the Hyundai creditor banks, officials of the FSC and the President of Hynix.

(83) In the questionnaires sent to the GOK, it was asked whether the GOK or any other public body was involved in the decision process of the banks to undertake the May 2001 measures. The same was asked in the questionnaires sent to the banks. The minutes of any meetings attended by the GOK or other public officials were also requested. All parties replied that the GOK was not in any way involved in the May restructuring process. Therefore, information relating to any such contacts was not available and could neither be addressed during the investigation before the provisional findings nor verified during the verification visits.

(84) After the publication of the provisional findings, information from secondary sources, including press articles indicating that such contacts indeed had taken place, were submitted by interested parties. This information referred to meetings that had taken place on particular dates and to contacts between the banks and the FSS/FSC officials. The interested parties, Hynix and the GOK, were particularly invited to review this information and comment on it. The parties failed to rebut this new information. In fact, both of them admitted expressly that the FSS representatives were indeed present in the meeting of 10 March 2001 and had had contacts with banks in the context of these measures, as indicated by the new information.

(85) It is noted that the new information and the confirmation of its accuracy by the interested parties contradicted the statements given by the GOK, officials of the FSC and FSS and the banks involved at the earlier stages of the investigation. The GOK and the banks have consistently argued that neither the GOK nor other public officials were in any way involved in the May 2001 measures and that the FSC and FSS only carry out supervisory functions as regards financial institutions and did not intervene in the daily business operations of the banks. Such withholding of information is considered to have impeded the investigation within the meaning of Article 28 of the basic Regulation, which prescribes that in such circumstances findings may be based on best information available. The parties in question were informed of the consequences of their non-cooperation. It is also noted that the financial adviser of Hynix at the time, Citibank Seoul, failed to fully cooperate with the

investigation. Citibank has explained that this non-cooperation was due to the intervention of Hynix. Citibank, being the financial adviser of Hynix at the time of the measures, possessed important information both on the financial condition of Hynix and the measures under investigation. By not allowing Citibank to cooperate, thereby preventing the investigation to examine the information in Citibank's possession, Hynix itself is considered as having seriously impeded the investigation. Given the non-cooperation of the parties as regards providing information on the May 2001 measures and the new information obtained after the provisional measures, not rebutted by them, it is appropriate to reassess the provisional findings in light of the new information and on the basis of best facts available.

- (86) The totality of the facts indicates that as from November 2000 the GOK had been directing banks and other institutions to take measures in order to alleviate the liquidity problems of Hynix and to promote the electronics industry policy. This has been confirmed as regards all measures dealt with above in the previous chapters of this Regulation. It is also noted that the further the year progressed, the worse the financial situation of Hynix became despite the measures taken. In March 2001 its rating had declined to B-. Therefore, there is no reason to assume that the GOK would under these deteriorating circumstances suddenly stop its support to Hynix. On the contrary, it is reasonable to believe that it continued to support Hynix, in particular since its worsening financial situation ensured that alternative market-based sources of financing were not available.

- (87) As explained already above in the context of the assessment of the three previous investigated measures, Hynix had exhausted its possibilities of receiving bank loans as early as January 2001 due to its high exposure to its major creditor banks and its weak credit rating. By March 2001 its rating had been downgraded further and its exposure increased due to the GOK-directed lifting of the prudential credit limits as regards some banks. It had not serviced its syndicated loan granted in January 2001 and its liabilities kept cumulating further, despite all the measures taken to alleviate its situation. Under these circumstances, there is no indication that Hynix would have been able to get a loan from the market. Hynix did

not raise such a possibility during the procedure, neither did it indicate that it even tried to get further loans from either the Korean or foreign markets.

- (88) The information on the record indicates that the banks did not appear to have had any commercial grounds to purchase KRW 1 trillion worth of convertible bonds ('CBs') from Hynix in June 2001. The evidence on the record indicates that the bonds were purchased in order to provide Hynix with cash to cover its existing liabilities. The banks acknowledged the inability of Hynix to service its debts already at the beginning of May 2001. In the Creditor Financial Institutions Council Resolution of 7 May 2001, it is stated that Hynix could not fulfil its obligations as regards the syndicated loan for the first quarter of 2001 and that it was highly likely that it would not be able to do so also for the second quarter. This was stated to be a default under Article 12 of the loan agreement. However, in order to prevent related problems like cross default, Article 11 of the loan agreement was not applied for the first and second quarter of 2001. The banks thus effectively exempted Hynix from the consequences of the default under its loan agreement. Nevertheless, they still granted new financing by purchasing the CBs in June 2001.
- (89) Several Hynix creditor banks also increased their loan loss provisions with respect to the Hynix debt ⁽¹⁾. Prior to participation in the June 2001 CB purchase, KorAm Bank, Hana Bank, Shinhan Bank and Kookmin Bank increased their loan loss reserves for Hynix by 25 %. By the third quarter of 2001, these banks had classified 60 % or more of their loans to Hynix as non-performing. It is recalled that three of these banks failed to cooperate with the investigation (see recital 18 above).
- (90) The banks purchased the CBs on 20 June 2001. It is noted that between mid-June and 20 June 2001, the Hynix stock price had sunk considerably. Despite this, the banks purchased the CBs even though it must have been evident to them at that time that they would not recover their money ⁽²⁾. Within one month the banks had incurred huge losses on the bonds. The Hynix stock price had declined sharply and the banks directed certain portions of the acceptance price of Hynix CBs as losses in settling their accounts at the end of June 2001.

⁽¹⁾ Shinhan Bank, ING Barings, 24 April 2001; KorAm Bank, ING Barings, 26 September 2001; Hana Bank, Morgan Stanley, Dean Witter, 30 October 2001; Kookmin Bank, Morgan Stanley, Dean Witter, 24 October 2001.

⁽²⁾ It is noted that the CBs purchased in May 2001 were swapped into equity or written off by the banks only a couple of months later in the context of the October 2001 restructuring measures.

(91) The information received after the publication of the provisional measures and not rebutted by the parties indicates that contacts between the creditor banks and public officials took place in March to May 2001. According to this information, the 10 March 2001 meeting referred to in recital 82 was convened in order to get the banks to support the Hyundai Group of companies⁽¹⁾. When some banks indicated reluctance in providing support to Hynix since they were concerned about the downgrading of external credibility and violation of credit limits, the GOK financial officials still persuaded the banks to do it⁽²⁾. On 24 April 2001 it was reported that Hyundai Creditors' Association decided not to purchase KRW 1 trillion convertible bonds ('CBs') requested by Hynix. Hynix had no liquidity to pay off its maturing liabilities and the proceeds of the CB issuance, KRW 1 trillion, were to be used for servicing its existing debt. The presidents of the creditor banks, including KEB, KDB and Chohung Bank had a meeting on 23 April 2001 in which most participants were opposed to accepting CBs in the amount of KRW 1 trillion⁽³⁾. On the same day, the CEO of Citibank, Citibank being the financial adviser of Hynix at the time and the organiser of the May measures, formally requested financial support for Hynix from the GOK, and the FSC Chairman expressed a positive position on it. Against this background, it was reported that financial support to Hynix, including acceptance of CBs, had become more likely⁽⁴⁾. It is recalled that Citibank has also failed to cooperate with the investigation (see recital 18).

(92) It was reported that KorAm Bank, one of the banks not cooperating with the investigation, refused to take over its share of the KRW 1 trillion of CBs on the basis that Hynix failed to deliver a memorandum pledging to make its best effort to reduce its debts. It is observed that there were reports indicating that as a response to this, the FSS stated that it would not forgive the bank if it would not participate, adding that it will take stern measures against the bank, such as disapproving new financial instruments and subjecting the bank to a tighter audit. Following this warning, KorAm reversed its decision and participated in the purchase of CBs⁽⁵⁾.

(93) Considering that in the absence of cooperation by the parties the final conclusions need to be based on best facts available, further information, even if extracted from secondary sources, should be observed in this context. It is noted that one of the measures originally

investigated was an alleged SGICO (Seoul Guarantee Insurance Corporation) guarantee for KRW 600 billion of Hynix CBs to be purchased by investment trust companies. It was confirmed during the investigation that this bond purchase never took place and therefore no guarantee was provided⁽⁶⁾. The reasons for the failed transaction, however, were not explained. It is observed that there are reports indicating that the banks at the time required that in order for them to purchase the CBs, the investment trust companies also needed to do so since the banks did not want to bear all the financial burden themselves. The investment trust companies refused to buy Hynix bonds since they claimed it was common knowledge that the bonds were insolvent bonds and that they were not able to sell them at the time when they were struggling to recover the confidence of the market. According to the reports, the investment trust companies stated that they would not be able to avoid criticism that they were investing their customers' money in an insolvent company, which could lead to lawsuits against them. If the investment trusts were forced by the financial authorities to accept the new corporate bonds in the amount of several billions of won under these circumstances, the whole investment trust circle may become insolvent⁽⁷⁾. On the basis of the above it appears that the banks were participating in all the discussions on the May 2001 measures since early March 2001 and that they were well aware of the arguments of the investment trusts and the reasons these refused to subscribe the bonds. The banks themselves had also decided not to accept the CB purchase some weeks earlier and had acknowledged the inability of Hynix to service its existing debt.

(94) Following the disclosure of this information to the interested parties, the parties admitted that an FSS official was present in one meeting and that subsequent contacts between FSC/FSS and the banks took place. It was explained that the FSS official was only present as an observer to act as a witness for the creditors' prior commitments of funding, and not to influence the creditor banks or their decision to extend further credits to Hyundai companies. It was also explained that the 'follow-up phone calls' with the FSS/FSC officials and the creditor banks were only conducted in the exercise of the normal prudential supervisory role of the FSC/FSS. However, considering that the parties have been withholding important information until confronted with it

⁽¹⁾ The Naeoe Economic Daily, 10 March 2001.

⁽²⁾ The Maeil Economic Daily, 11 March 2001.

⁽³⁾ Korea Times, 24 April 2001.

⁽⁴⁾ Maeil Economic, 24 April 2001.

⁽⁵⁾ Korea Times, 21 June 2001; Dow Jones International News, 20 June 2001.

⁽⁶⁾ Recital 39 of the provisional Regulation.

⁽⁷⁾ Donga daily, 4 May 2001; Korea Economic Daily, 3 May 2001; Maeil Economic, 7 May 2001.

and impeding the investigation by instructing other parties not to cooperate, it is difficult to find these explanations fully convincing. In addition, information on the record indicates that the official attending the meeting of 10 March 2001 was the FSC Vice Chairman, i.e. a high-ranking official. In these circumstances, pursuant to Article 28 of the basic Regulation which allows the conclusions to be based on best facts available in cases of non-cooperation by the parties, it is concluded that the banks were not freely and independently deciding on the issue of the CB purchase on the basis of commercial considerations, but were directed to buy the bonds by the GOK. The information from the secondary sources referred to above supports this conclusion.

(95) In its comments on the final disclosure the GOK argued that account should be taken of the fact that private investors had bought Hynix GDRs worth USD 1,25 billion in June 2001 and that therefore the banks' decision to buy Hynix CBs was in line with commercial considerations. It is noted that these investors must have been influenced by the anticipated continuous availability of the GOK-directed KDB programme to refinance Hynix's maturing liabilities. Moreover, these investors did not have the same insight in the situation of Hynix as the creditor banks. Therefore, it is not unreasonable to conclude that the decision of the banks to invest should have been different from that of the GDR investors.

(96) On the basis of the best facts available it is therefore concluded that the decision of the banks to purchase KRW 1 trillion of Hynix CBs was not taken on the basis of commercial considerations, but was taken due to direction by the GOK pursuing public policy goals. The amount of the CBs purchased is therefore a financial contribution by a government within the meaning of Articles 2(1)(a)(iv) and (i) of the basic Regulation. This purchase conferred a benefit to Hynix in the amount of KRW 1 trillion, the purchase price of the bonds, since comparable funds were not available to it in the market. Hynix's situation had deteriorated further from January 2001 and it had no possibility to receive an equivalent loan from the market. For these reasons, the amount of the CB purchase of KRW 1 trillion is considered as a subsidy in the meaning of Article 2 of the basic Regula-

tion. Since this is an ad hoc subsidy provided to only one company, it is specific pursuant to Article 3 of the basic Regulation and therefore countervailable.

(97) According to Article 5 of the basic Regulation, the amount of countervailable subsidies shall be calculated in terms of the benefit conferred on the recipient. The CBs purchased by the creditor banks had an interest rate and were to be paid back at their maturity by Hynix. They are therefore comparable to a loan. According to Article 6(b) of the basic Regulation the first point to examine is whether a comparable commercial loan was available in the market and if so, the benefit would be the difference between the interest rates applied. As explained in recital 87 there were no comparable loans available to Hynix in May 2001. For this reason, the benefit conferred by the bond purchase needs to be determined on another basis.

(98) According to Section E(b)(v) of the Guidelines, the amount of the loan forgiven or defaulted on will be treated as a grant. This means that if at the time of the granting of a loan it is already evident for the granting authority that it will not recover its money, the loan should be considered as a grant. In the present case, as explained under recitals 88 to 90, it was obvious for the banks at the time of the purchasing of the bonds that they would not recover the money they had spent on purchasing the Hynix's CBs. Therefore the benefit to Hynix and the amount of countervailable subsidy is the purchase price of the bonds, KRW 1 trillion. Using the calculation method explained in recitals 67 and 108 of the provisional Regulation, the subsidy amounts to 5,4 %.

7. THE OCTOBER 2001 RESCUE PACKAGE, CONSISTING OF DEBT TO EQUITY SWAP, THE SECOND ROLL-OVER OF DEBT AND THE PROVISION OF A NEW LOAN OF KRW 658 BILLION

(99) Following the publication of the provisional Regulation, Hynix, the GOK, KEB, Woori Bank, Chohung Bank ('CHB'), Citibank Seoul and National Agricultural Cooperation Federation ('NACF') submitted comments concerning the provisional findings as regards the October 2001 rescue package.

- (100) The comments of the parties are listed and assessed below. However, since the calculation of the amount of the countervailable subsidy is an important question as regards the October 2001 measures, it is considered useful to explain how and following which principles the assessment of the amount of subsidy is conducted, in particular considering that the October 2001 measures were granted to a company in financial difficulties.

(a) Introduction

- (101) In the provisional Regulation, the October 2001 measures, namely the debt-to-equity swap, the new loan of KRW 658 billion and the extension of maturities and roll-over of debt, were considered as grants. This was based on Section E(b)(v) of the Guidelines, which provides that a loan will be considered as a grant if it is forgiven or defaulted on. Recitals 104 to 107 of the provisional Regulation provisionally concluded that due to the financial situation of Hynix, no corresponding financing was available to it in the market and that the banks knew at the time of the October 2001 measures that they would not recover their money invested in/lent to Hynix.

- (102) The first point to examine when assessing the calculation of the subsidy in cases of provision of financing to a company in difficulty is the credit rating of the company at the time of the measures. The rating is indicative of the financial situation of the company and its ability to attract investments or receive financing at the given time since the potential investors/lenders base their decisions above all on the rating given to the company by an independent international rating agency.

- (103) It is noted that the rating given to Hynix in October 2001 by Standard & Poor's was SD — 'selective default'. This is the second-worst rating possible, the worst being 'default', which according to Standard & Poor's criteria is not prospective, as the other ratings, but used only when the default has actually occurred. SD is assigned when an issuer can be expected to default selectively, that is, continue to pay certain issues or classes of obligations while not paying others. Consequently, the rating of Hynix at the time of the measures was very alarming to any investor/lender and did not support a decision to grant further financing to it under commercial considerations.

- (104) The second point to examine would be the history of the company in servicing its existing debts and the rating given to it by the lenders concerned. If a company with even a moderate rating continued to service its

existing debt to some of its lenders, it would not be completely unreasonable for these lenders to take this into account in their internal rating of the company concerned and also consider this fact positively when assessing whether further lending to the company concerned could be considered. In the present case, however, it is noted that Hynix had not serviced its existing debts in 2001, and had even defaulted on the interest payments of the syndicated loan granted in January 2001. As explained in recital 88, the banks announced the default already in May 2001, but decided not to take the appropriate measures to address the situation. Several banks raised their loan-loss provisions as regards Hynix already in May 2001 and again in October 2001 before the measures, indicating that the further financing was already considered a loss. The internal ratings of the banks concerned reflected this assessment. The six banks concerned by the October 2001 measures rated Hynix internally from 'precautionary' to 'doubtful'. Such a situation does not support a decision to grant further financing to the company concerned.

- (105) The third point to examine would be the general financial situation of the company concerned. If the company is experiencing temporary liquidity problems but has healthy fundamentals, it is justified for potential lenders to take this into account when taking their credit decisions.

- (106) It is noted that the overall financial situation of Hynix had been critical for a long period. At the end of 2000, Hynix had accumulated more than USD 9,46 billion of liabilities. This was almost twice its net worth and more than four times the value of market capitalisation of the company⁽¹⁾. In October 2001, Hynix's debts were six times its equity. This situation was also well known by the banks concerned. As explained in recital 44, KEIC already stated in November 2000 that Hynix was in a state of technical insolvency. Similar statements can be found in the internal reports of the banks concerned which refer to Hynix having negative capital and excessive lending.

- (107) The financial ratios of Hynix according to the so-called Altman Z-score model, designed specifically to predict the likely failure of Korean companies, were in 1999 to 2001 far worse than other Korean companies that actually did fail. The Hynix scores were 700 % higher than the threshold level of a company in severe financial distress⁽²⁾. Hynix's current and quick ratios were indicative of a company with totally inadequate liquidity to

⁽¹⁾ Hynix business plan for 2001 filed with the FSC, 21 March 2002.

⁽²⁾ Saunders Report, p. 30-35.

cover obligations ⁽¹⁾. Hynix's net profit margin, return on assets and return on equity were negative in nearly every year since 1997, with net margins reaching minus 24,3 % in 2000 and a minus 93,83 % in 2001. In any year from 1997 to 1999, the company's cash flow from operations was not enough to cover even one sixth of its debt or total liabilities.

(108) The 2001 financial accounts also discounted the possibility of future financial success of Hynix, stating that the entire normalisation of the company's operation required the continuous support from creditor banks until the selling price of semiconductor products sufficiently recovered. These facts indicate that both the history and the future of Hynix was characterised by its dependency of financial assistance from its creditors. Hynix had reached a point where it was unable to finance its operations by the returns generated by its activities.

(109) The next point in the assessment of the basis of calculation of the subsidy would be to see whether other loans from commercial sources had been granted to the company concerned, and if so, under which conditions. If such loans were granted, the terms and conditions of such loans could serve as a benchmark for measuring the benefit conferred to Hynix by the measures concerned, and thereby also the amount of subsidy.

(110) In the present case, it is noted that Hynix could not obtain any commercial loans at any time in 2000 and 2001. Hynix's borrowing was exclusively concentrated on GOK-provided, GOK-directed and GOK-guaranteed loans. The largest creditor of Hynix at the time of the measures was KDB, which held 44 % of the total of Hynix loans in December 2001 ⁽²⁾.

(111) Prior to 1998, Hynix had received loans from French and Japanese banks, including the Bank of Tokyo, Société Générale and Credit Lyonnaise. Since then, however, none of these banks has participated in the restructuring of Hynix. The outstanding loans from foreign banks, including those from Citibank Seoul, accounted for only 5 % of the total Hynix loans in 2000 to 2001 ⁽³⁾. It is noted that the assessment of the role of Citibank is explained in recitals 130 to 133.

(112) The lack of participation of foreign banks suggests that further investment in Hynix was not considered to be rational and economically justified. It is noted that the outstanding amount of KRW 37,5 billion of the syndi-

cated loan from foreign borrowers granted in 1996 and led by Société Générale was declared for default and cross default in 2001.

(b) Financial contribution by government

(i) Comments of the parties

(113) Hynix and the GOK both argued that the October 2001 package did not constitute a subsidy since the financing provided was not granted by the GOK. Hynix argued that as regards Citibank and KEB, no evidence was provided showing that the GOK had used its influence to force the banks to accept the October 2001 measures. As regards Woori Bank, CHB and NACF, Hynix argued that the GOK shareholding should not be confused with government control of credit decisions. It was further argued that the credit decisions were based on commercial considerations by each of the banks concerned.

(114) KEB argued that the GOK had played no role in the restructuring programmes in relation to KEB's commercial decisions. It argued that the GOK has no special right either contractually or under Korean law that would allow it either to block or influence KEB's commercial decisions. According to KEB, the same applies also to the FSS. In relation to the FSS's management recommendations for the KEB business operations it was argued that these actions fall within the scope of its ordinary activities pursuant to the Banking Act and the banking Regulations and were not to be understood as meaning any kind of interference or involvement on the part of the FSS or any other financial supervisory authority.

(115) Woori Bank argued that, despite its position as the largest shareholder, the GOK was prohibited from exercising any influence over the Woori bank's decision-making process.

(116) CHB argued that the GOK has no direct or indirect influence on its management activities. Even if Korea Deposit Insurance Corporation ('KDIC') has a substantial shareholding in CHB, CHB allegedly remained a commercial bank and its decisions were taken on the basis of purely commercial considerations. It argued that the Memorandum of Understanding ('MOU') referred to in the provisional Regulation only concerned the various restructuring measures imposed by the GOK in response to the 1997 financial crisis.

⁽¹⁾ Saunders Report, p. 20-21.

⁽²⁾ Hynix business plan for 2001 filed with the FSC, 21 March 2002.

⁽³⁾ Hynix business plan for 2001 filed with the FSC, 21 March 2002.

- (117) Hynix and CHB also argued that other banks (Industrial Bank of Korea ('IBK'), Seoul Bank, Kwangju Bank and Kyongam Bank) where the GOK also had a substantial shareholding did not participate in the October 2001 package, and this demonstrated that the GOK had not interfered in the business activities of any of the banks involved.
- (118) NACF argued that it was formed for the purpose of improving the economic, social and cultural status of farmers and quality of their lives. KDIC as a preferred investor was not allowed by law to participate in NACF decision-making. As such, its mandate did not include implementation of public policy goals.
- (119) Citibank Seoul denied being in any way affiliated with the GOK and explained that it participated in the investigated measures solely in pursuit of its commercial interests.
- (ii) *Assessment of the Comments*
- (120) It is noted that it has been provisionally concluded on the basis of the principles set out in recitals 10 to 14 above that KDB is a public body. As regards the other banks, these were not found to be public bodies but were found to be directed by the GOK to carry out the measures in question.
- (121) In terms of demonstrating direction, the fact that the GOK was the only or the major shareholder in some of the banks is an important point that needs to be taken into account in the assessment of the situation. The amount of a shareholding by the GOK, or other shareholders, determines the extent to which they can influence the decision-making process set out in company law and the articles of association of the company concerned. In this respect it is important to refer to the Korean Prime Ministerial Decree No 408 adopted in November 2001, which addresses management responsibilities in companies where the government has a shareholding. Though Article 6 of the Decree emphasises the importance of allowing such companies to manage themselves, it crucially allows the State to fulfil its full rights as a shareholder.
- (122) The information on the record also indicates that the State as a majority shareholder can appoint directors of financial institutions. As such, the GOK regularly nominates or carries influence in the selection of a CEO and other members of a bank's management⁽¹⁾. Through its voting power, the GOK is therefore in a position to influence the operations of the KEB, Woori and the CHB, where it is the largest shareholder. For example, information on the record indicates that the State influenced the decision to change KEB's CEO following poor performance with Hynix and certain credit-card companies⁽²⁾.
- (123) Moreover, it should be noted that the provisional Regulation did not rely solely on the GOK's shareholdings to prove direction. Recitals 88 to 98 of the provisional Regulation explained extensively as regards each bank the reasons for which it was found that the GOK had exercised direction with regard to the October 2001 measures. In addition to the explanations provided in the provisional Regulation, these findings are now further reinforced by additional information, some of which has been received after the publication of the provisional measures.
- (124) As explained under recitals 32, 42 and 43, the records contain evidence that the GOK gave direct instructions to financial institutions concerning some of the measures under investigation. This information also indicates that the FSS was involved in the measures. The record also indicates that the GOK coerced these institutions to participate in some measures by threatening to impede their business operations⁽³⁾. It is noted that the Commission had on several occasions asked both the GOK and banks concerned about such involvement, yet all parties have consistently denied that there was any State involvement in relation to the measures in question.
- (125) On 3 August 2001, briefly before the October 2001 measures, the Korean Deputy Prime Minister stated in the seminar meeting of the Newspaper and Broadcast Editors Association that in the event that the creditor group was unable to resolve the Hynix issue, the GOK would come forward to make a quick decision. If the creditor group could not make a decision on additional financing to Hynix, the financial authorities should decide.

⁽¹⁾ Private financial experts Verification Report, Meeting 1, point 2, Meeting 2, point 6, Meeting 4, point 9, Meeting 5, point 11.

⁽²⁾ Private financial experts Verification Report, Meeting 1, point 2, Meeting 2, point 6, Meeting 4, point 9.

⁽³⁾ As regards KorAm being directed to participate in the CB purchase in June 2001, Korea Times, 21 June 2001; as regards Korea First Bank being directed to participate in the KDB Debenture programme, Far Eastern Economic Review, 15 February 2001.

- (126) As for the KEB argument that the GOK has no legal or contractual right to influence its commercial decisions, it is noted that the findings of the provisional Regulation on the GOK direction were not based on such contractual or legal rights. The findings on this point sought to demonstrate how the GOK was able to use its power to direct KEB in a more subtle way, for example through its position as a major shareholder. Moreover, the preliminary conclusions on this point are reinforced by new evidence received after the publication of the provisional Regulation where GOK ministers intervened to instruct KEB in relation to some measures investigated — see recitals 32, 42 and 43.
- (127) As regards the FSS and FSC, evidence obtained since the provisional measures also demonstrates that the FSS was involved in the decisions on measures providing financing to Hynix, e.g. the letter from Korean ministers to KEB referred to in recital 126 above. As regards the FSS/FSC's role of carrying out its supervisory activities in relation to the ongoing restructuring of KEB, the evidence on the record shows that the FSC approved the extension of KEB lending limits, a fact which ran counter to the restructuring plan which demanded a reduction of its excessive credit exposure to Hynix. Moreover, in the KEB financial accounts a considerable amount of Hynix debt-to-equity swap was not included in the loss calculation of the troubled loans. Consequently, the comments of KEB on the provisional Regulation have not provided any new substantial evidence that would alter the assessment set out in recitals 90 to 91 of the provisional Regulation. These conclusions are therefore confirmed.
- (128) As regards NACF, recitals 96 to 98 of the provisional Regulation explained the grounds on which it was provisionally concluded that NACF was directed by the GOK in participating in the October 2001 measures. Even though the form of NACF as a cooperative is fully recognised, its cooperative goals to improve the economic, social and cultural status and quality of life of farmers are also economic policy objectives to support agriculture. It is further noted that NACF is jointly managed by the Ministry of Finance and Economy and the Ministry of Agriculture and Forestry. It has specialised functions as an agricultural policy bank, such as implementation of Korea's agricultural policy and provision of GOK funds for the agricultural sector. The new Agricultural Cooperative Law of August 1999 provides for GOK grants/support when necessary (Article 9), allows the GOK to take an equity stake (Articles 147 to 151) and enables NACF to issue Agricultural Finance Bonds and requires the GOK to guarantee it (Articles 153 and 156). The credit rating given by NACF to Hynix at the time of the measures, namely 8⁽¹⁾, did not justify granting further financing to Hynix. The comments of NACF on the provisional Regulation have not provided any new substantial evidence that would alter the assessment set out in recitals 96 to 98 of the provisional Regulation. These conclusions are therefore confirmed.
- (129) As regards the Woori Bank and the CHB⁽²⁾, recitals 88 and 89 of the provisional Regulation explained the reasons on the basis of which it was provisionally concluded that Woori Bank and CHB were directed by the GOK to participate in the October 2001 measures⁽³⁾. These conclusions on direction are reinforced by the information received after the imposition of provisional measures and which is referred to in recitals 91 to 94, 124 and 125. Woori Bank and CHB have not provided any new evidence in their comments which would alter the Commission's conclusion as set out in recitals 88 and 89 of the provisional Regulation. These conclusions are therefore confirmed.
- (130) As regards Citibank, as explained in recitals 93 and 95 of the provisional Regulation, it failed to cooperate fully with the investigation. In these circumstances, findings with regard to its involvement in this financial package to Hynix have been established in accordance with Article 28 of the basic Regulation, i.e. on the basis of facts available.
- (131) In terms of its role as a lender in this investigation it should be noted that the non-cooperation of Citibank prevented any reliable information being obtained on the precise functions and practices of Citibank in relation to the financial package given to Hynix. Thus, Citibank's assertions that it was not acting under GOK direction could not be verified via a proper response to a

⁽¹⁾ The scale being 1 to 10.

⁽²⁾ The GOK owned 100 % of Woori Bank and 80 % of CHB.

⁽³⁾ It is also noted that an internal Woori Bank document recommending participation in the October 2001 measures states the following: 'Should Hynix go to Court receivership or be liquidated, the effect on the national economy will be immense. The company accounts for 4 % of the total exports and 150 000 workers, including the company itself and its upstream and downstream companies.' This indicates that public interest considerations were taken into account.

questionnaire and a subsequent verification visit. The same applies to the lending practices of Citibank. It should also be noted that the failure of Citibank to cooperate significantly impeded the investigation, not just in terms of identifying Citibank's precise functions in relation to its role as a lender, but also in respect to its role as the financial adviser to Hynix. Due to the non-cooperation the true status of Citibank as regards Hynix and the nature and intensity of its overall relationship to the GOK remain unknown. The importance of cooperation and verification visits is demonstrated by the fact that as regards some of the other banks involved in the case, it was proper cooperation and verification that was instrumental in allowing definitive conclusions to be drawn as regards the relations between them, Hynix and the GOK. What the investigation has, however, shown, due to information given by other parties, is that Citibank was a central figure in discussions between the GOK, Hynix and other parties involved in this case. Indeed, Hynix stated that Citibank should not cooperate in the investigation because 'such disclosure may divulge information relating to Hynix's cost, finance or accounting'. It is recalled that Hynix was majority-owned by the GOK via the banks at the time of this intervention.

puted as placing Citibank in a vulnerable position with regards to direction by the GOK. Due to the non-cooperation it was not possible to establish whether Citibank acted on coercion or whether this was in accordance with their normal business practice. In this respect, it is recalled that the reason for non-cooperation was to prevent access to Hynix's cost, finance and accounting data. In the absence of any other explanation, this can reasonably be taken as an indication that this data in Citibank's possession contain information revealing that there were no commercial reasons to provide the financing in question, and that the financing was provided due to GOK direction. This reason is also the one suggested in the complaint. In addition, as explained in recital 94 of the provisional Regulation, Citibank has had an unusually close and symbiotic relationship with the GOK since 1967, when it was authorised to operate in Korea. This close relationship between the GOK and Citibank is witnessed in the role played by Citibank in assisting the GOK to extricate itself from the Korean financial crisis of 1997. Citibank led and successfully completed Korea's bank debt restructuring for a total of USD 21,75 billion in 1998. Moreover, Citibank helped the GOK and government-related institutions to access capital markets during the Korean financial crisis by successfully sponsoring a USD 4 billion global bond offering. All these facts confirm that Citibank has a very close relationship to the GOK. On the basis of these facts, and of the refusal of Citibank to grant access to the information in its possession, and failing any other verifiable evidence being available, the conclusion to be drawn in accordance with Article 28(6) of the basic Regulation is that the GOK was involved and directed Citibank to provide the financing in question.

(132) In these circumstances, the final findings had to be based on the facts available with regard to whether Citibank as a lender acted under GOK direction and whether the benefit to Hynix equated to the full financial contribution made by Citibank to Hynix. In this respect, it is uncontested that unlike the other participants in these measures, Citibank's first intervention as a creditor bank of Hynix was in January 2001 when the financial situation of Hynix was already sufficiently bad to deter any other new bank from getting financially involved. Citibank's own rating for Hynix in October 2001 was D 'doubtful'. Nevertheless, Citibank provided financing to Hynix. Citibank was requested to explain their general lending policy and whether it was normal to provide financing to doubtful companies. As already explained, Citibank did not provide any details which would have explained their motivation in participating in the measures investigated.

(133) As for the GOK direction, information on the record indicates that there were considerable links between the GOK, Hynix and Citibank. For the GOK and Citibank these went beyond the loans investigated. Such links can be interpreted in two ways. Firstly, they can be interpreted as indicating that Citibank may well have had commercial reasons for providing financing to Hynix, or as alleged by one of the parties, they could be inter-

(134) As for the argument that not all banks where the GOK had a substantial shareholding participated in the October 2001 measures and that this disproved that GOK direction was taking place, it is noted that Kwangju Bank and Kyongam Bank were about to be merged into Woori Financial Holding at the time of the measures. As Woori Bank was already one of the major creditor banks in the October 2001 restructuring, it is understandable that it was not necessary for Kwangju and Kyongam Banks to participate in the measures separately. The same situation applies to Seoul Bank, which the GOK was planning to sell to Hana Bank following the recommendations of the IMF. In anticipation of this sale, a rise in speculative loans on the books of the Seoul Bank was not seen to be beneficial.

- (135) As regards IBK, it is noted that IBK is a specialised bank whose mandate is to promote the development of small and medium-sized enterprises. Its operations are underwritten by the GOK. By extending further lending to Hynix, IBK would have exceeded its mandate in a very apparent way which would have been extremely difficult to justify. In fact, by granting the D/A facility and participating in the CB purchase as regards Hynix, IBK had already breached its mandate and further exposure to a large company in difficulties would not have been in line with its policy goals.

(c) Benefit conferred by the measures

- (136) KEB, Woori Bank, CHB, NACF and Citibank Seoul all argued that they participated in the October 2001 package since they wanted to maximise their recovery rate for the loans already granted to Hynix. They considered that the value of Hynix as a going concern was higher than the immediate liquidation value. They argued that their participation in the October 2001 package was determined on the basis of their credit evaluation of Hynix, supported by analysis from outside consultants. It should be noted, however, that Hynix has refused to provide a copy of the analysis determining the liquidation value on the basis that it was confidential. Consequently, it has not been possible to assess its merits and, therefore, final findings in this regard have been determined in accordance with Article 28 of the basic Regulation.

- (137) It is also noted that the position of the decision of these banks to participate in the measures is not consistent with their own evaluation of the financial situation of Hynix, and in particular with the credit rating they gave it. The banks in question rated Hynix at the time of the measures between 'precautionary' and 'doubtful'. No satisfactory explanation has been provided as to why in spite of the very critical situation of Hynix they still decided to continue with financial support.

- (138) It is noted that independent banks operating under market principles are required by their shareholders to evaluate the repayment probability of the loans they make and to take their decisions on whether to grant the loans or not on this basis. Such banks are required to follow objective lending criteria and must answer to shareholders when losses occur, as was the case with the Hynix loans. With respect to banks participating in the October 2001 measures, this can therefore only be explained by the fact that the decision makers were

shielded from these consequences because of the high level of GOK ownership and factual control of the lending decisions. It should be further noted that the argument defending the merits of continuous lending to a heavily indebted company is particularly difficult to justify considering that the banks were at the same time swapping debt to equity, providing new financing and also raising the loss provisions for Hynix loans. This was based on their experience during 2001, when Hynix did not service its debts, as explained in recital 88. This indicates clearly that the banks, although aware that they would not recover their funding, provided it. This is not in line with lending practices based on commercial considerations.

- (139) Hynix and the GOK argued that Hynix's credit rating of 'selective default' was only a consequence of the restructuring programme and should not have been taken into account by the banks.

- (140) This argument does not appear to have any basis in fact. It is not reasonable to insist that a firm's credit rating is not the determining factor for potential investors. Moreover, the rating itself is more important than the reasons for it. Any potential investor planning to invest in a company examines its rating. In addition, following the logic argued by Hynix, the rating of Hynix should have been raised after the October 2001 restructuring measures were carried out. It never was, however, and remained at 'selective default'. This still remains the case today. Clearly the rating agencies considered the whole situation of Hynix and investors operating under market conditions would have, and should have, taken into account the credit rating that applied to Hynix at the time of the October 2001 measures.

(d) Calculation of the subsidy

(i) Comments of the parties and assessment of the comments

- (141) As regards the calculation of the subsidy, Hynix raised five points in its comments. Firstly, Hynix argued that the debt-to-equity swap should not be included in the subsidy calculation. In addition, the amount of debt-to-equity swap of KRW 2,994 trillion included the loans of all 15 banks, not only the loans of the six banks found to have provided a subsidy. Therefore, the share of the banks not providing a subsidy should be deducted from the total amount of the debt-to-equity swap. This point was also raised by the GOK and Shinhan Bank.

- (142) After the verification of this point, it was concluded that the share of those banks not participating in the Option 1 measures should indeed be deducted. According to the information in the records, the amount to be deducted was KRW 511 trillion. The total amount of the debt-to-equity swap considered as subsidy was corrected accordingly to KRW 2,483 trillion.
- (143) The second point raised by Hynix is that the value of extension of maturities and reduction of interest rates, KRW 1,586 trillion, is not correct, since it comprised alleged debt forgiveness and interest rate reduction of banks which were not found to provide a subsidy. The share of these banks should therefore be deducted from the total amount. This point was also raised by Shinhan Bank.
- (144) It is noted that an error has occurred on this point of calculation of the subsidy. According to information on the record the amount of loans subject to maturity extensions was KRW 1,825 trillion.
- (145) Thirdly, Hynix argued that the allocation method of the subsidy was incorrect. Since the October 2001 package only referred to the last three months of 2001, this should be taken into account when allocating the benefit over time.
- (146) The subsidy granted to Hynix in the context of the October 2001 package was a non-recurring subsidy. The amount of countervailable subsidy was calculated pursuant to Article 7(3) of the basic Regulation by allocating the amount of subsidy over the period of time which reflects to normal life of the assets in the industry concerned. According to point F(a)(ii) of the Guidelines, the allocation is done using the straight line method, which results in equal portions of a subsidy falling on each year, one of which being the investigation period.
- (147) The method advocated by Hynix is not reasonable, as it would artificially reduce the benefit conferred by the subsidy. If the amount of subsidy was allocated starting from October 2001 onwards, the duty would be in force for a longer period of time than when it is calculated under the normal calculation method laid down in the Guidelines, i.e. the beginning of the investigation period. A method referred to by Hynix would also lead to a situation in which each and every non-recurring subsidy granted during the investigation period would have its own individual countervailing duty period. This would be impossible to implement. In addition, if the numerator — the subsidy — covered only three months, the denominator — the recipient's turnover — would be reduced to cover the corresponding period. In this case, given the low level of sales in value terms in the last quarter of 2001, this could well increase the *ad valorem* rate of the subsidy. For these reasons, there are no grounds for changing the allocation method used in the provisional Regulation. Therefore, the conclusions set out in recital 108 of the provisional Regulation on the allocation of subsidy over time pursuant to the Guidelines are hereby confirmed.
- (148) The fourth argument of Hynix was that the interest rate added to the amount of subsidy was wrongly calculated. The interest rate should only have been added as regards the three last months of the year 2001, October to December, since this was the time when the benefit was available to Hynix.
- (149) The reasoning rejecting the argument of Hynix concerning the allocation of the subsidy over years in recital 147 applies also here. The linear allocation method distributes the benefit of all non-recurring subsidies received during the investigation period equally over the number of years in the allocation period. The annual commercial interest rate is added to this amount pursuant to point F(a)(ii) of the Guidelines, in order to have an equal denominator for the interest rate for all cases. Since the subsidy is allocated equally over the years, the interest rate follows the same method and an equal interest rate is calculated for all portions of subsidy resulting from the allocation. Any issue relating to timing of the grant during the investigation period is compensated by the fact that the subsidy is being allocated over the entire year's sales in order to determine the subsidy amount. For these reasons, there are no grounds for changing the calculation method for the interest rate used in the provisional Regulation. Therefore, the conclusions set out in recital 108 of the provisional Regulation on the calculation of the interest rate pursuant to the Guidelines are hereby confirmed.
- (150) As regards the amount of the countervailable subsidies, Hynix argued that the subsidy amounts should be allocated on the consolidated turnover of Hynix instead of the turnover of Hynix Semiconductor Inc., since the subsidies benefited Hynix and all its subsidiaries.
- (151) The practice of the European Community in anti-subsidy investigations is to allocate the subsidies over the turnover of the company investigated. The company is defined as a separate accounting entity. This is important, since the investigation targets subsidies granted in the exporting country benefiting a specific product or products. Only the information relevant for this product in the exporting country is investigated and verified by the investigating authorities. The European Community does not consider the consolidated turnover an appropriate basis, since it does not relate to the product concerned and often includes subsidiaries situated outside the exporting country which have not been investigated. It is noted that in the present case, all the Hynix subsidiaries included in the consolidated turnover are situated outside the Republic of Korea.

(152) For these reasons, the subsidy amount shall be allocated on the turnover of Hynix and the conclusion on this point in recitals 67 and 108 of the provisional Regulation is hereby confirmed.

(ii) *Final findings on the calculation of the subsidy of the October 2001 measures*

New loan

(153) In recital 105 of the provisional Regulation, the loan of KRW 658 billion was provisionally considered to be a grant pursuant to Section E(b)(v) of the Guidelines, since the providers of the loan did not expect to recover the loan at the time of granting it. Hynix's credit rating in October 2001 was 'selective default', it had a history of not having serviced its debt during 2001 and its liabilities exceeded six times its equity. In accordance with Article 6(b) of the basic Regulation, no alternative sources of financing were available in the market and Hynix had never even evoked such a possibility during the procedure. Under these circumstances it must have been evident to the banks concerned that they would not recover their money. The benefit to Hynix and the amount of countervailable subsidy is therefore the amount of the loan, KRW 658 billion. The conclusion of the provisional Regulation in recital 105 as regards the amount of the countervailable subsidy is therefore confirmed.

Extension of maturities and interest rate cuts of remaining loans

(154) As regards assessing the benefit and the amount of subsidy granted by the roll-over of debt and the maturity extensions, it is firstly noted that according to the information on the record, roll-overs of debt are considered as new loans in Korea. The assessment of the situation should therefore be similar to that of the case of a new loan. In such cases, the financial situation of the company and its payments history would be the decisive criteria. If it was obvious to the bank at the time of the maturity extension that it would not recover its loan, regardless of the maturity extension, the loan subject to a maturity extension would be considered as a grant, as would a new loan under the same circumstances.

(155) In the present case, the maturities of loans were extended by three years. As explained in recital 107, the situation of Hynix in October 2001 was so alarming that none of the lending banks had a reason to believe that they would ever recover their money. Due to this very critical situation of Hynix, considering the maturity extensions as grants appears to be the appropriate method of calculating the amount of subsidy.

(156) Another possibility to calculate the amount of subsidy would be to compare the interest rate the company actually pays for the extended credit period to the rate it is supposed to pay in case it is granted an extension of maturity. It is noted that normally the interest rate is increased if the maturity is extended. This reflects the increased risk of the lender and the fact that it needs to be compensated for granting the extension. However, the reason why this method is not appropriate in the present case is the fact that for companies in severe difficulties, there is no reliable market benchmark interest rate: the lender is free to charge any interest rate it wants in case it decides to extend a maturity for such a borrower instead of executing its mature claim. Even infinite interest rates can be used.

(157) In the present case the interest rate was lowered to 6 % for all loans subject to maturity extensions. This was extremely low, considering in particular that the syndicated loan granted to Hynix in January 2001 when it had the rating of BBB-, had an interest rate close to 13 %. Considering the fact that in October 2001 Hynix was rated SD and that it is normal practice for commercial banks to increase the interest rate in case of maturity extension, it can be concluded that a normal commercial lender could have very well used an infinite interest rate if it ever considered extending a maturity under such circumstances. Hynix would not have been able to sustain the cost of such interest rate. Since all the evidence in the record indicated that Hynix had no alternative sources of financing in the market than the October 2001 measures, the amount of loans subject to maturity extension, KRW 1,825 trillion, are considered as a grant pursuant to Article 6(b) of the basic Regulation and Section E(b)(v) of the Guidelines. The benefit to Hynix and the amount of countervailable subsidy is therefore the amount of the loans subject to maturity extensions, KRW 1,825 trillion.

(158) It is noted that the accuracy of this conclusion is confirmed by the events that took place subsequently outside the investigation period, in 2002. In June 2002 CHB set aside loss reserves equivalent to 80 % of its exposure to Hynix and planned to provide fully for its exposure to Hynix by the end of year 2002⁽¹⁾. Other Hynix creditor banks also increased their loan loss reserves from 80 % to 100 % of outstanding loans to Hynix, clearly indicating that Hynix loans were unrecoverable⁽²⁾. The further bailout of Hynix which was carried out in December 2002, only a little more than a year after the October 2001 measures, confirmed these predictions. A further KRW 1,9 trillion of debt was swapped into equity in December 2002. It is noted that the amount of debt subject to maturity extension in October 2001 almost equals to this amount, being KRW 1,825 trillion.

Debt-to-equity swap

(159) In recital 105 of the provisional Regulation the debt-to-equity swap was concluded to be considered as a grant pursuant to Section E(b)(v) of the Guidelines, since no market investor would have invested in Hynix shares at the time of the measure. In addition, the GOK-directed banks had also forgiven the same amount of outstanding debt to Hynix.

(160) According to Article 5 of the basic Regulation, the amount of countervailable subsidies shall be calculated in terms of the benefit to the recipient which is found to exist during the investigation period of subsidisation. It is noted that the debt-to-equity swap was immediately booked in Hynix's 2001 financial accounts, wiping out a considerable amount of its debt. It is therefore reasonable to conclude that the benefit to Hynix equated to the full amount by which its debt was reduced. Its financial situation was immediately improved by that amount, a fact which can have a number of beneficial consequences, e.g. the removal of the cost of the servicing of the debt and using the saved money in investments instead. The same applies even if the intervention of the banks is viewed as a type of equity infusion. The benefit to Hynix is the full amount of that capital.

(161) Apart from the question of the benefit conferred to Hynix by the measure, the situation from the point of view of the banks who transformed their loans into equity in the transaction should also be analysed.

⁽¹⁾ However, ÜBS Warburg stated in 18 September 2002 that given the high share of GOK ownership in the bank, additional exposure in the future might prove unavoidable.

⁽²⁾ Korea Times, 25 November 2002.

According to Section E(f)(i) and (ii) of the Guidelines, government provision of equity capital is not considered as conferring a benefit, unless the investment decision can be regarded as inconsistent with the usual investment practice of private investors in the exporting country concerned. The criterion to assess the benefit is whether a private investor would have put money into the company in the same situation in which the government provided equity.

(162) It is noted that Hynix's rating was at selective default and its financial situation was critical. Furthermore, the DRAM prices had plummeted from June 2001 onwards and in October 2001 they were at their lowest point ever. The stock price of Hynix had also fallen 72 % from June to September. This development just before the October 2001 measures indicated clearly that investment in Hynix shares was extremely risky and likely to result in considerable losses. Under these circumstances, it can be concluded that no normal market investor would have invested in Hynix shares in October 2001.

(163) According to Section E(f)(vii) of the Guidelines, the equity provided can be considered as a grant where it can be determined that the government had no intention of receiving any return on its investment and was in effect giving a disguised grant to the company in question. In the present case the GOK-directed banks forgave a considerable amount of their outstanding loans to Hynix, a measure considered as a grant pursuant to Section E(b)(v) of the Guidelines. This measure conferred a benefit to Hynix which equals to the amount of loans forgiven. The fact that the banks received equity in the transaction does not change this assessment, since considering both the market situation and the situation of Hynix at the time of the measures, no other investor would have bought Hynix shares and the banks could not expect to receive any return to their investment under those circumstances.

(164) For the reasons explained above, the amount of debt-to-equity swap provided by the GOK-directed banks is considered as grant pursuant to Articles 6(a) and (b) of the basic Regulation and Sections E(f)(v) and (vii) of the Guidelines. The benefit conferred to Hynix by this measure, and the amount of countervailable subsidy, is the amount of the debt-to-equity swap provided by the GOK-directed banks, KRW 2,483 trillion.

(165) It is noted that the accuracy of this conclusion is confirmed by the events that took place subsequently outside the investigation period, in 2002. In December 2002 the Hynix creditor banks carried out the third bailout of the company in two years. The measures included roll-over of KRW 3,2 trillion of debts and debt-to-equity swap of KRW 1,9 trillion. Hynix's total liabilities had increased to more than USD 7,9 trillion despite the two earlier bailouts. The capital write-down plan combined every 21 shares into one share. This was done to mitigate the capital erosion of approximately KRW 22 trillion that had resulted from accumulated deficit and discount on capital stocks⁽¹⁾. The banks pointed out that they had already set aside loan loss reserves equivalent to 80 % to 100 % of the loans extended to Hynix⁽²⁾. This situation, and in particular the magnitude of the capital write-down of 21:1, clearly indicates that Hynix equity can be considered worthless and the investment in it as loss.

(166) The calculation of the amount of subsidy has been revised on the basis of the comments of the parties and the new information that has given rise for changing the provisional findings as regards some investigated measures. In order to avoid double-counting, those subsidies which were included in the October 2001 measures have been deducted from them. The net subsidy amount of the October 2001 measures is therefore 19,4 % *ad valorem*. Considering also the conclusions in recitals 47, 80 and 98, the total amount of the subsidy is the following:

Type of Subsidy	D/A Extension	KDB Debenture Programme	CB purchase	October 2001 measures	TOTAL
	5,1 %	4,9 %	5,4 %	19,4 %	34,8 %

E. DEFINITION OF THE COMMUNITY INDUSTRY

(167) Following the imposition of provisional measures no comments were received on the definition of the Community industry as set out in recitals 110 and 111 of the provisional Regulation. It is therefore confirmed that the two cooperating Community producers representing 100 % of the total Community production of the product concerned during the IP constitute the Community industry within the meaning of Article 9(1) of the basic Regulation.

⁽¹⁾ Public Notice on other major management topics, decision made by Hynix-CFIC meeting, 30 December 2002.

⁽²⁾ Korea Times, 26 November 2002.

F. INJURY

1. PRELIMINARY REMARKS

(168) As set out in recital 115 of the provisional Regulation, for reasons of confidentiality, indices are used where necessary to show the evolution of trends. Following the publication of the provisional Regulation Hynix claimed that whilst the use of indices to describe its data is justified for confidentiality reasons, the mere disclosure in the provisional Regulation of indices in the analysis of the situation of the Community industry did not allow Hynix to assess with a sufficient degree of certainty the situation of the Community industry. Hynix further argued that there were no reasons of confidentiality not to disclose to it the actual figures of the Community industry, since the Community industry comprises two companies. It is noted that Hynix's claim was of a general nature, without specifying which data it would like to review in order to allow it to assess the situation of the Community industry.

(169) However, Article 29(5) of the basic Regulation prohibits disclosure of information for which confidential treatment has been requested and good cause has been shown for such treatment. Furthermore, since the Community DRAM market is highly concentrated with very few producers controlling the market, it would be easy for Hynix to deconstruct any cumulative figures disclosed to it so as to acquire an accurate understanding of confidential business information of the two Community producers composing the Community industry. Such information would be of great commercial value to Hynix and knowledge of it by third parties could harm the Community industry. Finally, the use of indices to show the development of the injury indicators over time is appropriate in a market in which there are only two producers. These indices allow Hynix, on the basis of its own Community market knowledge and the information placed in the file available for inspection by interested parties to analyse accurately the information provided and determine with a sufficient degree of certainty the situation of the Community industry. Accordingly, it is considered that Hynix's claim in this respect is not justified and is therefore rejected.

(170) No further comments were received on the preliminary remarks as set out in recitals 112 to 115 of the provisional Regulation. Those preliminary remarks are hereby confirmed.

2. COMMUNITY CONSUMPTION

(171) The total figure for Community consumption of the product concerned corresponds to the total imports plus all sales in the Community produced by the Community industry.

- (172) In the absence of any new information, the provisional findings concerning Community consumption as described in recital 117 of the provisional Regulation are confirmed. Throughout the period under consideration Community consumption of DRAMs increased by 316 % as follows:

Consumption in '000 Mbits	1998	1999	2000	2001 (IP)
DRAMs	16 593 400	28 961 100	45 873 600	68 967 600
Index	100	175	276	416

3. IMPORTS OF THE PRODUCT CONCERNED INTO THE COMMUNITY

(a) Volume of imports from Korea

- (173) Following the publication of the provisional Regulation, Hynix claimed that its import volume of the product concerned expressed in '000 Mbits increased at a much lower pace than was described in recital 118 of the provisional Regulation. Hynix argued that imports and market share (see below) should be based on the total sales of its subsidiaries in the Community (resales) of the product concerned to unrelated customers in the Community during the period under consideration and not on the volume of its imports of DRAMs produced in Korea. It is noted that these resales as reported by Hynix were significantly higher (up to 60 %) than the actual imports also reported by Hynix during the first two years of the period under consideration. No satisfactory explanation was given for this big discrepancy. It is considered that imports should comprise all sales of DRAMs produced by Hynix in Korea and sold to its subsidiaries in the Community, plus some minor sales to unrelated customers in the Community via a third country.
- (174) Hynix, supported by the GOK, also argued that, in establishing the trend of its imports into the Community over the period under consideration, the imports of the product concerned into the Community from LG Semicon Co., Ltd that occurred before the date of the merger of this company with Hyundai Electronics Industries Co., Ltd (Hynix since 29 March 2001) should have been included in its import data. Hynix and the GOK provided certain ad hoc data in this respect, i.e. two figures concerning imports in Mbits from LG Semicon Co., Ltd in 1998 and 1999. Otherwise, it was claimed that imports from Hynix should be considered for injury purposes only following the date of its merger with LG Semicon Co., Ltd in 1999.
- (175) However, LG Semicon Co., Ltd was a distinct legal entity before Hyundai Electronics Industries Co., Ltd acquired it from LG Electronics Inc. and its related companies on 7 July 1999. After the acquisition, LG Semicon Co., Ltd was renamed Hyundai Micro Electronics Co., Ltd and this company merged with Hyundai Electronics Industries Co., Ltd on 13 October 1999. The acquisition of LG Semicon Co., Ltd was therefore a new investment for Hyundai Electronics Industries Co., Ltd without any retroactive effects on its position on the market. In other words, Hyundai Electronics Industries Co., Ltd, predecessor of Hynix, which was the only company found to have benefited from subsidies, increased its production capacity. Furthermore, no party, including Hynix, has reported any imports from LG Semicon Co., Ltd for 1998 and 1999 in its questionnaire response or any other submission and as such were not verified by the Commission. LG Semicon Co., Ltd data cannot constitute part of Hynix's subsidised imports. For the reasons set out above, the claim made by Hynix and the GOK is rejected.
- (176) The volume of imports from Korea as described in recital 118 of the provisional Regulation was established on the basis of the aggregation of duly verified import data provided by Samsung and Hynix in their respective questionnaire responses. The volume of imports from Korea thus established increased by 331 % during the period under consideration. It is confirmed that imports from Hynix increased faster, i.e. by 361 % during the period under consideration.

- (177) Even if import data of LG Semicon Co., Ltd for 1998 and 1999 as provided ad hoc by Hynix and the GOK, and which could not be verified, were taken into account, they should be added to the volume of imports from Korea and not to the volume of imports from Hynix. The volume of imports from Korea would then have increased by 219 % during the period under consideration.

Imports	1998	1999	2000	2001 (IP)
Index Korea	100	128	185	319
of which:				
Index Samsung	100	110	181	414
Index Hynix	100	194	372	461
Index LG Semicon	100	90	0	0
(data not verified)				

(b) Prices of imports from Korea and Hynix

- (178) Import prices were calculated using data on import quantities and values provided in the questionnaire responses of the exporting producers in Korea. Since no comments were received on import prices following the publication of the provisional Regulation, the provisional findings concerning import prices as described in recital 119 of the provisional Regulation are confirmed. Throughout the period under consideration import prices developed as follows:

Average import price	1998	1999	2000	2001 (IP)
Index Korea	100	105	99	23
Index Hynix	100	91	77	20

- (179) With regard to the provisional findings on price undercutting as described in recital 122 of the provisional Regulation, Hynix and the GOK claimed that the reference to the fact that price undercutting took place for some transactions is irrelevant since price undercutting, in accordance with usual practice, is determined on a weighted average basis. Hynix further argued that in order to conclude whether its prices undercut a number of specific transactions of the Community industry, either a transaction-by-transaction comparison should be made or a daily comparison taking also into account, where possible, the time within the day.
- (180) However, there is no provision in the basic Regulation which stipulates that price undercutting should be calculated on a weighted average or any other specific basis. According to Article 8(3) of the basic Regulation it should be considered, when assessing the effect of subsidised imports on prices, whether price undercutting has been 'significant'. It does not set out any requirement relating to the calculation of the margin of undercutting, nor does it provide for a particular methodology to be followed in this respect. Moreover, according to the same Article, price undercutting is not alone determinative in an injury determination, rather it forms part of the overall assessment of injury to the Community industry and is conducted so as to provide guidance in the context of the assessment of injury and causation.

- (181) Furthermore, it is noted that the DRAM market is very transparent and characterised by substantial price competition. Indeed fixed costs are very high. Suppliers need to develop sufficient economies of scale and strive to maintain market shares. Price undercutting will occur in specific competitive situations with specific customers. But, if one supplier offers a price to a Community customer that undercuts the price of a DRAM sold by a Community producer, competitive pressure quickly eliminates such undercutting. Thus, in such markets, big customers can force competing suppliers to meet any lower price offering. It is therefore difficult to establish price undercutting over a given period. Such price depressing situations prevented the Community producers from increasing prices, something which would otherwise have occurred.
- (182) Nevertheless, the Commission established significant price undercutting ranging from 12 % to 32 % for the different DRAM densities on a substantial portion (41 %) of the Community producers transactions, representing 32 % of their sales value. In order to eliminate the effect of the sharp drop in prices during the IP, the calculation was based on the monthly average Hynix prices to independent customers by product type. Even if the daily average Hynix prices (by product type) were used, and taking account of the fact that the number of comparable transactions would be substantially reduced (by 38 %), there would be significant undercutting within the range set out above on 29 % of the total Community producers transactions. It is also noted that irrespective of whether the monthly or daily average of Hynix prices was used in the calculation, the proportion of the Community producers undercut transactions in relation to the total comparable transactions remained the same, i.e. around 47 %. It is noted that a typing error occurred at the end of the penultimate sentence of recital 122 of the provisional Regulation where the reference to Hynix sales should read Community industry sales. In the absence of further comments on price undercutting, the provisional findings as set out in recitals 119 to 123 of the provisional Regulation are hereby confirmed.

(c) Market share of imports from Korea

- (183) Hynix, supported by the GOK, claimed that contrary to the upward trend of its market share as described in recital 124 of the provisional Regulation its market share decreased during the period under consideration. This claim is not warranted since the market share figures provided by Hynix to justify its claim were initially based on the total sales of its subsidiaries in the Community of the product concerned to unrelated customers in the Community during the period under consideration and not on the volume of its imports of DRAMs produced in Korea. After it was clarified to Hynix that its market share as described in recital 124 of the provisional Regulation was calculated on the basis of duly verified import data which it had itself reported in its questionnaire response, Hynix indicated that in establishing the trend of its market share during the period under consideration, imports from LG Semicon Co., Ltd that occurred before the date of the merger of this company with Hyundai Electronics Industries Co., Ltd should have been included in its import data. Hynix and the GOK provided certain ad hoc data in this respect.
- (184) For the reasons set out in recital 175 this claim is rejected and the provisional findings concerning market shares as described in recital 124 of the provisional Regulation are confirmed.
- (185) Even if import data of LG Semicon Co., Ltd for 1998 and 1999 as provided ad hoc by Hynix and the GOK, and which could not be verified, were taken into account, they should be added to the market share of imports from Korea and not to the market share of imports from Hynix. The market share of imports from Korea would then have decreased by 21 % during the period under consideration.

Market shares	1998	1999	2000	2001 (IP)
Index Korea	100	73	68	79
of which:				
Index Samsung	100	63	65	100
Index Hynix	100	111	136	120
Index LG Semicon	100	52	0	0
(data not verified)				

4. SITUATION OF THE COMMUNITY INDUSTRY

- (186) In the absence of any new information, the provisional findings concerning the situation of the Community industry as set out in recitals 125 to 138 of the provisional Regulation are confirmed.

5. CONCLUSION ON INJURY

- (187) Following the publication of the provisional Regulation, Hynix and the GOK claimed that most of the injury indicators show that the situation of the Community industry is improving. Therefore, no material injury could have been suffered by the Community industry.
- (188) However, no arguments which could alter the conclusions as set out in recitals 139 to 141 of the provisional Regulation were made. In accordance with the provisions of Article 8(5) of the basic Regulation, these conclusions were based on the evaluation of all relevant economic factors and indices having a bearing on the state of the Community industry. The details are set out in recitals 125 to 138 of the provisional Regulation and they have not been challenged. Though the position of the Community industry improved in certain respects during the period under consideration because of the growing market for DRAMs, this was more than offset by the very substantial injury caused by the drastic drop in sales prices and the consequent heavy losses suffered by the Community producers during the IP. These losses had a negative effect on their return on investments and their cash flow. Consequently, taking into account all the factors, the conclusions reached in recitals 139 to 141 of the provisional Regulation that the Community industry has suffered material injury within the meaning of Article 8 of the basic Regulation are hereby confirmed.

G. CAUSATION OF INJURY

1. INTRODUCTION

- (189) As set out in recitals 143 to 157 of the provisional Regulation, it was examined, in accordance with Article 8(6) and (7) of the basic Regulation, whether the subsidised imports of the product concerned originating in Korea have caused injury to the Community industry to a degree that enables it to be classified as material. Known factors other than the subsidised imports, namely the general economic downturn during the IP, imports from other countries, exports of the Community industry and overcapacity, which could at the same time be injuring the Community industry, were also examined one by one to ensure that possible injury caused by these other factors was not attributed to the subsidised imports.

- (190) Following the imposition of provisional measures, Hynix and the GOK claimed that Hynix's imports could not have caused injury to the Community industry because their market share was decreasing during the period under consideration and their prices did not undercut the Community industry's prices. They further argued that any injury was self-inflicted and caused by the investments the Community industry made during the period under consideration, which largely contributed to the overcapacity during the IP. They also argued that the analysis in the provisional Regulation failed to take into account the severe cyclical downturn for IT during this period. It is noted that the comments of Hynix concerning causation referred to only one of the two Community producers composing the Community industry, i.e. Infineon. The analysis which follows concerns the Community industry as a whole.

2. EFFECT OF THE SUBSIDISED IMPORTS

- (191) As set out in recitals 176 and 177, subsidised imports from Hynix increased during the period under consideration even at a higher pace than the Community consumption. Over the same period, the development of their market share followed the same trend, i.e. increased (see recitals 184 and 185) and reached a very substantial level during the IP. Even if the alleged volume of imports from LG Semicon Co., Ltd was to be added to that of Hynix for the years 1998 and 1999, such an imports trend towards the IP would still be increasing (increase of 155 % between 1998 and the IP). It was found that the volume of Hynix's subsidised imports and their market share during the IP were sufficiently important in themselves to adversely affect the Community market and in particular the prices of the Community industry. Market analysts ⁽¹⁾ believed that Hynix was technically bankrupt and that it was kept alive only through debt-restructuring programs, thus maintaining artificially oversupply on the market. In this context, it should be noted that any additional supply not met by demand leads prices down. And Hynix, as set out in recital 148 of the provisional Regulation, was desperate to sell during the IP even below cost. No further comments which could alter the findings concerning the effect of Hynix's subsidised imports on the injurious situation of the Community industry as set out in recitals 144 to 148 of the provisional Regulation were made. These findings are hereby confirmed.
- (192) It is therefore concluded that the subsidisation alone, by enabling pricing irrespective of cost and by contributing substantially to the oversupply characterising the DRAM market, has led in a very substantial way to the very low price levels on the Community market. Without the subsidies in question it is reasonable to assume that the prices of the Community industry would have been higher, not only because Hynix would not have been able to charge the very low prices that they practised in the IP, but also because global supply would have been lower. Moreover, the magnitude of the volume of Hynix's low-priced subsidised imports had itself a significant negative impact on the situation of the Community industry.

3. IMPACT OF OTHER FACTORS

(a) General economic downturn during the IP

- (193) Hynix and the GOK argued that the Commission did not take into account the impact of the cyclicity of the DRAM market. They further argued that worldwide demand for DRAMs grew in 2001 only by 59 % whilst the average year on year rate was 75 %. It is noted that these alleged worldwide growth rates are highly subjective and contradict other information available on the record. As set out in recital 150 of the provisional Regulation, it is recognised that the general economic downturn of the PC and telecommunication markets in 2001 may have had some downward effect on prices. However, it was found that DRAM consumption in the Community continued its upward trend

⁽¹⁾ Morgan Stanley, Hynix Semiconductor — September 25, 2002.

throughout the period under consideration. The increased consumption in terms of Mbits during the IP stemmed to a large degree from the introduction of Microsoft XP, which has much higher Mbit requirements than previous systems, and increased sales of 'upgrade' products generated by the low prices. In fact, the consumption in Mbits in the Community increased almost at the same rate between the year 1999 and the good year 2000 (57 %) as compared to the increase between the good year 2000 and the bad year 2001 — the IP (51 %). It is therefore concluded that, whilst the economic downturn may have had some downward effect on prices, it can be assumed that, with consumption rising, this effect was not substantial.

(b) Imports of the product concerned from other countries than Korea

- (194) Following the imposition of provisional measures, no comments were received concerning other imports. However, following final disclosure Hynix argued that, in accordance with data in the complaint, imports from other countries than Korea (mainly Taiwan) and imports from Samsung have increased more than Hynix's imports, in particular between 2000 and the IP, and thus any injury suffered by the Community industry could not have been caused by Hynix's imports. With regard to Samsung's imports see recital 200. With regard to imports from all other countries (including Taiwan), the investigation found that in Mbit terms they decreased between 2000 and the IP by 4,2 %. In fact, their market share decreased from 31,4 % in 2000 to 20 % during the IP. During the same period Hynix's subsidised imports in Mbit terms increased by 24 %. Therefore, the argument is considered groundless and the findings set out in recital 151 of the provisional Regulation that imports from other countries than Korea have not contributed in any significant way to the injury suffered by the Community industry are hereby confirmed.

(c) Export activity of the Community industry

- (195) Following the imposition of provisional measures, no comments were received concerning the export activity of the Community industry. The findings set out in recital 152 of the provisional Regulation are hereby confirmed.

(d) Overcapacity

- (196) Following the imposition of provisional measures, Hynix and the GOK claimed that any injury suffered by the Community industry during the IP was self-inflicted by its investments made during the period under consideration. They further claimed that these investments have largely contributed to the overcapacity during the IP.
- (197) As set out in recital 153 of the provisional Regulation, the worldwide DRAM market still suffered during the IP from structural overcapacity resulting from the expectations of the late 1990s that the market would continue its rapid growth. This overcapacity can be said to have contributed to the severity of the current downturn from which this industry is suffering. However, it is noted that the capacity of the Community industry in Mbit terms did not reach the consumption in the Community during the IP. Furthermore, it is generally recognised that the DRAMs industry constantly needs a high level of investment, in particular in research and development, to keep abreast with leading-edge technology. The investments of the Community industry during the period under consideration can therefore be viewed as reasonable and were undertaken in order to maintain its competitiveness in a growing market. In this respect, it is noted that both Korean producers made significant investments during the period under consideration. In fact, the worldwide investments of the Community industry were less than half the investments of the two Korean producers during that period. It is therefore reasonable to assume that any overcapacity was not created by the Community industry alone. On the contrary, it was the Korean industry which has mainly contributed to such overcapacity worldwide. It is also reasonable to assume that, had the Korean government not intervened with the subsidies, the situation in both the Community and worldwide as regards overcapacity would not have been so pronounced.

(e) **Stocks**

- (198) Following the imposition of provisional measures, Hynix also argued that another reason for the declining prices of DRAMs during the IP was a significant 'inventory burn'. It was argued that during the 'near record year' 2000 when DRAM prices increased significantly, many customers (e.g. distributors) built up their DRAM inventory because users feared shortages. During the IP, when it became clear that the collapse of the PC and telecommunications markets would depress demand, these inventories were disposed of quickly and further exacerbated the already declining prices.
- (199) However, first of all this argument is not supported by any factual evidence. Secondly, it is based on a wrong premise: during the IP DRAMs consumption continued to increase in the Community. Finally, it is not plausible: no company will build up stocks when the prices are high, in particular when a product like DRAMs has a short life cycle; on the contrary they may build up stocks when the prices are low. In this respect, it is recalled that the stocks of the Community industry as a percentage of production in Mbits declined during the good year 2000 as well as during the bad IP. This has been confirmed by the sole cooperating distributor which stated in its response to the questionnaire that 'at present manufacturers move to just-in-time ordering'. The same distributor indicated during a hearing that its DRAMs stocks are renewed four times a month. Therefore, no link can be made in this regard between stocks and prices, and accordingly, this argument has to be rejected.

(f) **Samsung's imports**

- (200) It was also examined whether factors other than those already considered above could have contributed to the material injury suffered by the Community industry during the IP. In this respect the imports from Samsung were examined. During the period under consideration, Samsung's imports have also increased but at a lower pace than Hynix's imports and in any event slower than the increase of Community consumption. It was also found that during the IP Samsung's prices were on average higher than those of Hynix. Furthermore, Samsung's prices decreased less than Hynix's prices during the period under consideration. It was therefore concluded that though Samsung imports may have caused some injury to the Community industry, this was not sufficient to break the causal link between Hynix's subsidised imports and the material injury suffered by the Community industry.

4. CONCLUSION ON CAUSATION

- (201) The arguments brought forward by the interested parties on causation following the imposition of provisional measures have not altered the overall conclusions reached in the provisional Regulation.
- (202) Factors other than the subsidised imports originating in Korea, such as other imports, the general economic downturn, the export activity of the Community industry and the pre-existing overcapacity in the market, may well have contributed to the injury suffered by the Community industry during the IP. However, their injurious effect, both individually and collectively, was considered of some importance but insufficient to undermine the material injury attributable to subsidised imports.
- (203) The reduced prices of the Community industry's export sales may have also contributed to the injury. However, given the lower volume of exports in relation to the volume of sales in the Community during the IP, the injury suffered by the Community industry cannot be attributed to its exports.

- (204) As far as overcapacity is concerned, this worldwide situation existed during a number of years including the period under consideration. Therefore, this overcapacity cannot be considered alone as the cause of the very significant sudden drop in prices that led to the injury suffered by the Community industry. Furthermore, subsidised imports are themselves a substantial cause of oversupply.
- (205) Indeed, the investigation has shown that during the period under consideration Hynix's subsidised imports were sold on the Community market at volume and prices that caused very considerable injury to the Community industry. These imports were found to be a substantial cause of prices in the Community falling dramatically to levels that generated huge losses. This situation had grave consequences on the profitability of the Community industry and its ability to maintain the necessary investment levels. In view of the analysis, which has properly distinguished and separated the effects of all known factors on the situation of the Community industry from the injurious effects of the subsidised imports, it is hereby concluded that these other factors are not such as to break the causal link between subsidisation and injury. Accordingly, it is concluded that these imports have caused material injury to the Community industry within the meaning of Article 8(6) of the basic Regulation.

H. COMMUNITY INTEREST

- (206) No user, importer or distributor submitted any comments concerning Community interest or any other aspect of the investigation following the imposition of provisional measures. Even the few cooperating users did not submit any comments on the provisional findings. The Community industry expressed its support for the provisional determination on Community interest.
- (207) Hynix, although not directly concerned, argued following the imposition of provisional measures that the Community industry has not the capacity to supply its clients, and that Hynix's disappearance from the Community market could only result in an increased market share of other non-Community producers.
- (208) The argument put forward by Hynix is not persuasive. It contradicts Hynix's previous argument that the Community industry has created itself an overcapacity situation. The fact is that the Community industry still has significant spare capacity available that can be used if the market conditions allow fair competition. On the other hand, the aim of the measures is not to eliminate Hynix from the Community market, but to countervail the subsidisation to the extent it has benefited Hynix's imports to the detriment of other suppliers on the market.
- (209) In the absence of any comments from the directly interested parties the findings and conclusions set out in recitals 158 to 174 of the provisional Regulation are hereby confirmed. It is therefore concluded that the imposition of definitive countervailing measures would not be against the Community interest.

I. DEFINITIVE COURSE OF ACTION

- (210) In view of the conclusions reached regarding subsidies, injury, causation and Community interest, it is considered that definitive countervailing measures should be taken in order to prevent further injury being caused to the Community industry by subsidised imports from the Republic of Korea.

1. INJURY ELIMINATION LEVEL

- (211) For the purpose of establishing the level of the definitive measures, account has been taken of both the subsidy amount found and the amount of injury sustained by the Community industry.

- (212) The definitive measures should be imposed at a level sufficient to eliminate the injury caused by these imports without exceeding the subsidy amount established. When calculating the amount of duty necessary to remove the effects of the injurious subsidies, it was considered that any measures should allow the Community industry to cover its costs and obtain overall a profit before tax that could reasonably be achieved under normal conditions of competition, i.e. in the absence of subsidised imports, on the sales of the like product in the Community. The pre-tax profit margin used for this calculation was 15 % on turnover, which is necessary for the industry to maintain reasonable levels of investment. This profit margin was the average realised by the Community industry during the last two years before the IP.
- (213) Following the imposition of provisional measures, Hynix argued that the 15 % profit was not in line with the 9,5 % profit margin used in earlier anti-dumping proceedings concerning DRAMs originating in Korea and Japan. It is noted that these anti-dumping proceedings referred to more than 10 years ago, when the market circumstances and the product itself were different. In any event, given the magnitude of the losses suffered by the Community industry during the IP, even a profit margin at this level will result in an injury elimination level that would still be higher than the subsidy amount established.
- (214) Considering the above, the methodology used for establishing the injury elimination level as described in recitals 177 to 179 of the provisional Regulation is confirmed.

2. FORM AND LEVEL OF THE DUTY

- (215) Since the subsidy amount for Hynix Semiconductor Inc. has been found to be lower than the injury elimination level, the rate of the definitive countervailing duty to be imposed should correspond to the subsidy amount established in accordance with Article 15(1) of the basic Regulation, i.e. 34,8 %. Given the *de minimis* subsidy finding, no countervailing duty should be imposed on Samsung Electronics Co., Ltd.
- (216) The individual company countervailing duty rates specified in this Regulation were established on the basis of the findings of the present investigation. Therefore, they reflect the situation found during that investigation with respect to these companies. These duty rates (as opposed to the countrywide duty applicable to 'all other companies') are thus exclusively applicable to imports of products originating in the country concerned and produced by the companies and thus by the specific legal entities mentioned. Imported products produced by any other company not specifically mentioned in the operative part of this Regulation with its name and address, including entities related to those specifically mentioned, cannot benefit from these rates and shall be subject to the duty rate applicable to 'all other companies'.
- (217) Any claim requesting the application of these individual company countervailing duty rates (e.g. following a change in the name of the entity or following the setting up of new production or sales entities) should be addressed to the Commission ⁽¹⁾ forthwith with all relevant information, in particular any modification in the company's activities linked to production, domestic and export sales associated with, for example, that name change or that change in the production and sales entities. The Commission, if appropriate, will, after consultation of the Advisory Committee, amend the Regulation accordingly by updating the list of companies benefiting from individual duty rates.

⁽¹⁾ European Commission — Directorate General for Trade — Directorate B — J-79 5/17 — Rue de la Loi/Wetstraat 200 — B-1049 Brussels.

J. COLLECTION OF THE PROVISIONAL DUTY

- (218) In view of the amount of the countervailable subsidies found for the exporting producers and in light of the seriousness of the injury caused to the Community industry, it is considered necessary that the amounts secured by way of provisional countervailing duty under Regulation (EC) No 708/2003 be definitively collected to the extent of the rate of the definitive duty imposed or the rate of the provisional duty if the latter was lower,

HAS ADOPTED THIS REGULATION:

Article 1

1. A definitive countervailing duty is hereby imposed on imports of certain electronic microcircuits known as Dynamic Random Access Memories (DRAMs), of all types, densities and variations, whether assembled, in processed wafer or chips (dies), manufactured using variations of Metal Oxide-Semiconductors (MOS) process technology, including complementary MOS types (CMOS), of all densities (including future densities), irrespective of access speed, configuration, package or frame, etc. This also includes DRAMs presented in (non-customised) memory modules or (non-customised) memory boards, or in some other kind of aggregate form, provided the main purpose of which is to provide memory, currently classifiable within CN codes 8542 21 11, 8542 21 13, 8542 21 15, 8542 21 17, ex 8542 21 01 (TARIC code 8542 21 01 10), ex 8542 21 05 (TARIC code 8542 21 05 10), ex 8548 90 10 (TARIC code 8548 90 10 10), ex 8473 30 10 (TARIC code 8473 30 10 10) and ex 8473 50 10 (TARIC code 8473 50 10 10), originating in the Republic of Korea.

2. The rate of the definitive duty applicable to the net free-at-Community-frontier price, before duty, shall be as follows:

Korean Producers	Rate of Duty (%)	TARIC additional code
Samsung Electronics Co., Ltd 24th Fl., Samsung Main Bldg 250, 2-Ga, Taepyeong-Ro, Jung-Gu, Seoul	0 %	A437
All other companies	34,8 %	A999

3. Unless otherwise specified, the provisions in force concerning customs duties shall apply.

Article 2

The amounts secured by way of the provisional countervailing duty pursuant to Regulation (EC) No 708/2003 on imports of DRAMs originating in the Republic of Korea shall be collected at the rate of the duty definitively imposed or the rate of the provisional duty if the latter was lower. Amounts secured in excess of the definitive rates of the countervailing duty shall be released.

Article 3

This Regulation shall enter into force on the day following that of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 11 August 2003.

For the Council
The President
F. FRATTINI

COMMISSION REGULATION (EC) No 1481/2003
of 21 August 2003
establishing the standard import values for determining the entry price of certain fruit and vegetables

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to Commission Regulation (EC) No 3223/94 of 21 December 1994 on detailed rules for the application of the import arrangements for fruit and vegetables ⁽¹⁾, as last amended by Regulation (EC) No 1947/2002 ⁽²⁾, and in particular Article 4(1) thereof,

Whereas:

- (1) Regulation (EC) No 3223/94 lays down, pursuant to the outcome of the Uruguay Round multilateral trade negotiations, the criteria whereby the Commission fixes the standard values for imports from third countries, in respect of the products and periods stipulated in the Annex thereto.

- (2) In compliance with the above criteria, the standard import values must be fixed at the levels set out in the Annex to this Regulation,

HAS ADOPTED THIS REGULATION:

Article 1

The standard import values referred to in Article 4 of Regulation (EC) No 3223/94 shall be fixed as indicated in the Annex hereto.

Article 2

This Regulation shall enter into force on 22 August 2003.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 21 August 2003.

For the Commission

J. M. SILVA RODRÍGUEZ

Agriculture Director-General

⁽¹⁾ OJ L 337, 24.12.1994, p. 66.

⁽²⁾ OJ L 299, 1.11.2002, p. 17.

ANNEX

to the Commission Regulation of 21 August 2003 establishing the standard import values for determining the entry price of certain fruit and vegetables

(EUR/100 kg)

CN code	Third country code ⁽¹⁾	Standard import value
0702 00 00	052	64,3
	060	42,6
	999	53,5
0709 90 70	052	92,6
	999	92,6
0805 50 10	382	56,5
	388	52,6
	524	55,1
	528	59,2
	999	55,8
0806 10 10	052	110,0
	064	140,1
	400	194,3
	999	148,1
0808 10 20, 0808 10 50, 0808 10 90	039	65,0
	388	73,0
	400	92,6
	508	65,1
	512	84,7
	528	69,1
	720	71,9
	800	129,4
	804	86,6
	999	81,9
0808 20 50	052	111,7
	388	107,4
	512	81,5
	528	87,6
	800	148,4
	999	107,3
0809 30 10, 0809 30 90	052	122,7
	999	122,7
0809 40 05	060	63,5
	064	59,7
	066	49,8
	068	77,7
	093	60,7
	094	44,6
	624	154,7
	999	73,0

⁽¹⁾ Country nomenclature as fixed by Commission Regulation (EC) No 2020/2001 (OJ L 273, 16.10.2001, p. 6). Code '999' stands for 'of other origin'.

COMMISSION REGULATION (EC) No 1482/2003

of 21 August 2003

fixing the A1 and B export refunds for fruit and vegetables (tomatoes, oranges, lemons, table grapes and apples)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to Council Regulation (EC) No 2200/96 of 28 October 1996 on the common organisation of the market in fruit and vegetables ⁽¹⁾, as last amended by Commission Regulation (EC) No 47/2003 ⁽²⁾, and in particular the third subparagraph of Article 35(3),

Whereas:

- (1) Commission Regulation (EC) No 1961/2001 ⁽³⁾, as last amended by Regulation (EC) No 1176/2002 ⁽⁴⁾, lays down the detailed rules of application for export refunds on fruit and vegetables.
- (2) Article 35(1) of Regulation (EC) No 2200/96 provides that, to the extent necessary for economically significant exports, the products exported by the Community may be covered by export refunds, within the limits resulting from agreements concluded in accordance with Article 300 of the Treaty.
- (3) Under Article 35(2) of Regulation (EC) No 2200/96, care must be taken to ensure that the trade flows previously brought about by the refund scheme are not disrupted. For this reason and because exports of fruit and vegetables are seasonal in nature, the quantities scheduled for each product should be fixed, based on the agricultural product nomenclature for export refunds established by Commission Regulation (EEC) No 3846/87 ⁽⁵⁾, as last amended by Regulation (EC) No 118/2003 ⁽⁶⁾. These quantities must be allocated taking account of the perishability of the products concerned.
- (4) Article 35(4) of Regulation (EC) No 2200/96 provides that refunds must be fixed in the light of the existing situation or outlook for fruit and vegetable prices on the Community market and supplies available on the one hand, and prices on the international market on the other hand. Account must also be taken of the transport and marketing costs and of the economic aspect of the exports planned.

(5) In accordance with Article 35(5) of Regulation (EC) No 2200/96, prices on the Community market are to be established in the light of the most favourable prices from the export standpoint.

(6) The international trade situation or the special requirements of certain markets may call for the refund on a given product to vary according to its destination.

(7) Tomatoes, oranges, lemons, table grapes and apples of classes Extra, I and II of the common quality standards can currently be exported in economically significant quantities.

(8) In order to ensure the best use of available resources and in view of the structure of Community exports, it is appropriate to fix the A1 and B export refunds.

(9) The Management Committee for fresh Fruit and Vegetables has not delivered an opinion within the time limit set by its chairman,

HAS ADOPTED THIS REGULATION:

Article 1

1. For system A1, the refund rates, the refund application period and the scheduled quantities for the products concerned are fixed in the Annex hereto.

For system B, the indicative refund rates, the licence application period and the scheduled quantities for the products concerned are fixed in the Annex hereto.

2. The licences issued in respect of food aid as referred to in Article 16 of Commission Regulation (EC) No 1291/2000 ⁽⁷⁾ shall not count against the eligible quantities in the Annex hereto.

Article 2

This Regulation shall enter into force on 10 September 2003.

⁽¹⁾ OJ L 297, 21.11.1996, p. 1.

⁽²⁾ OJ L 7, 11.1.2003, p. 64.

⁽³⁾ OJ L 268, 9.10.2001, p. 8.

⁽⁴⁾ OJ L 170, 29.6.2002, p. 69.

⁽⁵⁾ OJ L 366, 24.12.1987, p. 1.

⁽⁶⁾ OJ L 20, 24.1.2003, p. 3.

⁽⁷⁾ OJ L 152, 24.6.2000, p. 1.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 21 August 2003.

For the Commission
Franz FISCHLER
Member of the Commission

ANNEX

to the Commission Regulation of 21 August 2003 fixing the export refunds on fruit and vegetables (tomatoes, oranges, lemons, table grapes and apples)

Product code ⁽¹⁾	Destination ⁽²⁾	System A1 Refund application period 10.9 to 7.11.2003		System B Licence application period 17.9 to 14.11.2003	
		Refund amount (EUR/t net weight)	Scheduled quantity (t)	Indicative refund amount (EUR/t net weight)	Scheduled quantity (t)
0702 00 00 9100	F08	25		25	4 316
0805 10 10 9100 0805 10 30 9100 0805 10 50 9100	F00	21		21	13 681
0805 50 10 9100	F00	21		21	8 145
0806 10 10 9100	F00	18		18	20 576
0808 10 20 9100 0808 10 50 9100 0808 10 90 9100	F04, F09	17		17	12 007

⁽¹⁾ The product codes are set out in Commission Regulation (EEC) No 3846/87 (OJ L 366, 24.12.1987, p. 1).

⁽²⁾ The 'A' series destination codes are set out in Annex II to Regulation (EEC) No 3846/87.

The numeric destination codes are set out in Commission Regulation (EC) No 2020/2001 (OJ L 273, 16.10.2001, p. 6).

The other destinations are defined as follows:

F00: All destinations except Estonia.

F03: All destinations except Switzerland and Estonia.

F04: Sri Lanka, Hong Kong SAR, Singapore, Malaysia, Indonesia, Thailand, Taiwan, Papua-New Guinea, Laos, Cambodia, Vietnam, Uruguay, Paraguay, Argentina, Mexico, Costa Rica and Japan.

F08: All destinations except Slovakia, Latvia, Lithuania, Bulgaria and Estonia.

F09: The following destinations:

— Norway, Iceland, Greenland, Faeroe Islands, Poland, Hungary, Romania, Albania, Bosnia and Herzegovina, Croatia, Slovenia, Former Yugoslav Republic of Macedonia, Serbia and Montenegro, Malta, Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Uzbekistan, Ukraine, Saudi Arabia, Bahrain, Qatar, Oman, United Arab Emirates (Abu Dhabi, Dubai, Sharjah, Ajman, Umm al Qalwain, Ras al Khaimah, Fujairah), Kuwait, Yemen, Syria, Iran, Jordan, Bolivia, Brazil, Venezuela, Peru, Panama, Ecuador and Colombia;

— African countries and territories except for South Africa;

— destinations referred to in Article 36 of Commission Regulation (EC) No 800/1999 (OJ L 102, 17.4.1999, p. 11).

COMMISSION REGULATION (EC) No 1483/2003**of 21 August 2003****fixing the conversion rate applicable to certain direct aid with an operative event on 1 July 2003**

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to Council Regulation (EC) No 2799/98 of 15 December 1998 establishing agrimonetary arrangements for the euro ⁽¹⁾,

Having regard to Commission Regulation (EC) No 2808/98 of 22 December 1998 laying down detailed rules for the application of the agrimonetary system for the euro in agriculture ⁽²⁾, as last amended by Regulation (EC) No 816/2003 ⁽³⁾, and in particular Article 4(3) thereof,

Having regard to Commission Regulation (EC) No 1410/1999 of 29 June 1999 amending Regulation (EC) No 2808/98 laying down detailed rules for the application of the agrimonetary system for the euro in agriculture and amending the definition of certain operative events provided for in Regulations (EEC) No 3889/87, (EEC) No 3886/92, (EEC) No 1793/93, (EEC) No 2700/93 and (EC) No 293/98 ⁽⁴⁾, and in particular Article 2 thereof,

Whereas:

- (1) In accordance with Article 4(1) of Regulation (EC) No 2808/98, the operative event for the exchange rate applicable to aid per hectare should be the commencement of the marketing year in respect of which the aid is granted. For aid for arable crops and grain legumes the operative event for the exchange rate should therefore be 1 July 2003.
- (2) In accordance with Article 4(3) of Regulation (EC) No 2808/98, the exchange rate to be used for aid per hectare should be the average of the exchange rates applicable during the month preceding the date of the operative event, calculated *pro rata temporis*.

- (3) Article 1 of Commission Regulation (EEC) No 1793/93 of 30 June 1993 regarding the operative event for the agricultural conversion rates used in the hops sector ⁽⁵⁾, as last amended by Regulation (EC) No 1410/1999, states that the agricultural conversion rate to be applied for the purposes of the aid for hops should be the average of the exchange rates applicable during the month preceding 1 July of the harvest year, calculated *pro rata temporis*.

- (4) The conversion rates to be applied for the aid in question should be fixed according to the average of the exchange rates applicable during the month of June 2003, calculated *pro rata temporis*.

HAS ADOPTED THIS REGULATION:

Article 1

The conversion rates given in the Annex apply to the following aid:

- (a) the aid referred to in Article 4(1) of Regulation (EC) No 2808/98 and having an operative event on 1 July 2003; and
- (b) the aid for hops, provided for in Article 12 of Council Regulation (EEC) No 1696/71 ⁽⁶⁾ and having an operative event on 1 July 2003.

Article 2

This Regulation shall enter into force on the third day following its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 21 August 2003.

For the Commission

Franz FISCHLER

Member of the Commission

⁽¹⁾ OJ L 349, 24.12.1998, p. 1.

⁽²⁾ OJ L 349, 24.12.1998, p. 36.

⁽³⁾ OJ L 116, 13.5.2003, p. 12.

⁽⁴⁾ OJ L 164, 30.6.1999, p. 53.

⁽⁵⁾ OJ L 163, 6.7.1993, p. 22.

⁽⁶⁾ OJ L 175, 4.8.1971, p. 1.

ANNEX

Conversion rates applicable to the aid referred to in Article 1

EUR 1 = *(average 1.6.2003 to 30.6.2003)*

7,42485	Danish kroner (DKK)
9,11402	Swedish kronor (SEK)
0,703188	pounds sterling

COMMISSION REGULATION (EC) No 1484/2003**of 21 August 2003****amending Annexes IIIB and VI to Regulation (EC) No 517/94 as regards quotas for Serbia and Montenegro**

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to Council Regulation (EC) No 517/94 of 7 March 1994 on common rules for imports of textile products from certain third countries not covered by bilateral agreements, protocols or other arrangements, or by other specific Community import rules ⁽¹⁾, as last amended by Commission Regulation (EC) No 1309/2002 ⁽²⁾, and in particular Article 5(2) in conjunction with Article 25(4) thereof,

Whereas:

- (1) Regulation (EC) No 517/94 establishes the annual quantitative limits for certain textile products originating in Serbia and Montenegro ⁽³⁾.
- (2) Serbia and Montenegro is currently at a critical junction of its reform process. It is particularly vital at this stage to support the political and economic reforms undertaken in this state and to keep the country well on track in the European Union's Stabilisation and Association process.
- (3) The European Council of 20 and 21 March 2003 offered the new leadership of Serbia and Montenegro the full support of the EU in implementing the required reforms, allowing further progress towards European structures, and notably the EU, and invited the High Representative and the Commission to propose concrete steps to that end.
- (4) Improving trade opportunities for Serbia and Montenegro in areas in which the country possesses comparative economic advantages is of great importance to underpin the country's economic and political reforms and to further its integration into European structures.
- (5) It is therefore important to improve market access specifically for textiles and to review the quotas currently applicable on imports of textile products originating in Serbia and Montenegro. This further improvement reflects the overall strong commitment of the EU to far-reaching trade liberalisation with the Western Balkan countries as laid down in Council Regulation (EC) No 2007/2000 ⁽⁴⁾, as last amended by Regulation (EC) No 607/2003 ⁽⁵⁾.

- (6) The proposed increase is part of an overall process of promoting closer trade relations with Serbia and Montenegro, which includes the start of negotiations on a textiles agreement with Serbia and Montenegro to achieve bilateral liberalisation.
- (7) Further imports within the EU of certain categories of textile products is presently no longer possible because the respective quotas have been exhausted. Serbia and Montenegro has requested that the quotas be increased.
- (8) It is appropriate to increase the levels of all quotas for Serbia and Montenegro in order to absorb certain pending import requests, as was done for Croatia and Bosnia Herzegovina for the year 2000 by Council Regulation (EC) No 7/2000 ⁽⁶⁾ prior to the negotiation of bilateral textile agreements with those two countries.
- (9) The increased quota levels should apply from the beginning of the year 2003 in order to absorb certain pending import requests.
- (10) Regulation (EC) No 517/94 should therefore be amended accordingly.
- (11) The measures provided for in this Regulation are in accordance with the opinion of the Textiles Committee, as referred to in Article 25 of Regulation (EC) No 517/94,

HAS ADOPTED THIS REGULATION:

Article 1

Annexes IIIB and VI to Regulation (EC) No 517/94 are amended as set out in the Annex to this Regulation.

Article 2

This Regulation shall enter into force on the day of its publication in the *Official Journal of the European Union*.

It shall apply with effect from 1 January 2003.

⁽¹⁾ OJ L 67, 10.3.1994, p. 1.

⁽²⁾ OJ L 192, 20.7.2002, p. 1.

⁽³⁾ Formerly the Federal Republic of Yugoslavia (FRY).

⁽⁴⁾ OJ L 240, 23.9.2000, p. 1.

⁽⁵⁾ OJ L 86, 3.4.2003, p. 18.

⁽⁶⁾ OJ L 2, 5.1.2000, p. 51.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 21 August 2003.

For the Commission

Pascal LAMY

Member of the Commission

ANNEX

Annexes IIIB and VI to Regulation (EC) No 517/94 are amended as follows:

1. Annex IIIB is replaced by the following:

‘ANNEX III B

Annual Community quantitative limits referred to in the fourth indent of Article 2(1) Serbia and Montenegro

Category	Unit	Quantity
1	tonnes	2 309
2	tonnes	2 848
2a	tonnes	644
3	tonnes	312
5	1 000 pieces	1 288
6	1 000 pieces	554
7	1 000 pieces	287
8	1 000 pieces	1 066
9	tonnes	292
15	1 000 pieces	429
16	1 000 pieces	230
67	tonnes	241’

2. Annex VI is replaced by the following:

‘ANNEX VI

OUTWARD PROCESSING TRAFFIC

Annual Community quantitative limits referred to in Article 4 Serbia and Montenegro

Category	Unit	Quantity
5	1 000 pieces	1 483
6	1 000 pieces	4 441
7	1 000 pieces	2 170
8	1 000 pieces	4 902
15	1 000 pieces	2 548
16	1 000 pieces	1 374’

II

(Acts whose publication is not obligatory)

COMMISSION

COMMISSION RECOMMENDATION

of 6 August 2003

concerning the guidelines on the revised interim computation methods for industrial noise, aircraft noise, road traffic noise and railway noise, and related emission data

(notified under document number C(2003) 2807)

(Text with EEA relevance)

(2003/613/EC)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002 relating to the assessment and management of environmental noise ⁽¹⁾, and in particular point 2.2 of Annex II thereto,

Whereas:

- (1) In accordance with Annex II to Directive 2002/49/EC, interim computation methods for the determination of the common indicators L_{den} and L_{night} for industrial noise, aircraft noise, road traffic noise and railway noise are recommended for Member States that have no national computation method or Member States that wish to change computation methods.
- (2) In accordance with point 2.2 of Annex II to Directive 2002/49/EC, the four recommended interim computation methods must be adapted to the definitions of L_{den} and L_{night} . In this respect, the Commission is required to publish guidelines on the revised computation methods and provide emission data for road traffic noise, railway noise and aircraft noise, on the basis of existing data.

- (3) The measures set out in this Recommendation are in accordance with the opinion of the Committee set up by Article 18 of Directive 2000/14/EC of the European Parliament and of the Council ⁽²⁾,

HEREBY RECOMMENDS:

1. The guidelines on the revised interim computation methods referred to in paragraph 2.2 of Annex II to Directive 2002/49/EC and the emission data for road traffic noise, railway noise and aircraft noise on the basis of existing data are set out in the Annex to this Recommendation.
2. This Recommendation is addressed to the Member States.

Done at Brussels, 6 August 2003.

For the Commission
Margot WALLSTRÖM
Member of the Commission

⁽¹⁾ OJ L 189, 18.7.2002, p. 12.

⁽²⁾ OJ L 162, 3.7.2000, p. 1.

ANNEX

Guidelines on the revised interim computation methods for industrial noise, aircraft noise, road traffic noise and railway noise, and related emission data**1. INTRODUCTION**

In accordance with Article 6 and Annex II of Directive 2002/49/EC, interim computation methods for the determination of L_{den} and L_{night} for road traffic noise, railway noise, aircraft noise and industrial noise are recommended for Member States that have no national computation methods or Member States that wish to change computation methods. These methods are the following:

- FOR ROAD TRAFFIC NOISE: the French national computation method 'NMPB-Routes-96 (SETRA-CERTU-LCPC-CSTB)', referred to in 'Arrêté du 5 mai 1995 relatif au bruit des infrastructures routières, Journal Officiel du 10 mai 1995, Article 6' and in the French standard 'XPS 31-133'. This method is referred to as 'XPS 31-133' in these guidelines.
- FOR RAILWAY NOISE: the Netherlands national computation method published in 'Reken- en Meetvoorschrift Railverkeerslawaaï '96, Ministerie Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer, 20 November 1996'. This method is referred to as 'RMR' in these guidelines.
- FOR AIRCRAFT NOISE: ECAC/CEAC Doc. 29 'Report on Standard Method of Computing Noise Contours around Civil Airports', 1997. This method is referred to as 'ECAC doc. 29' in these guidelines.
- FOR INDUSTRIAL NOISE: ISO 9613-2: 'Acoustics — Abatement of sound propagation outdoors, Part 2: General method of calculation'. This method is referred to as 'ISO 9613' in these guidelines.

The abovementioned methods must be adapted to the definitions of L_{den} and L_{night} .

These guidelines relate to the revised interim computation methods and provide emission data for aircraft noise, road traffic noise and railway noise on the basis of existing data. It should be noted that these data are provided on the basis of a review of existing data available for use with the interim computation methods recommended for transportation noise. While the emission data provided in these guidelines cannot cover all the specific situations that may be encountered in Europe, in particular for road and rail traffic, means are provided here to obtain additional data through measurements. Finally, the use of the data provided in these guidelines is not compulsory, and Member States willing to use the interim computation methods are free to use other data that they would consider appropriate, provided such data are suitable for use with the methods concerned.

2. ADAPTATION OF THE INTERIM COMPUTATION METHODS**2.1. General adaptations relating to the noise indicators L_{den} and L_{night}** **2.1.1. General considerations**

Articles 3 and 5 and Annex I of Directive 2002/49/EC define the noise indicators L_{day} (day-time indicator), $L_{evening}$ (evening-time indicator), L_{night} (night-time indicator) and the compound indicator L_{den} (day-evening-night noise indicator). According to Article 5 of Directive 2002/49/EC, the noise indicators L_{den} and L_{night} must be used for the calculation of strategic noise maps.

L_{den} is derived from L_{day} , $L_{evening}$ and L_{night} using the following formula:

$$L_{den} = 10 \cdot \lg \frac{1}{24} \left(12 \cdot 10^{L_{day}/10} + 4 \cdot 10^{(L_{evening}+5)/10} + 8 \cdot 10^{(L_{night}+10)/10} \right)$$

Directive 2002/49/EC requires L_{day} , $L_{evening}$ and L_{night} to be long-term noise levels according to ISO 1996-2:1987. They are determined over all day, evening and night periods of a year.

ISO 1996-2:1987 defines the average long-term level as an equivalent A-weighted continuous sound pressure level that can be determined by computation accounting for variations in both source activity and meteorological conditions influencing the propagation conditions. ISO 1996-2 allows the use of meteorological correction terms, and a reference is made to the meteorological corrections in ISO 1996-1, although no method to determine and apply such correction is provided.

Finally, Annex I of Directive 2002/49/EC permits Member States to shorten the evening period by 1 or 2 hours. Daytime and/or night-time period(s) must be lengthened accordingly. The basic equation to calculate L_{den} has to be adapted to reflect these changes in one or more of the rating periods. This leads to a more general form of the equation:

$$L_{den} = 10 \cdot \lg \frac{1}{24} \left(t_d \cdot 10^{L_{day}/10} + t_e \cdot 10^{(L_{evening}+5)/10} + t_n \cdot 10^{(L_{night}+10)/10} \right)$$

where:

- t_e is the length of the shorter evening period, where $2 \leq t_e \leq 4$,
- t_d is the resulting length of the daytime period,
- t_n is the resulting length of the night-time period,
- and
- $t_d + t_e + t_n = 24$ hours

2.1.2. Receiver height

For the purpose of strategic noise mapping, Directive 2002/49/EC imposes the receiver point (or 'assessment point') height at $4 \pm 0,2$ m above the ground. As that L_{den} is a compound indicator calculated from L_{day} , $L_{evening}$, L_{night} , this height is also mandatory for these indicators.

2.1.3. Meteorological correction

Annex I of Directive 2002/49/EC defines characteristics of the time period 'year' with respect to sound emission (a relevant year as regards the emission of sound) and meteorological conditions (an average year as regards the meteorological conditions). With respect to the latter, no additional information is provided in the Directive as to what should be considered as an average year.

In the meteorological community, it is common practice to derive average meteorological conditions for a site from a statistical analysis of 10 years of detailed meteorological data measured on or near to the site. This need for long-term measurements and analysis reduces the likelihood of obtaining sufficient data for all sites that have to be noise mapped. Therefore the use of a simplified form of meteorological data proportional to the occurrence of variations in propagation conditions is suggested where sufficient data is not available. Following the example of the simplified assumptions contained in XPS 31-133, such data should be chosen in accordance with both the precautionary principle and the prevention principle applied in EU environmental legislation, which provides for protection of the citizen from potentially dangerous and/or harmful effects. In the light of this, it is recommended that a conservative (favourable to propagation) approach be taken when selecting such simplified meteorological data. Therefore, the approach described in Table 1 is recommended for producing meteorological corrections when calculating the EU noise indicators:

TABLE 1

Meteorological correction decision grid

Condition	Action
Site: Meteorological data measured on the site or derived from a sufficiently large number of nearby sites by meteorological methods that ensure that the resulting data is representative for the site of interest.	Derive average meteorological data from an analysis of detailed meteorological data.
Period: Sufficiently long measurement time to allow for a statistical analysis that describes the average year with accuracy and continuity to ensure that the data sampled is representative of all daytime, evening and night-time periods of the year.	
No meteorological data available for the site of interest or the available meteorological data does not comply with the above requirements	Adopt a simplified assumption for overall meteorological data.

2.2. *Adaptation of the road traffic noise method 'XPS 31-133'*

2.2.1. Description of the calculation method

The recommended interim computation method for road traffic noise is the French national computation method 'NMPB-Routes-96 (SETRA-CERTU-LCPC-CSTB)', referred to in 'Arrêté du 5 mai 1995 relatif au bruit des infrastructures routières, Journal Officiel du 10 mai 1995, Article 6' and in the French standard 'XPS 31-133'. This method describes a detailed procedure to calculate sound levels caused by the traffic in the vicinity of a road, taking into account the meteorological effects affecting propagation.

2.2.2. Meteorological correction and calculation of long-term levels

The long term-level L_{longterm} is calculated by the following formula:

$$L_{\text{longterm}} = 10 \cdot \lg [p \cdot 10_{L_F/10} + (1 - p) \cdot 10_{L_H/10}]$$

where:

- L_F is the sound level calculated in favourable sound propagation conditions,
- L_H is the sound level calculated in homogeneous sound propagation conditions,
- p is the long-term occurrence of meteorological conditions favourable to the propagation of sound determined following 2.1.3.

2.2.3. Summary table of adaptations needed

Subject	Result of comparison/action
Noise indicator	The definitions of the base indicators are identical: equivalent continuous A-weighted sound pressure level determined over the year taking into account variations in emission and transmission. However, the common noise indicators, including the three assessment periods day, evening, night following Directive 2002/49/EC have to be introduced.
Source	Source emission data provided in Guide du Bruit, adapted to introduce road surface corrections (see 3.1).
Propagation	
— influence of meteorological conditions	Define percentage of occurrence of favourable conditions following 2.1.3.
— atmospheric absorption	Data have to be chosen at national level in order to establish a table with air attenuation coefficient versus temperature and relative humidity typical for various European regions concerned, based on ISO 9613-1.

2.3. *Railway noise*

2.3.1. Description of the calculation method

The recommended interim computation method for railway noise is the 'RMR' Netherlands national computation method published in 'Reken- en Meetvoorschrift Railverkeerslawai '96, Ministerie Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer, 20 November 1996', which provides two different calculation schemes, SRM I (simplified scheme) and SRM II (detailed scheme). The conditions under which each of the schemes can be used, as described in the Dutch document, should be followed in order to determine which method to use for the purpose of strategic noise mapping following Directive 2002/49/EC.

2.3.2. Summary table of adaptations needed

Subject	Result of comparison/action
Noise indicator	RMR calculates equivalent noise levels but does not calculate long-term equivalent noise levels according to ISO 1996-2:1987. To calculate long-term indicators with RMR, average train data for the relevant year have to be provided and assessment periods day, evening, night following Directive 2002/49/EC have to be introduced.
Propagation	
— influence of meteorological conditions	Long-term average levels are calculated taking into account the meteorological correction factor CM (with C0 set to 3.5 dB)
— atmospheric absorption	Table 5.1 of RMR provides air attenuation versus temperature and relative humidity coefficients. In some particular situations in some Member States, these coefficients may need to be adapted. This should be done following ISO 9613-1.

2.4. *Aircraft noise*

2.4.1. Description of the calculation method

The recommended interim noise computation method for aircraft noise is ECAC/CEAC Doc. 29 'Report on Standard Method of Computing Noise Contours around Civil Airports', 1997. Of the different approaches to the modelling of flight paths, Annex II.2 of Directive 2002/49/EC states that the segmentation technique referred to in section 7.5 of ECAC Doc. 29 will be used. However, the latter document does not provide the procedures needed for such segmentation calculations. These guidelines provide such procedures (see 2.4.2).

It should be noted that in 2001, the European Civil Aviation Conference (ECAC) launched a revision of its Doc. 29 with a view to producing state-of-the-art in aircraft noise contour modelling. While Directive 2002/49/EC as published in July 2002 explicitly refers to the 1997 version of ECAC Doc. 29, attention should be paid to the revised version of the method when it is adopted by ECAC so as to allow, if appropriate and considered necessary, for the new method to be introduced in Annex II of Directive 2002/49/EC as the recommended method for aircraft noise computation. Such an introduction should be considered further to an assessment of the suitability of the revised method for strategic noise mapping as required by Directive 2002/49/EC.

2.4.2. Segmentation technique

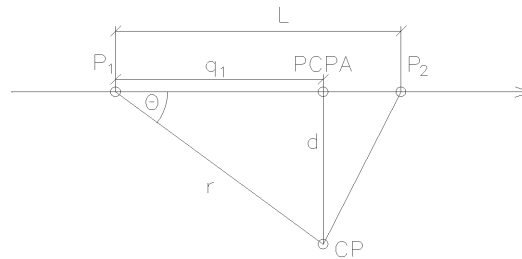
In line with Directive 2002/49/EC, sound exposure level generated by aircraft during operations should be computed using a segmentation technique. Although ECAC doc. 29 refers to such a technique, it does not provide means to implement such computations. These guidelines recommend the use of the segmentation method described in the Technical Manual of the Integrated Noise Model (INM) Version 6.0, as published in January 2002. This method is briefly described in the text below.

The flight path (both for straight and circular sections) is divided into segments, each of which is straight, (and the power setting and the speed are constant). The minimum value of the length of a segment is 3 m. For each sub-arc three x-y-points are computed. These three points define two line segments; the first point is at the start of the sub-arc, the third point is at the end of the sub-arc, the second point is half-way along the sub-arc.

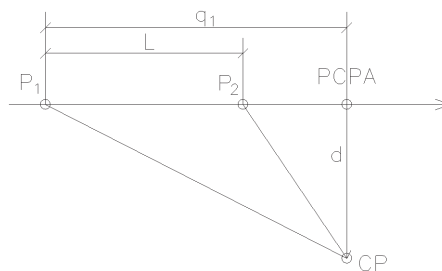
For each of the flight path segments or, if necessary, the extended flight path segment the perpendicular closest point of approach (PCPA) to the observer and the slant distance from the observer to this PCPA is determined (see Figure 1).

Figure 1 — Definition of perpendicular closest point of approach PCPA on the flight path and slant distance d for a segment P_1P_2 , when the calculation point CP is astride the segment (a) or when it is ahead of the segment (b) or when it is behind the segment (c).

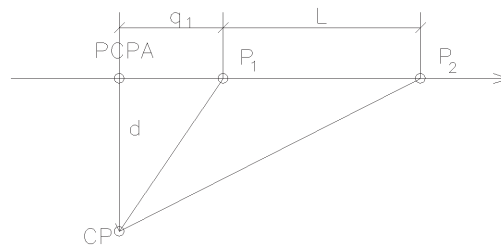
(a)



(b)



(c)



The slant distance d to the PCPA defines the data to be read from the Noise-Power-Distance(NPD)-curves; it defines also the elevation angle. The distance in the horizontal plane from the calculation point CP on the ground to the vertical projection of the PCPA defines the lateral distance for the calculation of the lateral attenuation (if relevant).

- If the height is changing in the segment, the height is set as follows: if the calculation point CP is astride the segment the height at the PCPA (linear interpolation) is used, if the CP is behind or ahead of the segment the height at the nearest end of the segment to the CP is used.
- If the speed is changing in the segment the speed is set as follows: if the calculation point CP is astride the segment, the speed at the PCPA (linear interpolation) is used, if the CP is behind or ahead of the segment, the speed at the nearest end of the segment to the CP is used.
- If the power setting is changing in the segment or the sound level according to the power setting is changing (Δ_s) the level is set as follows: if the calculation point CP is astride the segment, the level at the PCPA (linear interpolation) is used, if the CP is behind or ahead of the segment, the relevant level at the nearest end of the segment to the CP is used.

The proportion of the sound energy from a segment, or 'noise fraction', is calculated following the model used in INM 6.0.

If the default data referred to in 3.3.2 is used ($L_{A,max}$ based), then the 'scaled distance' s_L referred to in INM 6.0 Technical Manual should be calculated following:

$$s_L = \frac{2}{\pi} \cdot v \cdot \tau$$

where:

- v is the actual speed in m/s and,
- τ is the duration of flypast in seconds.

The 'scaled distance' is introduced to ensure that the total exposure obtained from the 'noise fraction' calculation is consistent with the NPD-data.

The sound event level of a whole flypast is calculated by adding up the sound event levels of the single segments on an energetic basis.

2.4.3. Calculation of the overall noise levels

Before the noise sound exposure in a calculation point from the total traffic can be determined, the sound exposure level (SEL) has to be calculated for each individual aircraft operation, following:

- If the calculations are based on SEL NPD-data for a reference speed (usually 160 knots for jet aircraft and 80 knots for small propeller driven aeroplanes):

$$SEL(x,y) = SEL(\xi,d)_{v,ref} - \Lambda(\beta,l) + \Delta_L + \Delta_V + \Delta_F$$

- If the calculations are based on $L_{A,max}$ -NPD-data (as the default data referred to in 3.3.2):

$$SEL(x,y) = L_A(\xi,d) - \Lambda(\beta,l) + \Delta_L + \Delta_A + \Delta_F$$

where:

- $SEL(\xi,d)_{v,ref}$ is the SEL at a point having co-ordinates (x,y) caused by a movement on an arrival or a departure route of an aeroplane with thrust ξ at the shortest distance d taken from noise-power-distance curve for thrust ξ and shortest distance d,
- $L_A(\xi,d)$ is the sound level at a point having co-ordinates (x,y) caused by a movement on an arrival or a departure route of an aeroplane with thrust ξ at the shortest distance d taken from noise-power-distance curve for thrust ξ and shortest distance d,
- $\Lambda(\beta,l)$ is the extra attenuation of sound during propagation lateral to the direction of aeroplane, for horizontal lateral distance l and elevation angle β ,
- Δ_L is the directivity function for take-off roll noise behind the start-of-roll point,
- Δ_V is the correction for actual speed on the flight path where $\Delta_V = 10 \cdot \lg(v_{ref}/v)$ with:
 - v_{ref} is the speed used in the NPD-data,
 - v is the actual speed on the flight path,
- Δ_A is the duration allowance depending on speed v calculated following 3.3.2,
- Δ_F is the correction for the finite length of the segment of the flight path.

The number of movements of any of the aircraft groups on any of the flight paths during a whole year has to be determined for the time periods day, evening and night separately.

With this, the Directive 2002/49/EC noise indicators L_{den} and L_{night} are calculated as follows:

$$L_{den} = 10 \cdot \lg \left(\frac{1}{86\,400} \sum_{i,j} (N_{d,i,j} + 3,16 \cdot N_{e,i,j} + 10 \cdot N_{n,i,j}) \cdot 10^{SEL_{i,j}/10} \right)$$

and

$$L_{night} = 10 \cdot \lg \left(\frac{1}{T_n} \sum_{i,j} N_{n,i,j} \cdot 10^{SEL_{i,j}/10} \right)$$

where:

- $N_{d,i,j}$ is the number of movements of the jth aircraft group on the ith flight path during the day period on an average day,
- $N_{e,i,j}$ is the number of movements of the jth aircraft group on the ith flight path during the evening period on an average day,
- $N_{n,i,j}$ is the number of movements of the jth aircraft group on the ith flight path during the night period on an average day,
- T_n is the duration of the night period in seconds,
- $SEL_{i,j}$ is the sound exposure level from the jth aircraft group on the ith flight path.

The number of movements on an average day is calculated as the average of the number of movements over a year following:

$$N_{i,j} = \frac{N_{year,i,j}}{365}$$

where the movements are separately counted for the periods day, evening and night and distinguished by the index d for the day period, e for the evening period and n for the night period.

The formula for L_{den} contains an additional +5 dB for the evening period (a factor of 3,16) to account for the number of movements in the evening period and an additional +10 dB for the night period (a factor of 10) to account for the number of movements during the night period.

2.4.4. Summary table of adaptations needed

The following table contains a presentation of the contents of ECAC Doc. 29 chapter by chapter showing similarities, differences and required additions needed to meet the requirements of Directive 2002/49/EC.

Section of the original text	Required adaptations
1. Introduction	Adapt to segmentation technique and common noise indicators as required by Annex II of Directive 2002/49/EC
2. Explanation of terms and symbols	Adapt to the use of noise indicators of Directive 2002/49/EC Noise unit must be A-weighted overall sound level Noise scale must be A-weighted equivalent sound level Replace 'noise index' by Directive 2002/49/EC noise indicators
3. Calculation of contours	'Period of some months' has to be changed to 'period of a year' to reflect the requirement of Directive 2002/49/EC for the 'average year' Correct (lateral attenuation $\Delta(\beta,l)$ must be subtracted and not added) and adapt formula (1) in part 3.3 of ECAC doc. 29 following point 2.4.3 of these guidelines
4. Format of aircraft noise and performance information to be used	In part 4.1.3 of ECAC doc. 29, adapt cut-off levels to ensure compatibility with the lowest contour levels to be calculated according to Directive 2002/49/EC See point 3.3 of these guidelines for additional information on noise emission data (including a default recommendation providing information on flight profiles, engine thrust and flight speeds) for the purpose of strategic noise mapping
5. Grouping of aircraft types	Approach to aircraft grouping should be adapted to take into account current fleet on European airports. See point 3.3.2 of these guidelines for default NPD-data based on updated aircraft grouping. Section 5.4 of ECAC doc. 29 allows for completion of emission data where necessary
6. Calculation grid	Grid spacing need to be chosen by competent authorities to take into account particular situations when producing strategic noise maps
7. Basic calculation of the noise from individual aircraft movements	In point 7.3 of ECAC doc. 29, the duration correction/allowance may need to be adapted depending if the type of NPD-data used is based on $L_{A,max}$ (see part 2.4.3 of these guidelines). In particular, if the default data recommended in these guidelines is used, Δ_v must be replaced by Δ_A (see part 3.3.2 of these guidelines) In point 7.5 of ECAC doc. 29, segmentation technique should be followed (see part 2.4.2 of these guidelines) Point 7.6 of ECAC doc. 29 is irrelevant when segmentation technique is used

Section of the original text	Required adaptations
8. Noise during the take-off and landing ground roll	In part 8.2 of ECAC doc. 29, apply equation (16) for $90 < \Phi \leq 148,4^\circ$ (to avoid discontinuity at $148,4^\circ$) and precise that $\Delta_L = 0$ for $\Phi \leq 90^\circ$ Equation (18) of ECAC doc. 29 for the determination of the sound exposure level may need to be adapted to take into account duration correction/allowance if the type of NPD-data used is based on $L_{A,max}$ (see part 3.3.2 of these guidelines)
9. Summation of sound levels	Introduction of the common noise indicators of Directive 2002/49/EC. See part 2.4.3 of these guidelines
10. Modelling of lateral and vertical dispersion of flight paths	No adaptation needed
11. Computation of sound exposure level with correction for track geometry	Chapter irrelevant when segmentation technique is used
12. Overall guidance on the computation of the noise contours	This guidance chapter does not need to be modified, but should be read in the light of Directive 2002/49/EC requirements, in particular regarding noise indicators

2.5. Industrial noise

2.5.1. Description of the calculation method

The recommended interim computation method for industrial noise is ISO 9613-2: 'Acoustics — Abatement of sound propagation outdoors, Part 2: General method of calculation'. This method, referred to as 'ISO 9613-2' in these guidelines, specifies an engineering method for calculating the attenuation of sound during propagation outdoors in order to predict environmental noise levels around a variety of sources, including industrial sources.

2.5.2. Summary table of adaptations needed

Subject	Result of comparison — action
Noise indicator	The definitions of the base indicators are identical: A-weighted long-term average sound level determined over a long period of time of several months or a year taking into account variations in both emission and propagation. Assessment periods day, evening, night following Directive 2002/49/EC have to be introduced.
Propagation — atmospheric absorption	Data have to be chosen at national level in order to establish a table with air attenuation coefficient versus temperature and relative humidity typical for various European regions concerned, based on ISO 9613-1.

3. EMISSION DATA

3.1. Road traffic noise — 'Guide du bruit 1980'

3.1.1. Measurement procedure

XPS 31-133 refers to the 'Guide du Bruit 1980' as a default emission model for road traffic noise calculations. If a Member State who adopts this interim computation method wishes to update the emission factors, the measurement procedure described below is recommended. It should be noted that in 2002 the French authorities launched a project designed to review the emission values. Attention should be paid to these new values and the methods developed to obtain them, when published by the responsible authorities, so as to allow, if appropriate and considered necessary, for them to be used as input data for the calculation of road traffic noise.

The noise emission level of a vehicle is characterised by the maximum pass-by sound level L_{Amax} in dB measured at 7,5 m from the centreline of the trajectory of the vehicle. This sound level is determined separately for different vehicle types, speeds and traffic flows. While the slope of the road is identified, the road surface is not explicitly taken into account. To remain compatible with the original measurement conditions, measurements for the addition of vehicle acoustical characteristics should be made for vehicles driving on either of the following road surface types: cement concrete, very slim bituminous concrete 0/14, half-granulated bituminous concrete 0/14, superficial seal 6/10, superficial seal 10/14. A surface correction is then added according to the scheme presented in 3.1.4.

Measurements can be made either on single isolated vehicles of the traffic or on specific circuits under controlled conditions. The vehicle speed should be measured with a Doppler radar (accuracy of approximately 5 % at slow speeds). The traffic flow is determined either by subjective observation (accelerated, decelerated or fluid) or by measurement. The microphone is positioned 1,2 m above ground and 7,5 m horizontally from the centreline of the vehicle trajectory.

For use with XPS 31-133 and in accordance with the specifications of Guide du Bruit 1980, the sound power level L_w and noise emission E are calculated from the measured sound pressure level L_p and vehicle speed V by:

$$L_w = L_p + 25,5 \text{ and } E = (L_w - 10 \log V - 50)$$

3.1.2. Noise emission and traffic

3.1.2.1. Noise Emission

The term noise emission is defined as follows:

$$E = (L_w - 10 \log V - 50)$$

where V is the vehicle speed

The emission E is therefore a sound level which can be described in terms of dB(A) as the sound level L_{eq} on the reference isophone due to a single vehicle per hour in traffic conditions which are function of:

- vehicle type,
- speed (or velocity),
- traffic flow,
- longitudinal profile.

3.1.2.2. Vehicle types

Two vehicle categories for noise prediction are used:

- light vehicles (vehicles less than 3,5 tonne net load),
- heavy vehicles (vehicles greater or equal to 3,5 tonne net load).

3.1.2.3. Speed

For reasons of simplicity, the parameter vehicle speed is used in this method for the whole average speed range (from 20 to 120 km/h). In the case of lower speeds (lower than 60 or 70 km/h depending on the situation) however, the method is refined by means of the subsequently described traffic flow.

To determine a long-term sound level in L_{eq} it is sufficient to know the average speed of a fleet of vehicles. This average speed of a fleet of vehicles can be defined as follows:

- the median speed V_{50} , or the speed that is reached or exceeded by 50 % of all vehicles; or
- the median speed V_{50} plus half the standard deviation of speeds.

All average speeds determined with either of these methods that turn out to be below 20 km/h are set to 20 km/h.

If available data do not allow for the accurate estimation of the average speed, the following general rule can be followed: for each road segment, the maximum allowed speed on this segment is used. A new road segment must be defined whenever the allowed maximum speed changes. An additional correction is introduced for the lower speed range (lower than 60 to 70 km/h depending on the situation), under which conditions corrections for one of the four flow types must be applied. Finally, all speeds below 20 km/h are set to 20 km/h.

3.1.2.4. Various types of traffic flows

Traffic flow type is a complementary parameter to speed, which accommodates acceleration, deceleration, engine load, and pulsed or continuous traffic motion. Four categories are defined below:

Fluid continuous flow: Vehicles move with a nearly constant velocity on the road section of interest. It is 'fluid' in that the flow is stable in both space and time for periods of at least ten minutes. Variations during the course of a day may be observed but without abrupt or rhythmic variations. Furthermore, it is neither accelerated nor decelerated but of steady velocity. This flow type corresponds to the traffic on a motorway/autobahn link or an interurban road, on an urban expressway (outside rush hours), and on major roads in an urban environment.

Pulsed continuous flow: A flow with a significant proportion of vehicles in a transitory state (i.e. either accelerating or decelerating) that is stable neither in time (i.e. there exist abrupt variations of flow during small time periods) nor in space (i.e. at any given moment in time irregular concentrations of vehicles exist on the road section of interest). It remains however possible to define an average overall velocity for this type of flow which is stable and repetitive for a sufficiently long period of time. This flow type corresponds to that found on city-centre roads, on major roads close to saturation, on dispatching or connecting roads with numerous crossings, in car parks, at pedestrian crossings and at junctions to housings.

Pulsed accelerated flow: This is a pulsed flow and thus turbulent. However, a significant proportion of all vehicles is accelerating, which in turn means that the notion of speed has a meaning only in discrete points as it is not stable during displacement. This is typically the case for traffic either on expressways after a crossing, or at a motorway slip road, at a tollbooth, etc.

Pulsed decelerated flow: This is the opposite of the previous one, in which a significant proportion of vehicles is decelerating. It is generally found on the approach of major urban crossings, on motorway or expressway exits or on the approach to a tollbooth, etc.

3.1.2.5. Three longitudinal profiles

Three longitudinal profiles are defined below, in order to take into account the difference in sound emission as a function of the slope of the carriageway:

- a horizontal carriageway or a horizontal carriageway section whose gradient in direction of traffic flow is less than 2 %;
- an ascending carriageway is one where upward gradient in the direction of traffic flow is greater than 2 %;
- a descending carriageway is one where the downward gradient in the direction of traffic flow is more than 2 %.

In the case of a one-way road this definition is directly applicable. In the case of two-way traffic a separate calculation for each driving direction and subsequent accumulation of results is required to obtain a precise estimate.

3.1.3. Quantified noise emission values for various road traffic types

3.1.3.1. Schematic representation

Guide du bruit provides nomograms giving the value of the sound level L_{eq} (1 hour), in dB(A), (also known as noise emission E , described in 3.1.2.1). The sound level is given separately for a single light vehicle (the sound emission is then ' E_{lv} ') and a single heavy vehicle (the sound emission is then ' E_{hv} ') per hour. For these separate vehicle types, E is a function of speed (see 3.1.2.3), traffic flow (see 3.1.2.4) and longitudinal profile (see 3.1.2.5). While the sound level shown in the nomograms does not include any corrections for road surface, these guidelines include a correction scheme (see 3.1.4).

The frequency-dependent basic sound power level L_{Awi} in dB(A), of a compound point source i in a given octave band j is calculated from the individual sound emission levels for light and heavy vehicles obtained from nomogram 2 of Guide du Bruit 1980 (referred to as 'nomogram 2' in these guidelines) using the following equation:

$$L_{Awi} = L_{Aw/m} + 10\lg(l_i) + R(j) + \psi$$

where:

- $L_{Aw/m}$ is the global sound power level per metre length along the lane attributed to the specified source line, in dB(A), given by:

$$L_{Aw/m} = 10 \log \left(10^{(E_{lv} + 10 \log Q_{lv})/10} + 10^{(E_{hv} + 10 \log Q_{hv})/10} \right) + 20$$

where:

- E_{lv} is the sound emission for light vehicles as defined in nomogram 2,
- E_{hv} is the sound emission for heavy vehicles as defined in nomogram 2,

- Q_{lv} is the volume of light traffic during the reference interval,
- Q_{hv} is the volume of heavy vehicles during the reference interval;
- Ψ is the road surface noise level correction defined in 3.1.4;
- l_i is the length of the section of the source line represented by a component point source i in meters;
- $R(j)$ is the spectral value, in dB(A), for octave band j given in Table 2.

TABLE 2

Normalised A-weighted octave band traffic noise spectrum calculated from third octave spectrum of EN 1793-3

j	Octave band (in Hz)	Values of $R(j)$ (in dB(A))
1	125	– 14,5
2	250	– 10,2
3	500	– 7,2
4	1000	– 3,9
5	2000	– 6,4
6	4000	– 11,4

3.1.4. Road surface correction

3.1.4.1. Introduction

Above a certain speed the overall noise emitted by a vehicle is dominated by the tyre-road contact noise. It depends on vehicle speed, type of road surface, (in particular porous and sound-deadening surfaces) and tyre type. Guide du bruit 1980 provides a standard noise emission for a standard road surface. The scheme described below is suggested to introduce road surface corrections. It is compatible with EN ISO 11819-1 provisions.

3.1.4.2. Surface type definitions

- Smooth asphalt (concrete or mastic): is the reference road surface defined in EN ISO 11819-1. It is a dense, smooth-textured, either asphalt concrete or stone-mastic asphalt surface with a maximum chipping size of 11 - 16 mm.
- Porous surface: is a surface with a void volume of at least 20 %. The surface has to be less than five years old (the age restriction accounts for the tendency of porous surfaces to become less absorptive over time as the voids fill up. If special maintenance is applied the age restriction may be lifted. However, after the initial five years term measurements must be made to determine the acoustics properties of the surface. The sound-reducing effect of this surface is a function of vehicle speed).
- Cement concrete and corrugated asphalt: includes both the cement concrete and coarse-texture asphalt.
- Smooth texture paving stones: paving stones with a distance smaller than 5 mm between the blocks.
- Rough texture paving stones: paving stones with a distance greater than or equal to 5 mm between the blocks.
- Others: is an open category into which each Member States may place corrections for other surfaces. To ensure harmonised use and results, data must be obtained in accordance with EN ISO 11819-1. The data obtained should be entered into Table 3. For all measurements, the passage speeds must be equal to the standard's reference speeds. The Statistical Pass-By Index (SPBI) equation will be used to evaluate the effect of the percentage of heavy vehicles. 10 %, 20 %, 30 % will be used respectively to calculate the SPBI for each of the three percentage ranges defined in Table 3 (0-15 %, 16-25 % and > 25 %).

TABLE 3

Standard road surface correction scheme

Speed	< 60 km/h			61-80 km/h			81-110 km/h		
% Heavy vehicles	0-15 %	16-25 %	> 25 %	0-15 %	16-25 %	> 25 %	0-15 %	16-25 %	> 25 %
Surface type									

3.1.4.3. *Recommended correction scheme*

TABLE 4

Proposed road surface correction scheme

Road surface categories	Noise level correction Ψ		
Porous surface	0-60 km/h	61-80 km/h	81-130 km/h
	- 1 dB	- 2 dB	- 3 dB
Smooth asphalt (concrete or mastic)	0 dB		
Cement concrete and corrugated asphalt	+ 2 dB		
Smooth texture paving stones	+ 3 dB		
Rough texture paving stones	+ 6 dB		

3.2. *Railway noise*3.2.1. *Introduction*

The Dutch railway noise computation method RMR has its own emission model that is described in detail in Chapter 2 of the original Dutch text. This emission model can remain to be used in all Member States without modification.

With regard to emission data, these guidelines identify in 3.2.2 the Dutch emission database as the recommended default database. However, the measurement methods described in 3.2.2.2 will allow Member States to produce new emission data to compensate for the lack of emission data of non-Dutch rolling stock on non-Dutch rails in the default database.

3.2.2. *The noise emission model*

Prior to the calculation of the 'equivalent continuous sound pressure level' all vehicles that use a specified section of railway line and follow the appropriate service guidelines should be either placed in the 10 railway vehicles categories shown in 3.2.2.1 or, where appropriate, into additional categories after carrying out measurements according to 3.2.2.2.

3.2.2.1. *Existing train categories*

The existing categories that are provided in the Dutch emission database are primarily differentiated by propulsion system and wheel brake system as follows:

Category	Train description
1	Block braked passenger trains
2	Disc braked and block braked passenger trains
3	Disc braked passenger trains
4	Block braked freight trains
5	Block braked diesel trains
6	Diesel trains with disc brakes

Category	Train description
7	Disc braked urban subway and rapid tram trains
8	Disc braked InterCity and slow trains
9	Disc braked and block braked high speed trains
10	Provisionally reserved for high speed trains of the ICE-3 (M) (HST East) type

3.2.2.2. Measurement method

The noise emission characteristics of a railway vehicle or of a track can be determined by measurement. The measurement procedures are described in:

- ‘Reken- en Meetvoorschrift “Railverkeerslawaaï 2002, Ministerie Volkshuisvesting, Ruimtelijke Ordening” en Milieubeheer, 28 maart 2002’.

Three procedures are given to determine the characteristics of new train categories or non-Dutch rolling stock on non-Dutch tracks (procedures A and B) and of non-Dutch tracks (procedure C):

- Procedure A is a simplified method, which provides a way of determining if a railway vehicle can be allocated to an existing category (as referred to in 3.2.2.1). This method can also be used for new (yet to be constructed) vehicles on which it is impossible to carry out noise measurements. This allocation is done mainly on the basis of the type of propulsion system (diesel, electric, hydraulic) and the braking system (disc or block).
- Procedure B describes methods of obtaining emission data for rail vehicles that do not necessarily fit into an existing train category. A so-called ‘free category’ is introduced to which any vehicle type can be assigned, if its noise emission is determined according to this procedure. The data obtained in this manner take into account the separation of vehicle, the track sound radiation and the wheel and track roughness. Also the different sources of noise — traction noise, rolling noise and aerodynamic noise — are taken into account along with the heights of the different sources.
- Procedure C allows for the determination of the acoustical characteristics of track construction (sleepers, ballast bed, etc). The noise calculation method is based on the fact that the track characteristics, in octave bands, are independent of the type of vehicle or of the speed of the vehicle. To verify this, it is necessary to perform measurements at one location at two additional speeds (difference > 20, respectively 30 %). The differences in the calculated track characteristics should be below 3dB in each of the octave bands. If the correction is dependent on speed, additional research has to be carried out that may lead to speed-dependent characteristics.

3.2.2.3. Emission model

If calculations are carried out following SRM I, emission values in dB(A) are determined as follows:

$$E = 10 \lg \left(\sum_{c=1}^y 10^{E_{nr,c}/10} + \sum_{c=1}^y 10^{E_{r,c}/10} \right)$$

where:

- $E_{nr,c}$ is the emission term per rail vehicle category for non-braking trains,
- $E_{r,c}$ emission term for braking trains,
- c is the train category,
- y is the total number of categories present.

The emission values per rail vehicle category are determined from:

$$\begin{aligned} E_{nr,c} &= a_c + b_c \lg v_c + 10 \lg Q_c + C_{b,c} \\ E_{r,c} &= a_{r,c} + b_{r,c} \lg v_c + 10 \lg Q_{r,c} + C_{b,c} \end{aligned}$$

where the standard emission values a_c , b_c , $a_{r,c}$ & $b_{r,c}$ are provided in RMR.

If SRM II is used, then for each train category and for different sound source heights (up to 5 heights), emission values per octave band are determined. After the characterisation of the emission of different train categories, the emission of the specified section of railway line is calculated taking into account the passage of different train categories (and the fact that not all categories have sound sources at all heights) and the passage of trains under different conditions (braking or not braking). The emission factor in octave band i is calculated following:

$$L_{E,i}^h = 10 \log \left(\sum_{c=1} n 10^{E_{nb,i,c}^h/10} + \sum_{c=1} n 10^{E_{br,i,c}^h/10} \right)$$

where n is the number of train categories using the railway line under consideration, $E_{nb,i,c}^h$ (resp. $E_{br,i,c}^h$) is the emission term for non-braking (resp. braking) units for train in each train category ($c = 1$ to n), in octave band i , and at assessment height h ($h = 0\text{m}, 0,5\text{ m}, 2\text{ m}, 4\text{ m}$ and 5 m — dependent on the train category) calculated as follows:

$$E_{br,i,c}^h = a_{br,i,c}^h + b_{br,i,c}^h \log V_{br,c} + 10 \log Q_{br,c} + C_{bb,i,m,c}$$

$$E_{nb,i,c}^h = a_{i,c}^h + b_{i,c}^h \log V_c + 10 \log Q_c + C_{bb,i,m,c}$$

where:

- $a_{i,c}^h$ and $b_{i,c}^h$ (resp. $a_{br,i,c}^h$ and $b_{br,i,c}^h$): emission terms for train category c in non-braking (resp. braking) conditions, for octave band i , at height h .
- Q_c : mean number of non-braking units of the railway vehicle category concerned
- $Q_{br,c}$: mean number of braking units of the railway vehicle category concerned
- V_c : mean speed of passing non-braking railway vehicles
- $V_{br,c}$: mean speed of passing braking railway vehicles
- bb : type of track/condition of the railway tracks
- m : estimation of the occurrence of track disconnection
- $C_{bb,i,m}$: correction for to track discontinuities and rail roughness

3.3. Aircraft noise

3.3.1. Introduction

Further to a review of available databases, these guidelines provide in 3.3.2 a default recommendation for the computation of aircraft noise around airports using ECAC doc. 29 as modified following 2.4.

As underlined in the introduction to these guidelines, the use of the default recommended data is not compulsory, and Member States may use other data that they consider appropriate, provided they are suitable for use with ECAC doc. 29.

Furthermore, attention should be paid to ongoing initiatives relating to the establishment of an updated and internationally agreed database on civil aircraft noise. In particular, in the future, such a database may be provided jointly by Eurocontrol and the American Federal Aviation Authority.

3.3.2. Default recommendation

For the computation of aircraft noise, further to a review of readily available databases, it has been found that the following documents (see below) provide complete data covering noise power distance data and performance data for most types of civil aircraft including the new low noise aircraft generation:

- 'ÖAL-Richtlinie 24-1 Lärmschutzzonen in der Umgebung von Flughäfen Planungs- und Berechnungsgrundlagen. Österreichischer Arbeitsring für Lärmbekämpfung Wien 2001'
- 'Neue zivile Flugzeugklassen für die Anleitung zur Berechnung von Lärmschutzbereichen (Entwurf), Umweltbundesamt, Berlin 1999'

The data are based on a grouping of aircraft and contain $L_{A,max}$ -levels. The following formula allows calculation of SEL-values using pass-by duration as an additional parameter.

SEL is calculated in dB from $L_{A,max}$ by

$$SEL = L_{A,max} + \Delta_A \& \Delta_A = 10 \cdot \lg \frac{T}{T_0}$$

with $T_0 = 1$ second and T in s expressed following:

$$T = \frac{A \cdot d}{V + (d/B)}$$

where:

- A and B are constants which are different for take-off and approach and for different fixed-wing aircraft,
- d is the slant distance in m (see 2.4.2),
- V is the speed in m/s.

The sound levels are given for take-off thrust and for landing thrust. Thrust reduction after take-off is addressed via sound level reductions ΔL_{ξ} given at certain heights and speeds.

For each of the aircraft groups, default take-off-profiles are given with speed V and height H versus distance σ on the ground track from start-off-roll point and for greater distances with $dH/d\sigma$.

The sound level data and the performance data are normalised for temperature 15°C, humidity 70 % and pressure 1 013,25 hPa. They may be used for temperatures up to 30 °C and whenever the product of relative humidity and temperature is greater than 500.