

Commission Decision of 17 June 2009 on the State aid C 33/08 (ex N 732/07) to Volvo Aero Corporation for R & D, which Sweden intends to implement (notified under document C(2009) 4542) (Only the Swedish version is authentic) (Text with EEA relevance) (2009/838/EC)

COMMISSION DECISION

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(2009/838/EC)

THE COMMISSION OF THE EUROPEAN COMMUNITIES

Having regard to the Treaty establishing the European Community, and in particular the first subparagraph of Article 88(2) thereof,

Having regard to the Agreement on the European Economic Area, and in particular Article 62(1) (a) thereof,

Having called on interested parties to submit their comments pursuant to those provisions⁽¹⁾,

Having regard to those comments,

Whereas:

1. **PROCEDURE**

- (1) By letter of 10 December 2007, the Swedish authorities notified to the Commission the measure related to an aid that they intended to grant to Volvo Aero Corporation. The Commission requested further information in a letter dated 28 January 2008. The Swedish authorities submitted some answers to this request in a letter of 18 March 2008.
- (2) On 15 April 2008, a meeting took place between the Swedish authorities and the services of the Commission, after which the Commission wrote another letter requesting supplementary information on 21 April 2008. The Swedish authorities replied to this letter and submitted further observations by letter of 2 June 2008. In that letter, the Swedish authorities referred to additional information, notably internal exchanges of e-mail between managers of the beneficiary. This supplementary information was submitted on 19 June 2008.

- (3) By letter of 16 July 2008 the Commission notified to Sweden its decision to initiate proceedings pursuant to Article 88(2) of the EC Treaty on the above mentioned measure. The decision of the Commission to initiate proceedings has been published in the *Official Journal of the European Union*⁽²⁾. The Commission invited interested parties to submit their observations on the measure. Sweden submitted observations on 17 October 2008.
- (4) By fax dated 28 October 2008, Fred Bodin, the former President and CEO of Volvo Aero, submitted observations. By letter of 31 October 2008, GE Aviation submitted observations. By e-mail dated 3 November 2008, the IF Metalworkers union of Volvo Aero submitted observations.
- (5) By letter of 3 November 2008 the Commission has forwarded these observations to the Swedish authorities, which submitted comments on 12 December 2008.
- (6) The Commission requested further information from the Swedish authorities by letter of 30 March 2009, to which Sweden replied on 3 April 2009.

2. OBJECTIVE OF THE MEASURE

- (7) The Swedish authorities intend to grant aid to Volvo Aero (the *Company*) for the research and development (*R & D*) of components for the GENx engine, which is an engine developed by General Electric (*GE*) for the Boeing B787 and B747-8 aircraft. Volvo Aero signed an initial risk-sharing partnership agreement with GE on 15 December 2004 and commenced work on the R & D project.
- (8) Volvo Aero is a developer and producer of components for commercial and military aircraft engines, with operating income of SEK 359 million (approx. EUR 39 million⁽³⁾) and operating margin of 4,8 % in 2008. It is a small player in the so-called second tier market⁽⁴⁾ and produces components for all the original equipment manufacturers (OEMs): General Electric (*GE*) and Pratt & Whitney (*PW*) in North America and Rolls-Royce (*RR*) in Europe.
- (9) Volvo Aero is part of the Volvo Group (the *Group*). The Group operates mainly in the trucks, construction equipment, and buses sectors. It also provides engines for leisure and work boats as well as diesel-powered generator set and operations in the aerospace industry (through its subsidiary Volvo Aero)⁽⁵⁾. In 2008, the Group's operating income amounted to SEK 15 851 million (approx. EUR 1 704 million) with an operating margin of 5,2 %. Volvo Aero accounts for 2 % share of the Group's net sales and operating income.
- (10) The GENx is being developed by GE and a number of risk and revenue sharing partners (RRSP) which include, apart from Volvo Aero, the following companies: Avio (Italy), with 12 %, responsible for the design and manufacturing of the accessory gearbox; Techspace Aero (Belgium) with 5 %,

responsible for the low pressure compressor stators; and other partners in Japan (IHI and MHI with combined 15 % share) and in the US.

- (11) The GENx for the B787 was certified in March 2008 and the GENx for B747-8 is scheduled for certification in mid 2009. 1120 GENx orders were secured for the B787 and B747-8 aircraft; however the launch of the B787 has been delayed by Boeing for nearly 2 years and no engines have actually been sold as yet.
- (12) Volvo Aero's participation in the GENx under the RRSP agreement amounts to 5,6 % of the overall GENx costs. Volvo Aero is in charge of developing a number of components for GENx: the fan hub frame, booster spool, turbine rear frame, after fan case and high pressure turbine root seal, with the total R & D project costs of SEK 927 million (approx EUR 100 million).
- (13) The scale of the proposed R & D project is 4 times greater than any other R & D project handled by the Company so far and it is the first time Volvo Aero has assumed this level of responsibility. Besides, the technical and commercial risks presented by GENx are substantial. The GENx engine contains complex lightweight components that have to be applied in a new manner. The ambitious technological objectives fixed by GE for the development of GENx components are linked to low fuel consumption, low noise, low emissions and low weight.
- (14) The Swedish authorities intended to grant to Volvo Aero a repayable advance⁽⁶⁾ of SEK 362 million (approx. EUR 39 million at the exchange rate in effect when the aid was granted), which would cover 39 % of the eligible R & D costs. The aid has not been paid out yet and is subject to approval by the Commission. According to the Swedish authorities, the reimbursement mechanism would ensure a return of 7,32 % on the loan, higher than the current reference rate for Sweden (5,49 % in 2007).
- (15) The repayment is defined on the basis of the earnings of Volvo Aero from the project (in terms of payments from GE to Volvo Aero). The forecast used by the Swedish authorities is SEK 23 billion⁽⁷⁾, based on sales forecasts of 4 937 engines up to 2028. Until this volume has been attained, Volvo Aero is expected to pay [...] ⁽⁸⁾ % of the payments from GE to the Government, including payments from other derivative engines from the GENx. When sales exceed SEK 23 billion, Volvo Aero will continue to pay a royalty corresponding to [...] % of annual turnover from the GENx (but excluding future derivative engines), with no limitation in time.
- (16) Volvo Aero requested the aid in a letter to the Swedish Government on 7 December 2004, before the start of the project. The Swedish authorities gave an oral assurance to Volvo Aero in December 2004 that they would grant some aid for the R & D project (without however confirming the exact amount and form of aid). Only informally, through a telephone call from the Ministry of

Industry to Volvo Aero, did the Government express its positive stance on the aid.

- (17) Volvo Aero claims that it relied on this assurance and signed the agreement with GE on 15 December 2004, even though it did not get any written confirmation by the Government about the aid. The aid was formally approved by the Swedish authorities only in 14 June 2007 when they gave the instruction to the National Debt Office to formalize the loan, after, according to the Swedish authorities, the scope of Volvo Aero's part in the project had been clarified. By then, a large part of the R & D project had been completed.

3. **GROUNDINGS FOR INITIATING THE FORMAL INVESTIGATION PROCEDURE**

- (18) The Commission decided to open the formal investigation procedure because of a number of misgivings that are summarised below:
- (19) The Commission had misgivings about the market failure invoked by Sweden, i.e. the asymmetric information related to financing that applies to this type of project⁽⁹⁾. Given that Volvo Aero is not financially independent of the Volvo Group and the project costs have *de facto* been covered from Volvo Aero's operating cash flow and the intra-group cash pool, this raised the question whether Volvo Aero really lacks the resources to participate in the GENx project.
- (20) The Commission had doubts as to the incentive effect of the aid, and the need for it, and questioned the extent to which the aid had been a determining factor in Volvo Aero's decision to start the project, given that it was only formally approved when almost half of the project had been completed. The Commission was of the opinion that the oral discussion that took place between the Government and the Company was no substitute for the formal procedure for the granting of aid.
- (21) The Commission questioned the proportionality of the aid in respect of the repayment terms of the repayable advance. The Commission was concerned that the foreign exchange risks were being borne by the Government instead of Volvo Aero.
- (22) The Commission in the opening decision considered that the impact of the aid on competition was limited, given the very small market share of the beneficiary (2 % share of the market for large civil aircraft engines). However, the Commission invited competitors or other third parties to submit any observations as concerns effects on competition.

4. **COMMENTS FROM SWEDEN AND INTERESTED PARTIES**

- (23) Pursuant to Article 20(2) of Council Regulation (EC) No 659/1999 of 22 March 1999 laying down detailed rules for the application of Article 93 of the EC Treaty⁽¹⁰⁾, and in response to the public notice in the *Official Journal of the*

European Union⁽¹¹⁾, the Commission received comments from the Swedish authorities, from the former President and CEO of Volvo Aero, from GE Aviation, and from the IF Metalworkers union of Volvo Aero.

4.1. **Comments from Sweden**

4.1.1. *Market failure*

(24) The Swedish authorities provided information to address the Commission's doubts with regard to the market failure issue and to explain the existence of a market failure in the case at hand, focusing on the availability of appropriate internal and external financing as well as the Volvo Group's financial policies towards the use of external funding sources, including public support.

(25) Sweden provided further information on the Volvo Group's financial policy, including the terms and conditions of the intra-group loan to Volvo Aero. The information provided shows that the intra-group cash pool rather represented an emergency temporary measure in order to enable Volvo Aero to meet the contractual obligations against GE, in anticipation of the agreed Government support. The continuation of such loan, however, would threaten to unbalance the funding of other Group operations and is therefore not a sustainable option.

(26) As to the availability of external funding, Sweden explained why external financing was not available for the project. The Volvo Group has never obtained from any commercial bank or financial institution a conditional loan comparable to the repayable advance. The Volvo Group does not normally obtain commercial loans where the term exceeds 10 years, while the requested repayable advance is for 20 years. Nordea, the preferred bank of the Volvo Group, was not prepared to provide conditional loans or loans for 20-30 year term to the Volvo Group.

4.1.2. *Incentive effect*

(27) The Swedish authorities explained the reasons underlying the time lag between the initial assurances by the Government to grant the aid, the start of the R & D project and the formal approval of the aid. According to Sweden, the Government confirmed to Volvo Aero in 2004 that it would grant the aid. However, for a number of objective reasons, such as the scope of the project that had been clarified only by the autumn of 2006, and the elections in 2006, the approval of the aid was formalised only in 2007.

(28) Sweden provided information to demonstrate that the clear and positive assurances given to Volvo Aero in 2004 with regard to the aid had an incentive effect, as they enabled the Company to engage in the GENx project. The Swedish authorities claimed that the Government intended that Volvo Aero would rely on the said assurances and on that basis would enter into the agreement with GE. Internal documents were provided to the Commission to demonstrate that such assurances accurately reflect the intention of the Swedish authorities at the time.

- (29) Given the assurances by the Government in 2004 which triggered the change in the Company's behaviour, according to the Swedish authorities, a formal agreement to grant the aid in 2007 was just a formalisation of the *de facto* offer of the aid in 2004. The time lag between the assurances and their formalisation does not, according to Sweden, reflect any uncertainty that the aid has actually been paid out. Besides, the Swedish authorities emphasised that the formal decision to grant the aid was taken when a large part of R & D work was still ongoing.
- (30) The Swedish authorities reiterated further that given the exceptional nature of the GENx project, including its size and scope and the technological and commercial risks involved, the conditional loan was crucial for Volvo Aero to engage in the GE agreement. They presented detailed information concerning commercial and technological risks related to the project, both at the project start, as well as at the time the repayable advance was formalised in mid 2007 and beyond. Considering the technical and financial risks, GE initially had serious reservations about involving Volvo Aero in the GENx project given its limited experience in engine component development. Considerable technical and commercial risks remained in mid 2007 and beyond due to ongoing R & D work and fewer sales of GENx powered aircraft than originally expected.
- (31) According to the Swedish authorities, the *de facto* situation of Volvo Aero (that the R & D project was executed with internal and the Group resources) does not mean the long-term or risk-sharing financing was available to the Group operating companies. Having signed the GE agreement, Volvo Aero had contractual commitments to continue with the project. Failure to do so would have had dramatic consequences, such as breach of contract and delay in its work, loss of reputation and the risk of being perceived as an unreliable partner. Therefore, temporary reliance on the intra-group cash pool was crucial but no substitute for long-term funding. The Swedish authorities stressed that the Company, due to delay in the expected State aid, is confronted with the most dramatic cash flow position in its history.

4.1.3. *Proportionality of the aid*

- (32) The Swedish authorities presented arguments showing why Volvo Aero and not the Government would bear the foreign exchange risk. They also argued that since the repayment of the advance is based on revenues from sales (regardless of currency) and not units sold, the instrument is more proportionate, as it also includes the sale of spare parts. The Swedish authorities further claimed that the aid was proportionate mainly because of the repayment terms of the repayable advance.

4.1.4. *Distortion of competition*

- (33) The Swedish authorities agreed that the distortion of competition and trade was limited. They emphasised that the risk of crowding out was

limited because each engine project presents a fresh opportunity for several component producers to engage in new R & D. According to the Swedish authorities, the aid would only marginally increase the market share of the Company, as the GENx project will replace the previous CF6-80 programme. Finally, the aid would enable the Company to engage in the development and production of components for civil aircraft engines.

4.2. **Comments from interested parties**

- (34) Fred Bodin, the former President and CEO of Volvo Aero, provided the details of the negotiation process with GE and the Government. Given the cash flow implications of the GENx project, the board's decision to enter into the GE agreement was taken on the understanding that Volvo Aero would receive the aid, as documented in the GE RRSP agreement dated 15 December 2004. Mr Bodin emphasised that the Government had clearly confirmed it would grant the aid and he would not have authorised the agreement with GE without a clear commitment from the Government.
- (35) The observations from GE Aviation contained information explaining the negotiation process with GE, showing that GE had concerns regarding Volvo Aero's resources, both technical and financial, to participate in the GENx project, the largest R & D project ever undertaken by Volvo Aero. The Company conveyed to GE on several occasions that receiving the Government support for the project was critical to their decision to become a risk-sharing partner in the GENx project, and that Volvo Aero entered into the GE agreement on the understanding that it would be entitled to the loan. GE also pointed out that there are still risks associated with the GENx programme.
- (36) In their observations, the workers unions stress that the GENx programme is new and unique both for Sweden and for Volvo Aero. The previous work of Volvo Aero in the civil sector has been based on the production of engine components, while a significant part of the new project will involve the development of new engine components. The GENx programme is much larger than previous cooperation projects with Rolls Royce.
- (37) The workers unions expressed their concern over the difficulties of the aircraft market for such a small player as Volvo Aero, for which this kind of programme is essential to stay on a global market. They are aware of the financial implications and the constraints that the programme represented for Volvo but also understand the possibilities offered by the state loan. Without State aid the participation to such a large programme would have been impossible for Volvo Aero.
- (38) According to them, the development work is not yet complete and so there are still significant technical risks. Commercial risks are also still significant, as orders do not always mature into sales, particularly given the economic and financial downturn. The negative consequences of not getting State support

on the cash flow situation of Volvo Aero, which is worse than ever, worry the workers unions.

4.3. **Observations by Sweden on the third party comments**

- (39) By letter dated 12 December 2008, the Swedish authorities submitted observations on the third party comments and provided additional information on the basis of further input received from Volvo Aero to demonstrate that the repayable advance was crucial for Volvo Aero to enter into the GE agreement.
- (40) The Swedish authorities agreed with the observations of GE and the workers unions who claim that the GENx presented an exceptional challenge for Volvo Aero and that the R & D work is still ongoing, with related technical challenges. Besides, according to Sweden, these observations are fully consistent with the information provided by Mr Bodin, the former President and CEO of the Company, which also correctly represents the link between the negotiations with GE and the Government assurances to grant the aid.

4.4. **Further information provided by Sweden**

- (41) In response to the Commission letter dated 30 March 2009, Sweden provided further information about the intra-group funding to justify why AB Volvo has not contributed long-term funding to the GE project. Considering that the market failure and the incentive effect could be called into question by the late formalisation of the aid, the Swedish authorities indicated their readiness to accept an amendment of the originally notified aid amount.
- (42) On 14 June 2007, the date on which the Government gave its formal agreement to grant the aid, Volvo Aero had *de facto* paid approx. 66,5 % of the eligible costs. This is beyond its originally planned contribution of 60 %, and consequently the aid has to be reduced to approx. 33,5 % of the eligible costs, equivalent to approx. SEK 304 million (approx. EUR 33 million), compared to the SEK 362 million (approx. EUR 39 million) originally planned.

5. **EXISTENCE OF STATE AID**

5.1. **Existence of State aid**

- (43) As indicated in the decision to open proceedings, the measure under assessment falls within the scope of Article 87(1) of the Treaty. This conclusion was not disputed by any of the parties.
- (44) The notified measure concerns a loan granted by the Swedish National Debt Office to Volvo Aero. The resources involved are State resources, as they were made available by the Swedish Parliament and instructions for their use have been drawn up by the Swedish Government. The measure is selective as it concerns only one undertaking, Volvo Aero, which is a large enterprise involved in trade with other Member States. The measure provides an advantage to Volvo Aero, as it allows the Company to have access to

resources on terms which the market is not able to provide. Therefore the measure constitutes State aid according to Article 87(1) of the EC Treaty.

5.2. **Legality of the measure**

- (45) By notifying the measure before its implementation, the Swedish authorities have fulfilled their obligations under Article 88(3) of the EC Treaty. The notified measure will be implemented only after approval by the Commission, in line with Article 88(3) of the EC Treaty.

6. **COMPATIBILITY WITH THE SINGLE MARKET**

- (46) The Commission has assessed the measure under Article 87(3)(c) of the Treaty, in particular on the basis of the provisions concerning aid for R & D — since 1 January 2007, the Community Framework for State Aid for Research, Development and Innovation⁽¹²⁾ (the *R & D&I Framework*).

6.1. **Market failure**

- (47) To assess properly an aid for a large R & D project, it is necessary to assess the objectives of the measure, notably which market failures it aims to tackle. Only where market forces alone are unable to reach an economically efficient outcome is a market failure considered to exist. In their notification, the Swedish authorities explained that due to imperfect and asymmetric information, there is lack of private risk-sharing financing for the GENx project which is characterised by high technological risks and long-term returns.
- (48) The Commission has recognised the existence of such market failure concerning large programmes in the aerospace sector in previous decisions⁽¹³⁾. However, this does not mean that any project in the sector would face a market failure. It is evident that in several occasions, various companies in the sector have been able to fund new projects either from their own resources or through the financial markets. The Commission must assess the presence and the extent of a market failure in the specific case under assessment.
- (49) In the opening decision, the Commission questioned whether there was a market failure considering that the formal decision of the Government to grant the aid arrived at a very late stage in the programme when the project had already been financed by Volvo Aero from its operating cash flow and the intra-group cash pool. The Commission therefore questioned whether the intra-group funding could *de facto* constitute long-term funding of the GENx project.
- (50) The Commission takes account of information provided by the Swedish authorities on the Volvo Group's financial policy, including the terms and conditions of the intra-group loan to Volvo Aero, which seeks to demonstrate that the funding from the intra-group cash pool system could not be considered as long-term financing for the GENx project. Such funding rather

represented an emergency temporary measure to enable Volvo Aero to meet its contractual obligations towards GE; however, its continuation would threaten to unbalance the funding of other Group operations.

- (51) As explained by Sweden, the Group financial policies require that the subsidiaries are financed from their operating cash flow or the intra-group cash pool that is funded via the Group companies and through external sources. Volvo Treasury is in charge of the Group's cash pool management to ensure that there are sufficient reserves to safeguard the ongoing funding of Volvo operations. It is responsible for assessing the overall needs and possibilities of all the Group's business areas and determining the cash pool limits (borrowing and lending) of the Volvo Group companies on a quarterly basis.
- (52) As further explained by the Swedish authorities, the intra-group funding is not supposed to cover project-related financing. It is the responsibility of the subsidiaries to self-finance their R & D expenditures. Besides, the Group's cash pool facility can only be used for short-term projects, under strict repayment conditions and in proportion to the contribution made to the Group operating income, so that the intra-group financing is not done at the expense of other Group business areas. According to the Swedish authorities, the intra-group funding is provided on market terms.
- (53) The Commission notes that Volvo Aero's reliance on the intra-group cash pool for nearly 4 years has been an exception to the Group financial policies. According to Sweden, Volvo Aero was the only operating company that constantly received a substantial negative cash pool limit ranging between SEK [...] to [...] million (approx. EUR [...] to [...] million) from 2004-2008. Besides, the cash pool limits are no longer fixed on an annual basis, but on a quarterly basis. With its limited contribution of 2 % to the Group's operating income, such reliance on the intra-group funding has been disproportionate compared to the Company's relative importance in the Group⁽¹⁴⁾.
- (54) The Commission also takes account of the explanation provided by the Swedish authorities that such exceptional reliance on the Group's cash pool funding threatens to undermine the coherence of the Group's operations. Volvo Aero has relied on the Group's cash pool at the expense of funding other Group's business areas, thus endangering the continuity and balanced growth of other Group operations⁽¹⁵⁾, as it creates an imbalance of risks between the Volvo Group's aerospace and non-aerospace divisions. This would limit the Group's capacity for funding other Group projects which are less risky and give better returns.
- (55) The Commission considers that a continuous reliance on the intra-group cash pool is not sustainable in the long run, as the Group is putting Volvo Aero under severe financial pressure to repay the loan, notwithstanding its severe negative cash flow position. Volvo Aero had a negative operating cash flow

after tax of SEK [...] million (approx EUR [...] million) in 2008. Volvo Aero has therefore been obliged to take a number of internal measures to generate cash, such as [...]⁽¹⁶⁾.

- (56) On the basis of these arguments, the Commission is able to conclude that the intra-group cash pool has provided liquidity coverage for Volvo Aero to enable the Company to meet its obligations towards GE. However, such funding could not sustain the long-term financing of the project, as it could undermine the coherence of the intra-group funding and create risks to the balance between the Group businesses.
- (57) Nevertheless, considering that aerospace is one of the Group's business areas, albeit limited to 2 % of the Group's operating income, the Group should contribute some long-term funding to the project, even if, according to the Swedish authorities, the Company is not entitled to seek from Volvo Treasury a more structured long-term commitment regarding the GENx. Therefore, on the basis of the information provided, the magnitude and nature of the market failure concerning the GENx project appears somewhat limited, which could indicate that the proposed aid amount may not be truly proportionate to it.
- (58) Furthermore, given that Volvo Aero does not have the financial autonomy to seek external funding for the investments like the one supported by the measure, the Commission questioned in the opening decision whether the Volvo Group indeed lacked the means of securing external funding for the GENx project.
- (59) In their observations, the Swedish authorities first confirmed that the Volvo Group companies are not allowed to obtain any direct external funding from banks and other financial institutions. Prior to the application for the Government support, the Group explored other possible sources of external risk capital, but without success. Despite the fact that AB Volvo is in a strong position to access external funding, there is very limited external funding available for this type of long-term aerospace R & D project, partly due to perceived high project risks.
- (60) The Swedish authorities also provided arguments explaining why borrowing would not be suitable to fund capital-intensive aerospace R & D projects with high technological and commercial risks and very long pay-back periods.
- (61) The Swedish authorities explained that the Volvo Group sought external risk-sharing financing for the GENx project without success. The Volvo Group approached Nordea Bank, but the bank would not provide risk-sharing financing. The Volvo Group also contacted private equity players on an informal basis, but without success. Finally, Volvo Aero was able to secure only a small contribution from one sub-contractor (Carlton ForgeWorks) to cover the entry fee to GE.

- (62) The Commission therefore is able to conclude that no external funding was available for the GENx project.
- (63) The Commission also noted in the opening decision that the financial policies of Volvo Group seem to imply that State funding was the pre-condition for financing its subsidiaries. In their observations, the Swedish authorities explained that public funding was not a precondition for the Group to finance its subsidiaries. The Group's financial policies define the procedures for seeking alternative sources of funding, either through loans from outside the Volvo Group or commercial credit and other forms of structured products, including public funding.
- (64) On the basis of the comments provided, the Commission finds that while the non-availability of the aid has forced Volvo Aero to rely heavily on the intra-group financing, the Group does not appear to be in a position to sustain such funding in the long run without imposing risks on other Group's operations. In light of the new elements and the reduction in the aid from the Swedish authorities to take account of the Group's own *de facto* contribution to the project at the date of the formal granting of the aid, the Commission is able to conclude that the aid is intended to address a market failure.

6.2. Incentive effect

- (65) In its opening decision the Commission expressed doubts about the incentive effect of the aid, as the formal agreement of the Swedish Government of the aid to be granted was given when the project had been largely implemented, at least for the Boeing B787. As the decision was taken when the project was almost complete, it seemed to cover risks not related to the R & D content of the project.
- (66) According to chapter 6 of the R & D&I Framework the Commission has first to look whether the request for the aid was submitted by the beneficiary before the start of the R & D project. As already indicated in the opening decision, the aid was requested by Volvo Aero before the start of the project, thus respecting the provision contained in the second paragraph of chapter 6 of the R & D&I Framework.
- (67) The Commission notes that it normally questions the incentive effect of a measure whenever a formal decision to grant the aid is taken by the State at a point where the project is well advanced and *de facto* financed by the beneficiary. In the case of R & D, it is essential that the aid should have an impact on the behaviour of the Company, in inducing a larger or a speedier investment in a project. Without such an impact, the aid would have no incentive effect and would therefore not be necessary.
- (68) In order to have such an impact, the aid has to be decided upon by the State, either formally, but with a suspensive clause in view of the necessary approval by the Commission of the compatibility of the aid on the basis of the Article

88(3) of the Treaty, or through a letter of intent, which would not give rise to any legitimate expectations but would be sufficiently strong to indicate a willingness by the State to support a project⁽¹⁷⁾.

- (69) The Commission also notes that a necessary condition for the compatibility of aid to a R & D project is an early notification of the aid under Article 88(3) of the Treaty. A notification of aid to a project which is close to its end would mean that the State is not convinced about the aid it intends to grant or not able to give an assurance about such aid. If on the face of this uncertainty, the Company is able to carry out the project, and even to conclude it, it is likely then that the aid is largely not necessary for the Company itself.
- (70) According to Chapter 6 of the R & D&I Framework, the Commission has to assess, for all individual measures, a number of criteria indicating the incentive effect of the aid, related to the increase in size, scope or speed of the project or the increase in total amount spent by the beneficiary on R & D. The Commission, in performing the detailed assessment of the incentive effect, has based itself on point 7.3.3 of the R & D&I Framework.
- (71) In determining the incentive effect of the aid in changing the behaviour of the Company, the Commission questioned the value of the oral assurances by the Government given to Volvo Aero in December 2004. The Swedish authorities and third parties reiterated in their observations that the assurances by the Government to provide the aid were a decisive factor in the decision by Volvo Aero to engage in the project. Volvo Aero's contacts with the Ministry of Industry during the autumn of 2004 further strengthened Volvo Aero in its confidence that the resources set aside by the Parliament would be used to support the GENx R & D project⁽¹⁸⁾.
- (72) The Swedish authorities also provided internal documents demonstrating that the Company counted on the assurances concerning the aid before engaging in the project⁽¹⁹⁾. As indicated by the former CEO of the Company, had Volvo Aero not received such assurances from the Government, the GE agreement would not have been concluded, as the project would represent an unacceptable level of risk and scale of investment for the Company and the Group.
- (73) According to Sweden, the fact that there is no counterfactual project (i.e. a project that the Company would carry out in the absence of aid) could also show that Volvo Aero had expectations of receiving the aid, as with the TRENT 900 project⁽²⁰⁾. GE has also confirmed in its observations that the prospect of receiving aid was important to Volvo Aero's decision to become a risk-sharing partner. The GE agreement with Volvo Aero dated 15 December 2004 also contains a reference to the support from the Swedish State.
- (74) The Commission took into account the economic arguments provided by the Swedish authorities justifying why the GENx project would not have taken place without Government support. First, high upfront costs would put an

unacceptable strain on the Company's financial position. As evidenced by financial documents, Volvo Aero was able to finance only up to 60 % of the project costs from its operating cash flow while the remaining 40 % of the project costs were temporarily covered from the intra-group cash pool in anticipation of the expected public funding.

- (75) The Commission notes that while the aid seems to have had a limited effect on liquidity (the project has after all been financed by Volvo Aero from its internal cash flow and intra-group funding) and a limited effect on profitability in terms of its impact on the internal rate of return (IRR) and net present value (NPV), the aid reduced the financial exposure of Volvo Aero, thus reducing the project risks in the event of its technological or commercial failure.
- (76) The Commission notes that the GENx project is larger than Volvo Aero's earlier R & D project (Trent 900). It also enabled the Company to assume additional R & D responsibilities. The R & D work related to GENx presented additional risks which were not present in the CF6-80 programme, which was pure production work without any R & D component.
- (77) The Commission questioned in its opening decision the incentive effect of the aid that would come when the project was very nearly complete and the nature of technical and commercial risks changed. In their observations, the Swedish authorities demonstrated adequately that technical and commercial risks were still very significant even when the R & D project was at a fairly advanced stage due to the novelty of the technology and Volvo Aero's limited experience of this type of project.
- (78) In light of the above, the Commission is able to conclude that internal decision-making documents and GE observations indicate the critical importance of the aid for Volvo Aero in taking the decision to engage in the project because it reduces risk levels to a level that is acceptable for the Company to undertake the project. On the basis of these elements, the Commission is able to accept that the aid had an incentive effect as it was considered necessary in order for Volvo Aero to engage in the GENx project.

6.3. **Proportionality**

- (79) In its opening decision, the Commission stated it was not entirely convinced about the proportionality of the aid as concerns the repayment terms of the repayable advance. Given that the reimbursement of the advance is structured on the basis of SEK sales figures, while revenues from sales to GE are USD-based, the Commission suspected that the foreign exchange risks might be borne by the Government and not by the Company.
- (80) The Commission notes the arguments presented by the Swedish authorities that it is Volvo Aero and not the Government that bears the foreign exchange risk, given that Volvo Aero receives payments from GE in USD, while the aid has to be repaid in SEK. Besides, since the repayment of the advance is

based on revenues from sales (regardless of currency) and not units sold, the instrument is more proportionate, as it also includes the sale of spare parts.

- (81) The repayment terms of the repayable advance would seem to confirm the proportionality of the aid: returns are set at 7,32 %, surplus repayments are not capped in time and the repayment is on a quarterly basis based on revenues from GE.
- (82) While the Commission notes that the foreign exchange risk should be borne by the Company, the fact that the reimbursement is made on all revenues and not just on sales of engines balances the potential advantage to the Company from foreign exchange gains. Furthermore, the repayment advance is in line with the R & D&I Framework and it is a less distorting aid instrument. Taking into account also the relatively high return demanded by Sweden, the aid can be considered to be proportionate, as concerns the foreign exchange risk.
- (83) The Commission further points out that a repayable advance is a risk-sharing instrument that, where the project is successful, allows for a more than proportionate reimbursement from the beneficiary: If sales forecasts are reached, the aid is fully reimbursed, including interest. If sales fall below the forecast, the reimbursement is reduced proportionally⁽²¹⁾. If sales are above the forecast, the reimbursement exceeds the amount of the advance received.
- (84) In assessing whether the aid is proportionate to the nature and magnitude of the market failure, the Commission must ensure that the aid is limited to the necessary minimum. In its letter of 12 November 2008 the Commission therefore questioned whether the whole amount of the aid was actually necessary, considering that the aid was formally agreed when the project was fairly advanced and Volvo Aero had been able to finance the costs through the cash-pool described above.
- (85) In response to the Commission's concerns that the aid may not have been kept to the minimum, the Swedish authorities acknowledged that the aid granting process and the financial situation of the Group were an indication that the amount of aid could be reduced compared to their initial intention. They proposed to reduce the amount of the aid based on the de facto situation of Volvo Aero at the moment of the agreement to grant the aid on 14 June 2007. As of that date, Volvo Aero covered approx. 66,5 % of the eligible costs, of which 60 % had been covered from Volvo Aero internal cash. The remaining 6,5 %, equivalent to approx. SEK 58 million (approx. EUR 6 million), was financed from the intra-group cash pool. In summary, Sweden proposes to reduce the total aid amount from the initially requested SEK 362 million (approx. EUR 39 million) to approx. SEK 304 million (approx. EUR 33 million).
- (86) The Commission finds that limiting the aid to the proposed SEK 304 million (approx. EUR 33 million), which represents 33,5 % of the eligible project costs, compared to the initially proposed 39 % of the eligible costs, ensures

the aid is kept to the necessary minimum. This is because the proposed aid amount addresses the actual funding needs by Volvo Aero at the moment when the aid was formalised and in this way it better reflects the magnitude of the market failure. The Commission therefore is able to conclude that the reduced aid amount ensures that the aid remains proportionate and kept to the absolute minimum.

- (87) The Commission therefore is able to conclude that the aid repayment terms and the reduction in the aid amount to 33,5 % of the eligible costs are proportionate to the degree and magnitude of the market failure.

6.4. **Impact on competition**

- (88) In its opening decision, the Commission considered the relevant market to be the market for engines for large civil aircraft. The Commission reached the preliminary conclusion that the impact on competition of the aid was limited, in view of the limited market share and of the investment size. Competitors were none the less invited to comment and substantiate a possible significant impact on competition.

- (89) The Swedish authorities indicated that on the worldwide market of components for aero-engines, Volvo Aero is a small player compared to its competitors in Europe, such as Rolls Royce, Snecma, Avio, and MTU. Given that Volvo Aero has only 2 % market share in the large civil aircraft engine market, the aid would have a very limited impact. The components developed and manufactured by Volvo cannot be easily considered as a separate sub-market, not least because they can be developed either by the large original equipment manufacturers or by other suppliers.

- (90) The Commission notes that no competitors intervened after the Commission initiated formal investigation procedures. Taking into account the publicity given to the decision to open proceedings, the very limited market share of Volvo Aero in the large civil aircraft engine market, and the likely lack of European partners for the same components, the Commission infers from this absence of comments that no competitor had concerns that this aid may distort dynamic incentives, create market power or maintain inefficient market structures. The Commission also took into account supportive comments received from GE Aviation, as well as from the former president and CEO of Volvo Aero, and from Volvo trade unions.

- (91) To all appearances, the proposed aid does not seem to distort the dynamic incentives of competitors (engine component producers) to invest and compete. This may be mainly because many second and third tier suppliers tend to have long term relationships with a single Original Equipment Manufacturer (OEM) as their preferred partner. Volvo Aero works on a project basis with various OEMs, mainly Rolls-Royce and GE, and is independent.

- (92) As for competition in the product markets, the aid concerns only a limited number of components for aircraft engines, notably the fan hub frame, booster spool and turbine rear frame. Besides, these components are specifically designed for the GENx engine, and so do not affect other types of engine. Furthermore, the investment involved is limited in scale compared to the investments needed for the development of a new engine. Therefore, the aid does not have a significant impact on market power. Given this, the aid has a limited effect on competition in the market for aircraft engine components.
- (93) Finally, the aid is not linked to the use of certain inputs for the products concerned and to a certain location of R & D activities.
- (94) Based on the above considerations, the Commission is therefore able to conclude that, in absence of intervention by competitors or other third parties, and taking into account the very limited market share of Volvo Aero, the impact on competition is very limited.

6.5. **Balancing test**

- (95) In light of the positive and negative elements assessed above, and in accordance with point 7.5 of the R & D&I Framework, the Commission has to balance the effects of the measure and determine whether the resulting distortions adversely affect trading conditions to an extent contrary to common interest.
- (96) In the present case, the Commission finds that the aid has a positive effect in so far as it addresses a market failure, that it has an incentive effect for the beneficiary and that it is granted through an appropriate instrument which ensures that the aid is proportionate and that the impact on competition is limited.
- (97) The Commission also finds that the negative effects of the measure are limited, since the distortion of competition created by the aid is not significant as it does not crowd out investments by competitors and it does not create a position of market power.
- (98) In weighing up these factors, the Commission further notes that the Swedish authorities have reduced the aid amount to ensure it is limited to the necessary minimum.
- (99) The Swedish authorities will provide an annual report on the implementation of the aid, allowing the Commission to monitor the measure.
- (100) In conclusion, the Commission is able to say that the balancing test for the aid under assessment is positive.

7. **CONCLUSIONS**

Status: This is the original version (as it was originally adopted).

- (101) On the basis of the elements above, the Commission therefore concludes that it should adopt a final positive decision regarding the aid of SEK 304 million (approx. EUR 33 million) that Sweden intends to grant to Volvo Aero for the development of components for the GENx engine developed by GE for Boeing B787 and B747-8 aircraft,

HAS ADOPTED THIS DECISION:

Article 1

The State aid which Sweden is intending to grant to Volvo Aero, amounting to SEK 304 million (approx. EUR 33 million) is compatible with the common market.

Implementation of the aid is accordingly authorised.

Article 2

This Decision is addressed to the Kingdom of Sweden.

Done at Brussels, 17 June 2009.

For the Commission

Neelie KROES

Member of the Commission

- (1) [OJ C 253, 4.10.2008, p. 31.](#)
- (2) See footnote 1.
- (3) According to the European Central Bank, the Swedish krona to euro exchange rate was approx. 9,3 on the notification date of 10 December 2007.
- (4) The second tier market includes suppliers of aerostructures such as: Hamilton (US), Honeywell (US), IHI (JP), MTU (DE), Snecma (FR), Avio (IT), ITP (ES).
- (5) The Group also provides other services, such as financing, leasing, insurance, action services, warranty, rentals, IT solutions and logistical operations.
- (6) Repayable advance means a loan for a project which is paid in one or more instalments and the conditions for the reimbursement of which depend on the outcome of the R & D&I project.
- (7) Expected Volvo Aero revenues from sales of engines and spare parts.
- (8) Business secret
- (9) The asymmetry of information comes from the scale of the investment upfront, which is very significant, while returns arrive only in the long term. The break-even point is normally reached after 15-20 years. Technical and commercial risks also have a major bearing.
- (10) [OJ L 83, 27.3.1999, p. 1.](#)
- (11) See footnote 1.
- (12) [OJ C 323, 30.12.2006, p. 1.](#)
- (13) See for instance Commission's decisions on cases N 165/03 (Spain, aid to ITP for the Trent 900), N 372/05 (France, aid to Snecma for the engine SaM 146), N 120/01 (United Kingdom, aid to Rolls-Royce for the development of the Trent 600 and Trent 900 engines), and more recently on cases N 195/07 (Germany, Aid to Rolls-Royce Deutschland), and N 447/07 (France, Aid to Turbomeca), and most recently in C 9/2007 (Spain, aid to ITP).
- (14) Volvo Construction Equipment has been granted a high cash pool limit, however only for a single year and the company contributed 11 % to the group's operating income.
- (15) As indicated in the letter of 27 November 2008 from Volvo Group to Volvo Aero.
- (16) It should be noted that in January 2009 it was announced that Volvo Aero would initiate negotiations with the trade unions to reduce the number of blue-collar employees by 250 and the number of white-collar positions by around 100. This clearly indicates the financial difficulties faced by Volvo Aero at the moment.
- (17) See e.g. para 38 of the Guidelines on National Regional aid for 2007-2013 ([OJ C 54, 4.3.2006, p. 13](#)).
- (18) In 2002 the Swedish Parliament took a decision to set aside resources for future R & D-related activities within Swedish aviation industry.
- (19) Former CEO's presentation to the Board before end 2004
- (20) State aid case N 301/03.
- (21) And the distortion of competition is more limited, since the product has not been a success.