

I

(Information)

COMMISSION

COMMUNITY FRAMEWORK FOR STATE AID FOR RESEARCH AND DEVELOPMENT AND INNOVATION

(2006/C 323/01)

	Page
1. Introduction	4
1.1. Objectives of State aid for Research and Development and Innovation	4
1.2. State aid policy and R&D&I	4
1.3. The balancing test and its application to aid to Research and Development and Innovation	5
1.3.1. The State Aid Action Plan: less and better targeted aid, balancing test for the assessment of aid	5
1.3.2. The objective of common interest addressed by the framework	5
1.3.3. Appropriate instrument	6
1.3.4. Incentive effect and necessity of aid	6
1.3.5. Proportionality of the aid	6
1.3.6. Negative effects of the aid to R&D&I must be limited so that the overall balance is positive	6
1.4. Implementing the balancing test: legal presumptions and need for more specific assessment	7
1.5. Motivation for specific measures covered by this framework	8
2. Scope of application and definitions	8
2.1. Scope of application of the framework	8
2.2. Definitions	9
3. State aid within the meaning of Article 87(1) of the EC Treaty	10
3.1. Research organisations and innovation intermediaries as recipients of State aid in the meaning of Article 87(1) of the EC Treaty	10
3.1.1. Public funding of non-economic activities	11
3.1.2. Public funding of economic activities	11
3.2. Indirect State aid in the meaning of Article 87(1) of the EC Treaty to undertakings through publicly funded research organisations	11
3.2.1. Research on behalf of undertakings (Contract research or research services)	12
3.2.2. Collaboration of undertakings and research organisations	12

	Page
4. Compatibility of aid under Article 87(3)(b) of the EC Treaty	12
5. Compatibility of aid under Article 87(3) (c) of the EC Treaty	13
5.1. Aid for R&D projects	13
5.1.1. Research categories	13
5.1.2. Basic aid intensities	13
5.1.3. Bonuses	13
5.1.4. Eligible costs	14
5.1.5. Repayable advance	15
5.1.6. Fiscal measures	15
5.1.7. Matching clause	15
5.2. Aid for technical feasibility studies	16
5.3. Aid for industrial property rights costs for SMEs	16
5.4. Aid for young innovative enterprises	16
5.5. Aid for process and organisational innovation in services	16
5.6. Aid for innovation advisory services and for innovation support services	17
5.7. Aid for the loan of highly qualified personnel	17
5.8. Aid for innovation clusters	18
6. Incentive effect and necessity of aid	19
7. Compatibility of aid subject to a detailed assessment	19
7.1. Measures subject to a detailed assessment	19
7.2. Methodology of the detailed assessment: R&D&I criteria for economic assessment of certain individual cases	20
7.3. Positive effects of the aid	20
7.3.1. Existence of a market failure	20
7.3.2. Appropriate Instrument	21
7.3.3. Incentive effect and necessity of aid	21
7.3.4. Proportionality of the aid	22
7.4. Analysis of the distortion of competition and trade	22
7.4.1. Distorting dynamic incentives	22
7.4.2. Creating market power	23
7.4.3. Maintaining inefficient market structures	23
7.5. Balancing and decision	23

	Page
8. Cumulation	23
9. Special rules for agriculture and Fisheries	24
10. Final provisions	24
10.1. Reporting and monitoring	24
10.1.1. Annual reports	24
10.1.2. Access to full text of schemes	25
10.1.3. Information sheets	25
10.2. Appropriate Measures	25
10.3. Entry into force, validity and revision	25

1. INTRODUCTION

1.1. Objectives of State aid for Research and Development and Innovation

Promoting Research and Development and Innovation (hereinafter: R&D&I) is an important objective of common interest. Article 163 of the EC Treaty stipulates that 'The Community shall have the objective of strengthening the scientific and technological bases of Community industry and encouraging it to become more competitive at international level, while promoting all the research activities deemed necessary ...'. Articles 164 to 173 of the EC Treaty determine the activities to be carried out in this respect and the scope and implementation of the multi-annual framework programme.

When meeting in Barcelona in March 2002, the European Council adopted a clear goal for the future development of research spending. It agreed that overall spending on Research and Development (hereinafter: R&D) and innovation in the Community should be increased with the aim of approaching 3 % of gross domestic product by 2010. It further clarified that two-thirds of this new investment should come from the private sector. To reach this objective, research investment should grow at an average rate of 8 % every year, shared between a 6 % growth rate for public expenditure ⁽¹⁾ and a 9 % yearly growth rate for private investment ⁽²⁾.

The objective is through State aid to enhance economic efficiency ⁽³⁾ and thereby, contribute to sustainable growth and jobs. Therefore, State aid for R&D&I shall be compatible if the aid can be expected to lead to additional R&D&I and if the distortion of competition is not considered to be contrary to the common interest, which the Commission equates for the purposes of this framework with economic efficiency. The aim of this framework is to ensure this objective and in particular, to make it easier for Member States to better target the aid to the relevant market failures ⁽⁴⁾.

Article 87(1) of the EC Treaty lays down the principle that State aid is prohibited. In certain cases, however, such aid may be compatible with the common market on the basis of Article 87 (2) and (3). Aid for R&D&I will primarily be justified on the basis of Article 87(3)(b) and 87(3)(c). In this framework the

Commission lays down rules which it will apply in the assessment of aid notified to it, thereby exercising its discretion and increasing legal certainty and transparency of its decision-making.

1.2. State aid policy and R&D&I

In the context of the Lisbon strategy the level of R&D&I is considered not to be optimal for the economy in the Community, implying that an increase in the level of R&D&I would lead to higher growth in the Community. The Commission considers that the existing rules for State aid to R&D have to be modernised and enhanced to meet this challenge.

First, the Commission, in this framework, expands the existing possibilities of aid to R&D to new activities supporting innovation. Innovation is related to a process connecting knowledge and technology with the exploitation of market opportunities for new or improved products, services and business processes compared to those already available on the common market, and encompassing a certain degree of risk. For the purpose of State aid rules, the Commission considers however that State aid for innovation should be authorised not on the basis of an abstract definition of innovation but only to the extent that it relates to precise activities, which clearly address the market failures that are hampering innovation and for which the benefits of State aid are likely to outweigh any possible harm to competition and trade

Second, the Commission aims at supporting a better administration of State aid to R&D&I. It intends to extend the scope of the block-exemption for R&D, which is currently limited to aid to small and medium-sized enterprises (hereafter: SMEs) ⁽⁵⁾. A future general block exemption regulation (hereafter: BER) will cover the less problematic aid measures in the area of R&D&I. This framework will continue to apply for all measures notified to the Commission whether because the measure is not covered by the BER, because of an obligation in the BER to notify aid individually, or because the Member State decides to notify a measure which could in principle have been exempted under the BER, as well as for the assessment of all non-notified aid.

Third, in order to better focus the Commission's scrutiny, this framework provides, for the assessment of measures falling within its scope, not only rules on the compatibility of certain aid measure (Chapter 5 below) but also, due to the increased risk of certain aid measures distorting competition and trade, additional elements concerning the analysis of the incentive effect and necessity of aid (Chapter 6 below) and an additional methodology to be applied in case of detailed assessment (Chapter 7 below).

⁽⁵⁾ State Aid Action Plan. Less and better targeted State aid: a roadmap for State aid reform 2005-2009. COM(2005) 107 final — SEC (2005) 795; adopted on 7 June 2005.

⁽¹⁾ It must be kept in mind that only a part of the public expenditure on R&D will qualify as State aid.

⁽²⁾ Cf. 'Investing in research: an action plan for Europe'; Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions, COM(2003)226 final, p. 7.

⁽³⁾ In economics, the term 'efficiency' (or 'economic efficiency') refers to the extent to which total welfare is optimised in a particular market or in the economy at large. Additional R&D&I increases economic efficiency by shifting market demand towards new or improved products, processes or services, which is equivalent to a decrease in the quality adjusted price of these goods.

⁽⁴⁾ A 'market failure' is said to exist when the market, if left to its own devices, does not lead to an economically efficient outcome. It is in those circumstances that state intervention, including state aid, has the potential to improve the market outcome in terms of prices, output and use of resources.

In this context the Commission underlines that competitive markets should in principle, on their own, lead to the most efficient outcome in terms of R&D&I. However, this may not always be the case in the field of R&D&I and government intervention might then improve the outcome. Undertakings will invest more in research only to the extent that they can draw concrete commercial benefits from the results and are aware of the possibilities to do so. There are many reasons for low levels of R&D&I, which are partly due to structural barriers, and partly to the presence of market failures. Structural barriers should preferably be handled by structural measures⁽⁶⁾, whereas State aid may play a role in counter-weighting inefficiencies due to market failures. Furthermore, empirical evidence indicates that for State aid to be efficient it must be accompanied by favourable framework conditions, such as adequate intellectual property right systems, a competitive environment with research and innovation-friendly regulations and supportive financial markets.

However, State aid also distorts competition, and strong competition is at the same time a crucial factor for the market-driven stimulation of investment in R&D&I. Therefore, State aid measures must be carefully designed in order to limit the distortions. Otherwise, State aid can become counter-productive and reduce the overall level of R&D&I and economic growth.

The main concern related to R&D&I aid to undertakings is that rival undertakings' dynamic incentives to invest are distorted and possibly reduced. When an undertaking receives aid, this generally strengthens its position on the market and reduces the return on investment for other undertakings. When the reduction is significant enough, it is possible that rivals will cut back on their R&D&I activity. In addition, when the aid results in a soft budget constraint for the beneficiary, it may also reduce the incentive to innovate at the level of the beneficiary. Furthermore, the aid can support inefficient undertakings or enable the beneficiary to enhance exclusionary practices or market power.

1.3. The balancing test and its application to aid to Research and Development and Innovation

1.3.1. *The State Aid Action Plan: less and better targeted aid, balancing test for the assessment of aid*

In the State Aid Action Plan⁽⁷⁾, the Commission announced that 'to best contribute to the re-launched Lisbon Strategy for growth and jobs, the Commission will, when relevant, strengthen its economic approach to State aid analysis. An economic approach is an instrument to better focus and target certain State aid towards the objectives of the re-launched Lisbon Strategy'.

⁽⁶⁾ Including: university education, research programmes and public research facilities, IPR rules favouring innovation, attractive framework conditions for undertakings to do R&D&I

⁽⁷⁾ State aid Action Plan (footnote), paragraph 21.

In assessing whether an aid measure can be deemed compatible with the common market, the Commission balances the positive impact of the aid measure in reaching an objective of common interest against its potentially negative side effects by distortion of trade and competition. The State Aid Action Plan, building on existing practice, has formalised this balancing exercise in what has been termed a 'balancing test'⁽⁸⁾. It operates in three steps to decide upon the approval of a State aid measure; the first two steps are addressing the positive effects of State aid and the third is addressing the negative effects and resulting balancing of the positive and negative effects:

- (1) Is the aid measure aimed at a well-defined objective of common interest (eg growth, employment, cohesion, environment)?
- (2) Is the aid well designed to deliver the objective of common interest i.e. does the proposed aid address the market failure or other objective?
 - (i) Is State aid an appropriate policy instrument?
 - (ii) Is there an incentive effect, i.e. does the aid change the behaviour of firms?
 - (iii) Is the aid measure proportional, i.e. could the same change in behaviour be obtained with less aid?
- (3) Are the distortions of competition and effect on trade limited, so that the overall balance is positive?

This balancing test is applicable to the design of State aid rules as well as for the assessment of cases.

For a block exemption regulation, the State aid is compatible if the conditions laid down are fulfilled. The same applies in general to most cases addressed in this framework. However, for the individual aid measures which may have a high distortive potential due to high aid amounts, the Commission will make an overall assessment of the positive and negative effects of the aid based on the proportionality principle.

1.3.2. *The objective of common interest addressed by the framework*

This framework addresses the objective of common interest of promoting Research and Development and Innovation. It aims at enhancing economic efficiency by tackling well defined market failures, which prevent the economy in the Community from reaching the optimal level of R&D&I.

⁽⁸⁾ Cf. State Aid Action Plan (footnote 5), paragraph 11 and 20, as elaborated in more detail already in the Communication on Innovation, COM(2005) 436 final of 21 September 2005.

To establish rules ensuring that aid measures achieve this objective, it is, first of all, necessary to identify the market failures hampering R&D&I. R&D&I takes place through a series of activities, which are upstream to a number of product markets, and which exploit available R&D&I capabilities to develop new or improved products⁽⁹⁾ and processes in these product markets, thus fostering growth in the economy. However, given the available R&D&I capabilities, market failures may prevent the market from reaching the optimal output and lead to an inefficient outcome for the following reasons:

- **Positive externalities/knowledge spill-overs:** R&D&I often generate benefits for society in the form of knowledge spill-overs. However, left to the market, a number of projects may have an unattractive rate of return from a private perspective, even though the projects would be beneficial for society because profit seeking undertakings neglect the external effects of their actions when deciding how much R&D&I they should undertake. Consequently, projects in the common interest may not be pursued unless the government intervenes.
- **Public good/knowledge spill-overs:** For the creation of general knowledge, like fundamental research, it is impossible to prevent others from using the knowledge (public good), whereas more specific knowledge related to production can be protected, for example through patents allowing the inventor a higher return on their invention. To find the appropriate policy to support R&D&I, it is important to distinguish between creation of general knowledge and knowledge that can be protected. Undertakings tend to free ride on the general knowledge created by others, which makes undertakings unwilling to create the knowledge themselves. In fact, the market may not only be inefficient but completely absent. If more general knowledge was produced, the whole society could benefit from the knowledge spill-overs throughout the economy. For this purpose, governments may have to support the creation of knowledge by undertakings. In the case of fundamental research, they may have to pay fully for companies' efforts to conduct fundamental research.
- **Imperfect and asymmetric information:** R&D&I are characterised by a high degree of risk and uncertainty. Due to imperfect and/or asymmetric information, private investors may be reluctant to finance valuable projects; highly-qualified personnel may be unaware of recruitment possibilities in innovative undertakings. As a result, the allocation of human resources and financial resources may not be adequate in these markets and valuable projects for the economy may not be carried out.
- **Coordination and network failures.** The ability of undertakings to coordinate with each other or at least

interact, and thus deliver R&D&I may be impaired. Problems may arise for various reasons, including difficulties in coordinating R&D and finding adequate partners.

1.3.3. *Appropriate instrument*

It is important to keep in mind that there may be other, better placed instruments to increase the level of R&D&I in the economy, for example regulation, increase in funding of universities, general tax measures in favour of R&D&I⁽¹⁰⁾. The appropriateness of a policy instrument in a given situation is normally linked to the main reasons behind the problem. Reducing market barriers may be more appropriate than State aid to deal with the difficulty of a new entrant to appropriate R&D&I results. Increased investment in universities may be more appropriate to deal with a lack of qualified R&D&I personnel than granting State aid to R&D&I projects. Member States should therefore choose State aid when it is an appropriate instrument on the basis of the problem they are trying to address. This means it is necessary to clearly identify the market failure they intend to target with the aid measure.

1.3.4. *Incentive effect and necessity of aid*

State aid for R&D&I must lead to the recipient of aid changing its behaviour so that it increases its level of R&D&I activity and R&D&I projects or activities take place which would not otherwise be carried out, or which would be carried out in a more restricted manner. The Commission considers that as a result of aid, R&D&I activity should be increased in size, scope, amount spent or speed. Incentive effect is identified by counterfactual analysis, comparing the levels of intended activity with aid and without aid. Member States must clearly demonstrate how they intend to ensure that the incentive effect is present.

1.3.5. *Proportionality of the aid*

Aid is considered to be proportional only if the same result could not be reached with a less distortive aid measure. In particular, the amount and intensity of the aid must be limited to the minimum needed for the aided R&D&I activity to take place.

1.3.6. *Negative effects of the aid to R&D&I must be limited so that the overall balance is positive*

The possible distortions of competition resulting from State aid for R&D&I can be categorised as:

- disrupting the dynamic incentives of undertakings and crowding out;
- supporting inefficient production;

⁽⁹⁾ This includes services.

⁽¹⁰⁾ See the Notice on the application of the State aid rules to measures relating to direct business taxation; OJ C 384, 10.12.1998, p. 3.

- exclusionary practices and enhancing market power;
- effects on the localisation of economic activities across Member States;
- effects on trade flows within the internal market.

The negative effects are normally higher for higher aid amounts and for aid granted to activities which are close to commercialisation of the product or the service. Therefore aid intensities should generally be lower for activities linked to development and innovation than for research related activities. Furthermore, in the definition of eligible costs it is important to ensure that costs that can be considered to cover routine company activities are not eligible for aid. Also, characteristics of the beneficiary and the relevant markets have an influence on the level of distortion. Such aspects will be taken into account in more detail for the cases which will undergo a detailed assessment.

1.4. Implementing the balancing test: legal presumptions and need for more specific assessment

This framework will be used for the assessment of aid for research and development and innovation which is notified to the Commission. The Commission's compatibility assessment will be conducted on the basis of the balancing test presented in Chapter 1. Accordingly, a measure will only be approved if, considering each of the elements in the balancing test, this leads to an overall positive evaluation. However, the Commission's assessment may differ in the way this evaluation is conducted, as in each case the risks for competition and trade associated with certain types of measures may differ. Without prejudice to Articles 4 to 7 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 ⁽¹¹⁾, the Commission applies different legal presumptions according to the type of State aid measure notified.

All notified aid will be assessed first under the provisions in Chapter 5. In that chapter, the Commission has identified a series of measures for which it considers *a priori* that State aid targeting these measures will address a specific market failure hampering R&D&I. The Commission has furthermore elaborated a series of conditions and parameters, which aim at ensuring that State aid targeting these measures actually presents an incentive effect, is proportionate and has a limited negative impact on competition and trade. Chapter 5 thus contains parameters in respect of the aided activity, aid intensities and conditions attached to compatibility. In principle, only measures which fulfil the criteria specified in Chapter 5 are eligible for compatibility under Article 87(3)(c) of the EC Treaty on the basis of this framework.

In Chapter 6, the Commission presents more specifically how it will assess the necessity and incentive effect of the aid.

In Chapter 7, the Commission presents more specifically in which cases and how it will conduct a detailed assessment.

This translates into different levels of assessment described in more detail below. For the first level, the Commission considers that it is in principle sufficient that the measures concerned are in line with the conditions described in Chapter 5, provided that the conditions in Chapter 6 to presume the incentive effect are fulfilled. For all other measures, the Commission considers that additional scrutiny is necessary, because of higher risks for competition and trade, due to the activity, aid amount, or type of beneficiary. The additional scrutiny will generally consist in further and more detailed factual analysis of the case in line with the provisions set out in Chapter 6 in respect of necessity and incentive effect or in Chapter 7, in respect of the assessment for aid exceeding the threshold set in section 7.1. of this framework. As a result of this additional scrutiny, the Commission may approve the aid, declare it incompatible with the common market or declare that it is compatible with the common market subject to conditions.

Firstly, the Commission considers that for certain aid measures, fulfilling the provisions set out in Chapters 5 and 6 will generally be sufficient for securing compatibility, as it is presumed that for such a measure the result of the application of the balancing test would be positive. Whether a measure falls into this category depends upon the type of beneficiary, the activity aided and the amount of aid granted. The Commission considers that the following measures will be declared compatible on the basis of Chapters 5 and 6 if (i) they fulfil all the conditions and parameters mentioned in Chapter 5 and (ii) the aid is only granted after the aid application has been made to the national authorities:

- project aid and feasibility studies where the aid beneficiary is an SME and where the aid amount is below EUR 7,5 million per SME for a project (project aid plus aid for feasibility study);
- aid for industrial property rights costs for SMEs;
- aid for young innovative enterprises;
- aid for innovation advisory services; aid for innovation support services;
- aid for the loan of highly qualified personnel.

For the measures listed above, Chapter 6 clarifies that the incentive effect is presumed to be present if the condition mentioned above in (ii) is fulfilled.

Second, for notified aid **below** the thresholds set in section 7.1. of this framework, the additional scrutiny consists in a demonstration of the incentive effect and necessity as set out in Chapter 6. Such measures will therefore be declared compatible on the basis of Chapter 5 and Chapter 6 only if (i) they fulfil all the conditions and parameters mentioned in

⁽¹¹⁾ OJ L 83, 27.3.1999, p. 1.

Chapter 5 and (ii) the incentive effect and necessity have been demonstrated in accordance with Chapter 6.

Third, for notified aid **above** the thresholds set in section 7.1. of this framework, the additional scrutiny consists in a detailed assessment according to Chapter 7. These measures will therefore be declared compatible on the basis of Chapters 5, 6 and 7 only if (i) they fulfil all the conditions and parameters mentioned in Chapter 5 and (ii) the balancing test pursuant to Chapter 7 results in an overall positive evaluation.

1.5. Motivation for specific measures covered by this framework

Applying these criteria to R&D&I, the Commission has identified a series of measures for which State aid may, under specific conditions, be compatible with Article 87(3) (c) of the EC Treaty.

Aid for projects covering fundamental and industrial research and experimental development is mainly targeted at the market failure related to positive externalities (knowledge spillovers), including public goods. The Commission considers it useful to maintain different categories of R&D&I activities regardless of the fact that the activities may follow an interactive model of innovation rather than a linear model. Different aid intensities reflect different sizes of market failures and how close the activity is to commercialisation. Furthermore, compared to the previous State aid rules in this field, certain innovation activities have been included in experimental development. In addition, the bonus system has been simplified. Due to expected larger implications of market failures and expected higher positive externalities, bonuses appear justified for SMEs, collaboration by and collaboration with SMEs, cross-border collaboration as well as public-private partnerships (collaborations of undertakings with public research organisations).

Aid for technical feasibility studies related to R&D&I projects aims at overcoming the market failure related to imperfect and asymmetric information. These studies are considered to be further away from the market than the project itself, and therefore relatively high aid intensities can be accepted.

Aid for industrial property rights costs for SMEs is targeted at the market failure related to positive externalities (knowledge spillovers). The aim is to increase the possibilities for SMEs to sufficiently appropriate returns, thereby giving them greater incentive to undertake R&D&I.

Aid for young innovative enterprises has been introduced to deal with the market failures linked with imperfect and asymmetric information, which harm these undertakings in a particularly acute way, damaging their ability to receive appropriate funding for innovative ventures.

Aid for process and organisational innovation in services targets the market failures linked to imperfect information and positive externalities. It is meant to tackle the problem that innovation in services activities may not fit in the R&D categories. Innovation in service activities often results from interactions with customers and confrontation with the market, rather than from

the exploitation and use of existing scientific, technological or business knowledge. Furthermore, innovation in service activities tends to be based on new processes and organisation rather than technological development. To that extent, process and organisational innovation in services is not properly covered by R&D project aid and requires an additional and specific aid measure to address the market failures that hamper it.

Aid for advisory services and innovation support services, provided by innovation intermediaries, targets market failures linked with insufficient information dissemination, externalities and lack of coordination. State aid is an appropriate solution to change the incentives for SMEs to buy such services and to increase the supply and demand of the services provided by innovation intermediaries.

Aid for the loan of highly qualified personnel addresses the market failure linked with imperfect information in the labour market in the Community. Highly qualified personnel in the Community are more likely to be hired by large undertakings, because they tend to perceive large undertakings as offering better working conditions, and more secure and more attractive careers. By contrast, SMEs could benefit from important knowledge transfer and from increased innovation capabilities, if they were able to recruit highly qualified personnel to conduct R&D&I activities. Creating bridges between large undertakings or universities and SMEs may also contribute to addressing coordination market failures, and supporting clustering.

Aid for innovation clusters aims at tackling market failures linked with coordination problems hampering the development of clusters, or limiting the interaction and knowledge flows within clusters. State aid could contribute in two ways to this problem: first by supporting the investment in open and shared infrastructures for innovation clusters, and secondly by supporting cluster animation, so that collaboration, networking and learning is enhanced.

2. SCOPE OF APPLICATION AND DEFINITIONS

2.1. Scope of application of the framework

This framework applies to State aid for research and development and innovation. It will be applied in accordance with other Community policies on State aid, other provisions of the Treaties founding the European Communities and legislation adopted pursuant to those Treaties.

According to general Treaty principles, State aid cannot be approved if the aid measure is discriminatory to an extent not justified by its State aid character. With regard to R&D&I, it should in particular be underlined that the Commission will not approve an aid measure which excludes the possibility of exploitation of R&D&I results in other Member States.

Public authorities may commission R&D from companies or buy the results of R&D from them. If such R&D is not procured at market price, this will normally involve State aid within the meaning of Article 87(1) of the EC Treaty. If, on the other hand,

these contracts are awarded according to market conditions, an indication for which may be that a tender procedure in accordance with the applicable directives on public procurement, in particular Directive 2004/17/EC of the European Parliament and of the Council of 31 March 2004 coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors⁽¹²⁾ and Directive 2004/18/EC of the European Parliament and of the Council of 31 March 2004 on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts⁽¹³⁾ has been carried out, the Commission will normally consider that no State aid within the meaning of Article 87(1) of the EC Treaty is involved.

This framework applies to aid to support research and development and innovation in all sectors governed by the EC Treaty. It also applies to those sectors which are subject to specific Community rules on State aid, unless such rules provide otherwise.⁽¹⁴⁾

This framework applies to State aid for R&D&I in the environmental field⁽¹⁵⁾, as there are many synergies to exploit between innovation for quality and performance and innovation to optimise energy use, waste and safety.

Following the entry into force of Commission Regulation (EC) No 364/2004 of 25 February 2004 amending Regulation (EC) No 70/2001 as regards the extension of its scope to include aid for research and development⁽¹⁶⁾, aid for research and development to SMEs is exempt from the notification requirement under the conditions stipulated in Commission Regulation (EC) No 70/2001 of 12 January 2001 on the application of Articles 87 and 88 of the EC Treaty to State aid to small and medium-sized enterprises⁽¹⁷⁾. Member States, however, remain free to notify such aid. If they decide to do so, this framework will continue to be used for the assessment of such notified aid.

While personnel costs are eligible in several of the measures covered by this framework and a measure on aid for the loan of highly qualified personnel has been introduced, general employment and training aid for researchers continue to fall under the specific State aid instruments for employment and training aid, currently Commission Regulation (EC) No 68/2001 of 12 January 2001 on the application of Articles 87 and 88 of the EC Treaty to training aid⁽¹⁸⁾ and Commission Regulation (EC) No 2204/2002 of 12 December 2002 on the application of Articles 87 and 88 of the EC Treaty to State aid for employment⁽¹⁹⁾.

⁽¹²⁾ OJ L 134, 30.4.2004, p. 1.

⁽¹³⁾ OJ L 134, 30.4.2004, p. 114.

⁽¹⁴⁾ For example, Article 3 of Regulation (EEC) No 1107/70 of the Council of 4 June 1970 on the granting of aids for transport by rail, road and inland waterway provides special rules for the compatibility of State aid to R&D in the sector of transport by rail, road and inland waterway.

⁽¹⁵⁾ See current Community guidelines on State aid for environmental protection, OJ C 37, 3.2.2001, p. 3, point 7. In addition, in the context of the revision of the environmental guidelines, the Commission will consider the opportunity to integrate new measures that can also cover eco-innovation.

⁽¹⁶⁾ OJ L 63, 28.2.2004, p. 22.

⁽¹⁷⁾ OJ L 10, 13.1.2001, p. 33. Regulation as amended by Regulation (EC) No 364/2004.

⁽¹⁸⁾ OJ L 10, 13.1.2001, p. 20. Regulation as amended by Regulation (EC) No 363/2004, (OJ L 63, 28.2.2004, p. 20).

⁽¹⁹⁾ OJ L 337, 13.12.2002, p. 3.

Aid for research and development and innovation for undertakings in difficulty within the meaning of the Community Guidelines on State aid for rescue and restructuring undertakings in difficulty⁽²⁰⁾ is excluded from the scope of this framework.

2.2. Definitions

For the purpose of this framework the following definitions apply:

- (a) **'small and medium-sized enterprises'**, or 'SMEs', **'small enterprises'** and **'medium-sized enterprises'** means such undertakings within the meaning of Regulation (EC) No 70/2001, or any regulation replacing that regulation;
- (b) **'large enterprises'** means undertakings not coming under the definition of small and medium-sized enterprises;
- (c) **'aid intensity'** means the gross aid amount expressed as a percentage of the project's eligible costs. All figures used shall be taken before any deduction of tax or other charge. Where aid is awarded in a form other than a grant, the aid amount shall be the grant equivalent of the aid. Aid payable in several instalments shall be discounted to its value at the moment of granting. The interest rate to be used for discounting purposes and for calculating the aid amount in a soft loan shall be the reference rate applicable at the time of grant. The aid intensity is calculated per beneficiary;
- (d) **'research organisation'** means an entity, such as university or research institute, irrespective of its legal status (organised under public or private law) or way of financing, whose primary goal is to conduct fundamental research, industrial research or experimental development and to disseminate their results by way of teaching, publication or technology transfer; all profits are reinvested in these activities, the dissemination of their results or teaching; undertakings that can exert influence upon such an entity, in the quality of, for example, shareholders or members, shall enjoy no preferential access to the research capacities of such an entity or to the research results generated by it;
- (e) **'fundamental research'** means experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundations of phenomena and observable facts, without any direct practical application or use in view;

⁽²⁰⁾ Currently OJ C 244, 1.10.2004, p. 2.

- (f) **'industrial research'** means the planned research or critical investigation aimed at the acquisition of new knowledge and skills for developing new products, processes or services or for bringing about a significant improvement in existing products, processes or services. It comprises the creation of components of complex systems, which is necessary for the industrial research, notably for generic technology validation, to the exclusion of prototypes as covered by point(g);
- (g) **'experimental development'** means the acquiring, combining, shaping and using of existing scientific, technological, business and other relevant knowledge and skills for the purpose of producing plans and arrangements or designs for new, altered or improved products, processes or services. These may also include, for example, other activities aiming at the conceptual definition, planning and documentation of new products, processes and services. The activities may comprise producing drafts, drawings, plans and other documentation, provided that they are not intended for commercial use.

The development of commercially usable prototypes and pilot projects is also included where the prototype is necessarily the final commercial product and where it is too expensive to produce for it to be used only for demonstration and validation purposes. In case of a subsequent commercial use of demonstration or pilot projects, any revenue generated from such use must be deducted from the eligible costs.

The experimental production and testing of products, processes and services are also eligible, provided that these cannot be used or transformed to be used in industrial applications or commercially.

Experimental development does not include the routine or periodic changes made to products, production lines, manufacturing processes, existing services and other operations in progress, even if such changes may represent improvements;

- (h) **'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,
- (i) **'process innovation'** ⁽²¹⁾ means the implementation of a new or significantly improved production or delivery method (including significant changes in techniques, equipment and/or software). Minor changes or improvements, an increase in production or service capabilities through the addition of manufacturing or logistical systems which are very similar to those already in use, ceasing to use a process, simple capital replacement or extension, changes resulting purely from changes in factor prices, customisation, regular seasonal and other cyclical changes, trading of new or significantly improved products are not considered innovations;

- (j) **'organisational innovation'** ⁽²²⁾ means the implementation of a new organisational method in the undertaking's business practices, workplace organisation or external relations. Changes in business practices, workplace organisation or external relations that are based on organisational methods already in use in the undertaking, changes in management strategy, mergers and acquisitions, ceasing to use a process, simple capital replacement or extension, changes resulting purely from changes in factor prices, customisation, regular seasonal and other cyclical changes, trading of new or significantly improved products are not considered innovations;
- (k) **'highly qualified personnel'** means researchers, engineers, designers and marketing managers with tertiary education degree and at least 5 years of relevant professional experience. Doctoral training may count as relevant professional experience;
- (l) **'secondment'** means temporary employment of personnel by a beneficiary during a period of time, after which the personnel has the right to return to its previous employer;
- (m) **'innovation clusters'** means groupings of independent undertakings — innovative start-ups, small, medium and large undertakings as well as research organisations — operating in a particular sector and region and designed to stimulate innovative activity by promoting intensive interactions, sharing of facilities and exchange of knowledge and expertise and by contributing effectively to technology transfer, networking and information dissemination among the undertakings in the cluster. Preferably, the Member State should intend to create a proper balance of SMEs and large undertakings in the cluster, to achieve a certain critical mass, notably through specialisation in a certain area of R&D&I and taking into account existing clusters in the Member State and at Community-level.

3. STATE AID WITHIN THE MEANING OF ARTICLE 87(1) OF THE EC TREATY

Generally, any funding meeting the criteria of 87(1) of the EC Treaty will be considered to be State aid. For the sake of providing further guidance, situations typically arising in the field of Research, Development and Innovation activities are considered below.

3.1. Research organisations and innovation intermediaries as recipients of State aid within the meaning of Article 87(1) of the EC Treaty

The question whether research organisations are recipients of State aid must be answered in accordance with general State aid principles.

⁽²¹⁾ Cf. definition in the OSLO manual, Guidelines for Collecting and Interpreting Innovation Data, 3rd Edition, Organisation for Economic Co-operation and Development, 2005, page 49.

⁽²²⁾ Cf. definition in the OSLO manual, page 51.

In line with Article 87(1) of the EC Treaty and the case-law of the Court, public financing of R&D&I activities by research organisations will qualify as State aid, if all conditions of Article 87(1) of the EC Treaty are fulfilled. In accordance with the case-law, this requires inter alia that the research organisation qualifies as an undertaking within the meaning of Article 87(1) of the EC Treaty. This does not depend upon its legal status (organized under public or private law) or economic nature (i.e. profit making or not). What is decisive for its qualification as an undertaking is whether the research organisation carries out an economic activity, which is an activity consisting of offering goods and/or services on a given market⁽²³⁾. Accordingly, any public funding of economic activities falls under Article 87(1) of the EC Treaty, should all other conditions be fulfilled.

3.1.1. *Public funding of non-economic activities*

If the same entity carries out activities of both economic and non-economic nature, in order to avoid cross-subsidisation of the economic activity, the public funding of the non-economic activities will not fall under Article 87(1) of the EC Treaty, if the two kinds of activities and their costs and funding can be clearly separated⁽²⁴⁾. Evidence that the costs have been allocated correctly can consist of annual financial statements of the universities and research organisations.

The Commission nevertheless considers that the primary activities of research organisations are normally of a non-economic character, notably:

- education for more and better skilled human resources;
- the conduct of independent R&D for more knowledge and better understanding, including collaborative R&D;
- the dissemination of research results.

The Commission furthermore considers that technology transfer activities (licensing, spin-off creation or other forms of management of knowledge created by the research organisation) are of

⁽²³⁾ Case 118/85 *Commission v. Italy* [1987] ECR 2599, paragraph 7, Case C-35/96 *Commission v. Italy* [1998] ECR I-3851, CNSD, paragraph 36; Case C-309/99 *Wouters* [2002] ECR I-1577 paragraph 46.

⁽²⁴⁾ Economic activities comprise in particular research carried out under contract with industry, the renting out of research infrastructure and consultancy work.

non-economic character if these activities are of an internal nature⁽²⁵⁾ and all income from these activities is reinvested in the primary activities of the research organisations⁽²⁶⁾.

3.1.2. *Public funding of economic activities*

If research organisations or other not-for-profit innovation intermediaries (for example, technology centres, incubators, chambers of commerce) perform economic activities, such as renting out infrastructures, supplying services to business undertakings or performing contract research, this should be done on normal market conditions, and public funding of these economic activities will generally entail State aid.

However, if the research organisation or not-for-profit innovation intermediary can prove that the totality of the State funding that it received to provide certain services has been passed on to the final recipient, and that there is no advantage granted to the intermediary, the intermediary organisation may not be recipient of State aid.

For aid to the final recipients, normal State aid rules apply.

3.2. **Indirect State aid within the meaning of Article 87(1) of the EC Treaty to undertakings through publicly funded research organisations**

This section is intended to clarify under which conditions undertakings obtain an advantage within the meaning of Article 87(1) of the EC Treaty in cases of contract research by a research organisation or collaboration with a research organisation. As far as the other elements of Article 87(1) of the EC Treaty are concerned, the normal rules apply. In particular, it will have to be assessed in accordance with the relevant case-law whether the behaviour of the research organisation can be attributed to the State⁽²⁷⁾.

⁽²⁵⁾ By internal nature, the Commission means a situation where the management of the knowledge of the research organisation(s) is conducted either by a department or a subsidiary of the research organisation or jointly with other research organisations. Contracting the provision of specific services to third parties by way of open tenders does not jeopardise the internal nature of such activities.

⁽²⁶⁾ For all remaining kinds of technology transfer receiving State funding, the Commission does not consider itself in a position, on the basis of its current knowledge, to decide in a general manner upon the State aid character of the funding of such activities. It underlines the obligation of the Member States under Article 88(3) of the EC Treaty to assess the character of such measures in each case and to notify them to the Commission, in case they consider them to represent State aid.

⁽²⁷⁾ Cf. Case C-482/99 *France v. Commission* [2002] ECR I-4397, on the issue of imputability to the State.

3.2.1. *Research on behalf of undertakings (Contract research or research services)*

This point concerns the situation in which a project is carried out by a research organisation on behalf of an undertaking. The research organisation, acting as an agent, renders a service to the undertaking acting as principal in situations where (i) the agent receives payment of an adequate remuneration for its service and (ii) the principal specifies the terms and conditions of this service. Typically, the principal will own the results of the project and carry the risk of failure. When a research organisation carries out such a contract, there will normally be no State aid passed to the undertaking through the research organisation, if one of the following conditions is fulfilled:

- (1) the research organisation provides its service at market price; or
- (2) if there is no market price, the research organisation provides its service at a price which reflects its full costs plus a reasonable margin.

3.2.2. *Collaboration of undertakings and research organisations*

In a collaboration project, at least two partners participate in the design of the project, contribute to its implementation and share the risk and the output of the project.

In the case of collaboration projects carried out jointly by undertakings and research organisations, the Commission considers that no indirect State aid is granted to the industrial partner through the research organisation due to the favourable conditions of the collaboration if one of the following conditions is fulfilled:

- (1) the participating undertakings bear the full cost of the project.
- (2) the results which do not give rise to intellectual property rights may be widely disseminated and any intellectual property rights to the R&D&I results which result from the activity of the research organisation are fully allocated⁽²⁸⁾ to the research organisation.
- (3) the research organisation receives from the participating undertakings compensation equivalent to the market price for the intellectual property rights⁽²⁹⁾ which result from the activity of the research organisation carried out in the project and which are transferred to the participating

⁽²⁸⁾ 'Full allocation' means that the research organization enjoys the full economic benefit of those rights by retaining full disposal of them, notably the right of ownership and the right to license. These conditions may also be fulfilled if the organisation decides to conclude further contracts concerning these rights including licensing them to the collaboration partner.

⁽²⁹⁾ 'Compensation equivalent to the market price for the intellectual property rights' refers to compensation for the full economic benefit of those rights. In line with general State aid principles and given the inherent difficulty to establish objectively the market price for intellectual property rights, the Commission will consider this condition fulfilled if the research organisation as seller negotiates in order to obtain the maximum benefit at the moment when the contract is concluded.

undertakings. Any contribution of the participating undertakings to the costs of the research organisation shall be deducted from such compensation.

If none of the previous conditions are fulfilled, the Member State may rely on an individual assessment of the collaboration project⁽³⁰⁾. There may also be no State aid where the assessment of the contractual agreement between the partners leads to the conclusion that any intellectual property rights to the R&D&I results as well as access rights to the results are allocated to the different partners of the collaboration and adequately reflect their respective interests, work packages, and financial and other contributions to the project. If conditions (1), (2) and (3) are not fulfilled and the individual assessment of the collaboration project does not lead to the conclusion that there is no State aid, the Commission will consider the full value of the contribution of the research organisation to the project as aid to undertakings.

4. COMPATIBILITY OF AID UNDER ARTICLE 87(3)(B) OF THE EC TREATY

Aid for R&D&I to promote the execution of an important project of common European interest may be considered to be compatible with the common market pursuant to Article 87(3)(b) of the EC Treaty.

The Commission will conclude that Article 87(3)(b) of the EC Treaty applies if the following cumulative conditions are fulfilled:

- (1) the aid proposal concerns a project which is clearly defined in respect of the terms of its implementation including its participants as well as its objectives. The Commission may also consider a group of projects as together constituting a project.
- (2) the project must be in the common European interest: the project must contribute in a concrete, clear and identifiable manner to the Community interest. The advantage achieved by the objective of the project must not be limited to one Member State or the Member States implementing it, but must extend to the Community as a whole. The project must present a substantive leap forward for the Community objectives, for instance by being of great importance for the European Research Area or being a lead project for European industry. The fact that the project is carried out by undertakings in different countries is not sufficient. The positive effects of the aid could be shown for example by important spill-overs for society, through the contribution of the measure to the improvement of the Community situation regarding R&D&I in the international context, through creation of new markets or the development of

⁽³⁰⁾ This provision does not intend to modify the obligation of the Member States to notify certain measures on the basis of Article 88(3) of the EC Treaty.

new technologies. The benefits of the project should not be confined to the industry directly concerned but its results should be of wider relevance and application to the economy within the Community (up- or downstream markets, alternative uses in other sectors, etc.).

- (3) the aid is necessary to achieve the defined objective of common interest and presents an incentive for the execution of the project, which must also involve a high level of risk. This could be shown by looking at the level of profitability of the project, at the amount of investment and time path of cash flows and at feasibility studies, risk assessments and expert opinions.
- (4) the project is of great importance with respect to its character and its volume: it must be a meaningful project with regard to its objective and a project of substantial size.

The Commission will consider notified projects more favourably if they include a significant own contribution of the beneficiary to the project. It will equally consider more favourably notified projects involving undertakings or research entities from a significant number of Member States.

In order to allow for the Commission to properly assess the case, the common European interest must be demonstrated in practical terms: for example, it must be demonstrated that the project enables significant progress to be made towards achieving specific Community objectives.

5. COMPATIBILITY OF AID UNDER ARTICLE 87(3)(C) OF THE EC TREATY

State aid for research and development and innovation shall be compatible with the common market within the meaning of Article 87(3)(c) of the EC Treaty, if, on the basis of the balancing test, it leads to increased R&D&I-activities without adversely affecting trading conditions to an extent contrary to the common interest. The Commission will view favourably notifications of aid measures which are supported by rigorous evaluations of similar past aid measures demonstrating the incentive effect of the aid. The following measures are eligible for compatibility under Article 87(3)(c) of the EC Treaty.

5.1. Aid for R&D projects

Aid for R&D projects will be considered compatible with the common market within the meaning of Article 87(3)(c) of the EC Treaty provided that the conditions set out in this section are fulfilled.

5.1.1. *Research categories*

The aided part of the research project must completely fall within one or more of the following research categories: fundamental research, industrial research, experimental development.

When classifying different activities, the Commission will refer to its own practice as well as the specific examples and explanations provided in the Frascati Manual on the Measurement of Scientific and Technological Activities, Proposed Standard Practice for Surveys on Research and Experimental Development ⁽³¹⁾.

When a project encompasses different tasks, each task must be qualified as falling under the categories of fundamental research, industrial research or experimental development or as not falling under any of those categories at all.

This qualification need not necessarily follow a chronological approach, moving sequentially over time from fundamental research to activities closer to the market. Accordingly, nothing will prevent the Commission from qualifying a task which is carried out at a late stage of a project as industrial research, while finding that an activity carried out at an earlier stage of the project constitutes experimental development or is not research at all.

5.1.2. *Basic aid intensities*

The aid intensity, as calculated on the basis of the eligible costs of the project, shall not exceed:

- (a) 100 % for fundamental research;
- (b) 50 % for industrial research;
- (c) 25 % for experimental development.

The aid intensity must be established for each beneficiary of aid, including in a collaboration project.

In the case of State aid for an R&D project being carried out in collaboration between research organisations and undertakings, the combined aid deriving from direct government support for a specific research project and, where they constitute aid (see section), contributions from research organisations to that project may not exceed the applicable aid intensities for each benefiting undertaking.

5.1.3. *Bonuses*

The ceilings fixed for industrial research and experimental development may be increased as follows:

- (a) where the aid is to be given to SMEs, the aid intensity may be increased by 10 percentage points for medium-sized enterprises and by 20 percentage points for small enterprises;

⁽³¹⁾ Organisation for Economic Co-operation and Development, 2002.

(b) up to a maximum aid intensity of 80 %, a bonus of 15 percentage points may be added if ⁽³²⁾:

(i) the project involves effective collaboration between at least two undertakings which are independent of each other and the following conditions are fulfilled:

- no single undertaking must bear more than 70 % of the eligible costs of the collaboration project;
- the project must involve collaboration with at least one SME or be cross-border, that is to say, the research and development activities are carried out in at least two different Member States.

(ii) the project involves effective collaboration between an undertaking and a research organisation, particularly in the context of co-ordination of national R&D policies, and the following conditions are fulfilled:

- the research organisation bears at least 10 % of the eligible project costs;
- the research organisation has the right to publish the results of the research projects insofar as they stem from research implemented by that organisation.

(iii) only in case of industrial research, if the results of the project are widely disseminated through technical and scientific conferences or published in scientific or technical journals or in open access repositories (databases where raw research data can be accessed by anyone), or through free or open source software.

For the purposes of points (i) and (ii) subcontracting is not considered to be effective collaboration. In case of collaboration between an undertaking and a research organisation, the maximum aid intensities and bonuses specified in this Framework do not apply to the research organisation.

Table illustrating the aid intensities:

	Small enterprise	Medium-sized enterprise	Large Enterprise
<i>Fundamental research</i>	100 %	100 %	100 %
<i>Industrial research</i>	70 %	60 %	50 %
<i>Industrial research</i> subject to:	80 %	75 %	65 %
— collaboration between undertakings;			

⁽³²⁾ Projects funded under the Framework programme of the European Community for research, technological development and demonstration activities will automatically qualify for a bonus for collaboration due to the minimum conditions for participation in such projects.

	Small enterprise	Medium-sized enterprise	Large Enterprise
for large undertakings: cross-border or with at least one SME or — collaboration of an undertaking with a research organisation or — dissemination of results			
<i>Experimental development</i>	45 %	35 %	25 %
<i>Experimental development</i> subject to:	60 %	50 %	40 %
— collaboration between undertakings; for large undertakings, with cross-border or at least one SME or — collaboration of an undertaking with a research organisation			

5.1.4. Eligible costs

The aid intensity will be calculated on the basis of the costs of the research project to the extent that they can be considered as eligible. All eligible costs must be allocated to a specific category of R&D.

The following costs shall be eligible:

- (a) personnel costs (researchers, technicians and other supporting staff to the extent employed on the research project);
- (b) costs of instruments and equipment to the extent and for the period used for the research project. If such instruments and equipment are not used for their full life for the research project, only the depreciation costs corresponding to the life of the research project, as calculated on the basis of good accounting practice, are considered as eligible;
- (c) costs for building and land, to the extent and for the duration used for the research project. With regard to buildings, only the depreciation costs corresponding to the life of the research project, as calculated on the basis of

good accounting practice are considered as eligible. For land, costs of commercial transfer or actually incurred capital costs are eligible;

- (d) cost of contractual research, technical knowledge and patents bought or licensed from outside sources at market prices, where the transaction has been carried out at arm's length and there is no element of collusion involved, as well as costs of consultancy and equivalent services used exclusively for the research activity;
- (e) additional overheads incurred directly as a result of the research project;
- (f) other operating expenses, including costs of materials, supplies and similar products incurred directly as a result of the research activity.

5.1.5. Repayable advance

If a Member State grants a repayable advance which qualifies as State aid within the meaning of Article 87(1) of the EC Treaty, the following rules shall apply.

Where a Member State can demonstrate, on the basis of a valid methodology based on sufficient verifiable data, that it is possible to calculate the gross grant equivalent of such aid granted in the form of a repayable advance and to accordingly design a scheme where this gross grant equivalent fulfils the conditions on maximum intensities in this section, it may notify this scheme and the associated methodology to the Commission. If the Commission accepts the methodology and deems the scheme compatible, the aid may be granted on the basis of the gross grant equivalent of the repayable advance, up to the aid intensities permissible under this section.

In all other cases, the repayable advance is expressed as a percentage of the eligible costs; it may then exceed the rates indicated in this section, provided that the following rules are fulfilled.

In order to allow the Commission to assess the measure, it must provide for detailed provisions on the repayment in case of success and clearly define what will be considered as a successful outcome of the research activities. All these elements must be notified to the Commission. The Commission will examine that the definition of a successful outcome has been established on the basis of a reasonable and prudent hypothesis.

In case of a successful outcome, the measure must provide that the advance is repaid with an interest rate at least equal to the applicable rate resulting from the application of the Commission notice on the method for setting the reference and discount rates⁽³³⁾.

⁽³³⁾ OJ C 273, 9.9.1997, p. 3. also published under: http://ec.europa.eu/comm/competition/state_aid/legislation/reference.html.

In case of a success exceeding the outcome defined as successful, the Member State concerned should be entitled to request payments beyond repayment of the advance amount including interest according to the reference rate foreseen by the Commission.

In case the project fails, the advance does not have to be fully repaid. In case of partial success, the Commission will normally require that the repayment secured is in proportion to the degree of success achieved.

The advance may cover up to a maximum of 40 % of the eligible costs for the experimental development phase of the project and up to 60 % for the industrial research phase, to which bonuses can be added.

5.1.6. Fiscal measures

On the basis of evaluation studies⁽³⁴⁾ provided by Member States in the notification, the Commission will consider that R&D&I fiscal aid schemes have an incentive effect by stimulating higher R&D&I-spending by undertakings.

The aid intensity of an R&D&I fiscal State aid measure can be calculated either on the basis of individual R&D&I projects or, at the level of an undertaking, as the ratio between the overall tax relief and the sum of all eligible R&D&I costs incurred in a period not exceeding three consecutive fiscal years. In the latter case, the R&D&I fiscal State aid measure may apply without distinction to all eligible R&D&I activities; the applicable aid intensity for experimental development must then not be exceeded⁽³⁵⁾.

At the time of notification, the Member State must provide an estimate of the number of beneficiaries.

5.1.7. Matching clause

In order to address actual or potential direct or indirect distortions of international trade, higher intensities than generally permissible under this section may be authorized if — directly or indirectly — competitors located outside the Community have received (in the last three years) or are going to receive, aid of an equivalent intensity for similar projects, programmes, research, development or technology. However, where distortions of international trade are likely to occur after more than three years, given the particular nature of the sector in question, the reference period may be extended accordingly.

⁽³⁴⁾ Even though this may not be possible *ex ante* for a newly introduced fiscal State aid measure, Member States will be expected to provide evaluation studies on the incentive effects of their own fiscal measures.

⁽³⁵⁾ Conversely, where an R&D&I fiscal State aid measure distinguishes between different R&D&I categories, the relevant aid intensities must not be exceeded.

If at all possible, the Member State concerned will provide the Commission with sufficient information to enable it to assess the situation, in particular regarding the need to take account of the competitive advantage enjoyed by a third-country competitor. If the Commission does not have evidence concerning the granted or proposed aid, it may also base its decision on circumstantial evidence.

5.2. Aid for technical feasibility studies

Aid for technical feasibility studies preparatory to industrial research or experimental development activities shall be compatible with the common market within the meaning of Article 87(3)(c) of the EC Treaty provided that the aid intensity, as calculated on the basis of the study costs, does not exceed the following aid intensities:

- (a) for SMEs, 75 % for studies preparatory to industrial research activities and 50 % for studies preparatory to experimental development activities,
- (b) for large undertakings, 65 % for studies preparatory to industrial research activities and 40 % for studies preparatory to experimental development activities.

5.3. Aid for industrial property rights costs for SMEs

Aid to SMEs for the costs associated with obtaining and validating patents and other industrial property rights shall be compatible with the common market within the meaning of Article 87(3)(c) of the EC Treaty up to the same level of aid as would have qualified as R&D aid in respect of the research activities which first led to the industrial property rights concerned.

Eligible costs are:

- (a) all costs preceding the grant of the right in the first legal jurisdiction, including costs relating to the preparation, filing and prosecution of the application as well as costs incurred in renewing the application before the right has been granted;
- (b) translation and other costs incurred in order to obtain the granting or validation of the right in other legal jurisdictions;
- (c) costs incurred in defending the validity of the right during the official prosecution of the application and possible opposition proceedings, even if such costs occur after the right is granted.

5.4. Aid for young innovative enterprises

Aid to young innovative enterprises shall be compatible with the common market within the meaning of Article 87(3)(c) of the EC Treaty if the following conditions are fulfilled ⁽³⁶⁾:

- (a) the beneficiary is a small enterprise that has been of existence for less than 6 years at the time when the aid is granted and
- (b) the beneficiary is an innovative enterprise, on the basis that:
 - (i) the Member State can demonstrate, by means of an evaluation carried out by an external expert, notably on the basis of a business plan, that the beneficiary will in the foreseeable future develop products, services or processes which are technologically new or substantially improved compared to the state of the art in its industry in the Community, and which carry a risk of technological or industrial failure, or
 - (ii) the R&D expenses of the beneficiary represent at least 15 % of its total operating expenses in at least one of the three years preceding the granting of the aid or in the case of a start-up enterprise without any financial history, in the audit of its current fiscal period, as certified by an external auditor.
- (c) the aid is not higher than EUR 1 million. This aid may not exceed EUR 1,5 million in regions eligible for the derogation in Article 87(3)(a) of the EC Treaty, and EUR 1,25 million in regions eligible for the derogation in Article 87(3)(c) of the EC Treaty.

The beneficiary may receive the aid only once during the period in which it qualifies as a young innovative enterprise. This aid may be cumulated with other aid under this framework, with aid for research and development and innovation exempted by Regulation (EC) No 364/2004 or any successor regulation and with aid approved by the Commission under the risk capital guidelines.

The beneficiary may receive State aid other than R&D&I aid and risk capital aid only 3 years after the granting of the young innovative enterprise aid.

5.5. Aid for process and organisational innovation in services

Innovation in services may not always fall within the research categories defined in section 5.1 but is typically less systematic

⁽³⁶⁾ This is without prejudice to the application of the Guidelines on national regional aid for 2007 — 2013, OJ C 54, 4.3.2006, p. 13, and notably the granting of aid for newly created small enterprises up to a total of EUR 2 million per small enterprise located in regions eligible for the derogation in Article 87(3)(a) of the Treaty.

and stems frequently from customer interaction, market demand, adoption of business and organisational models and practices from more innovative sectors or from other similar sources.

Aid for process and organisational innovation in services shall be compatible with the common market within the meaning of Article 87(3)(c) of the EC Treaty with a maximum aid intensity of 15 % for large enterprises, 25 % for medium enterprises and 35 % for small enterprises. Large enterprises are only eligible for such aid if they collaborate with SMEs in the aided activity, whereby the collaborating SMEs must incur at least 30 % of the total eligible costs.

Routine or periodic changes made to products, production lines, manufacturing processes, existing services and other operations in progress, even if such changes may represent improvements, do not qualify for State aid.

The following conditions must be fulfilled:

- (a) organisational innovation must always be related to the use and exploitation of Information and Communication Technologies (ICT) to change the organisation;
- (b) the innovation must be formulated as a project with an identified and qualified project manager, as well as identified project costs;
- (c) the result of the aided project must be the development of a standard, of a business model, methodology or concept, which can be systematically reproduced, possibly certified, and possibly patented;
- (d) the process or organisational innovation must be new or substantially improved compared to the state of the art in its industry in the Community. The novelty could be demonstrated by the Member States for instance on the basis of a precise description of the innovation, comparing it with state of the art process or organisational techniques used by other undertakings in the same industry;
- (e) the process or organisational innovation project must entail a clear degree of risk. This risk could be demonstrated by the Member State for instance in terms of: project costs in relation to company turnover, time required to develop the new process, expected gains from the process innovation by comparison with the project costs, probability of failure.

Eligible costs are the same as for aid to R&D projects (cf. section). In case of organisational innovation, however, costs of instruments and equipment cover costs of ICT instruments and equipment only.

5.6. Aid for innovation advisory services and for innovation support services

Aid for innovation advisory services and for innovation support services shall be compatible with the common market within the meaning of Article 87 (3) (c) of the EC Treaty if each of the following conditions are fulfilled:

- (1) the beneficiary is an SME;
- (2) the aid does not exceed a maximum of EUR 200 000 per beneficiary within any three year period ⁽³⁷⁾;
- (3) the service provider benefits from a national or European certification. If the service provider does not benefit from a national or European certification, the aid may not cover more than 75 % of the eligible costs;
- (4) the beneficiary must use the State aid to buy the services at market price (or if the service provider is a non-for-profit entity, at a price which reflects its full costs plus a reasonable margin).

The following costs shall be eligible:

- as regards innovation advisory services the following costs: management consulting; technological assistance; technology transfer services; training; consultancy for acquisition, protection and trade in Intellectual Property Rights and for licensing agreements; consultancy on the use of standards
- as regards innovation support services the following costs: office space; data banks; technical libraries; market research; use of laboratory; quality labelling, testing and certification;

If the service provider is a not-for-profit entity, the aid may be given in the form of a reduced price, as the difference between the price paid and the market price (or a price which reflects full costs plus a reasonable margin). In such a case, the Member States shall set up a system ensuring transparency about the full costs of the innovation advisory and innovation support services provided, as well as about the price paid by the beneficiary, so that the aid received can be measured and monitored.

5.7. Aid for the loan of highly qualified personnel

Aid for the loan of highly qualified personnel seconded from a research organisation or a large enterprise to an SME shall be compatible with the common market within the meaning of Article 87(3)(c) of the EC Treaty, provided the following conditions are fulfilled:

The seconded personnel must not be replacing other personnel, but must be employed in a newly created function within the beneficiary undertaking and must have been employed for at least two years in the research organisation or the large

⁽³⁷⁾ Without prejudice to the possibility of also receiving *de minimis* aid in respect of other eligible expenses.

enterprise, which is sending the personnel on secondment. The seconded personnel must work on R&D&I activities within the SME receiving the aid.

Eligible costs are all personnel costs for borrowing and employing highly qualified personnel, including the costs of using a recruitment agency, as well as a mobility allowance for the seconded personnel. The maximum aid intensity shall be 50 % of the eligible costs, for a maximum of 3 years per undertaking and per person borrowed.

This provision does not allow covering consultancy costs (payment of the service rendered by the expert, without employing the expert in the undertaking) as such, which are covered under the rules for SME-aid ⁽³⁸⁾.

5.8. Aid for innovation clusters

Investment aid may be granted for the setting up, expansion and animation of innovation clusters exclusively to the legal entity operating the innovation cluster. This entity shall be in charge of managing the participation and access to the cluster's premises, facilities and activities. Access to the cluster's premises, facilities and activities must not be restricted and the fees charged for using the cluster's facilities and for participating in the cluster's activities should reflect their costs.

Such aid may be granted for the following facilities:

- facilities for training and research centre;
- open-access research infrastructures: laboratory, testing facility;
- broadband network infrastructures.

The maximum aid intensity is 15 %.

In the case of regions falling under Article 87(3)(a) of the EC Treaty, the Commission considers that the intensity must not exceed:

- 30 % for regions with less than 75 % of average EU-25 GDP per capita, for outermost regions with higher GDP per capita and until 1 January 2011 statistical effect regions ⁽³⁹⁾,
- 40 % for regions with less than 60 % of average EU-25 GDP per capita,
- 50 % for regions with less than 45 % of average EU-25 GDP per capita.

In recognition of their specific handicaps, the outermost regions will be eligible for a further bonus of 20 % if their GDP per capita falls below 75 % of the EU-25 average and 10 % in other cases.

⁽³⁸⁾ Currently Regulation (EC) No 70/2001.

⁽³⁹⁾ Cf. Guidelines on national regional aid for 2007-2013, para. 18-20.

The statistical effect regions which fall under the derogation under Article 87(3)(c) of the EC Treaty from 1 January 2011 will be eligible for an aid intensity of 20 %.

In the case of aid being granted to an SME, the maximum intensities shall be increased by 20 percentage points for aid granted to a small enterprise and by 10 percentage points for aid granted to a medium-sized enterprise.

The eligible costs shall be the costs relating to investment in land, buildings, machinery and equipment.

Operating aid for cluster animation may be granted to the legal entity operating the innovation cluster. Such aid must be temporary and, as a general rule, must be abolished over time, so as to provide an incentive for prices to reflect costs reasonably rapidly.

Such aid may be granted for a limited duration of five years where the aid is degressive. Its intensity may amount to 100 % the first year but must have fallen in a linear fashion to zero by the end of the fifth year. In the case of non-degressive aid, its duration is limited to five years and its intensity must not exceed 50 % of the eligible costs. In duly justified cases, and on the basis of convincing evidence provided by the notifying Member State, aid for cluster animation may be granted for a longer period of time, not exceeding 10 years.

The eligible costs shall be the personnel and administrative costs relating to the following activities:

- marketing of the cluster to recruit new companies to take part in the cluster,
- management of the cluster's open-access facilities,
- organisation of training programmes, workshops and conferences to support knowledge sharing and networking between the members of the cluster.

When notifying investment aid or aid for cluster animation, the Member State must provide an analysis of the technological specialisation of the innovation cluster, existing regional potential, existing research capacity, presence of clusters in the Community with similar purposes and potential market volumes of the activities in the cluster.

Cases where Member States fund innovation infrastructure to be operated on an open access basis within not for profit research organisations should be assessed using the provisions set out in section 3.1.

6. INCENTIVE EFFECT AND NECESSITY OF AID

State aid must have an incentive effect, i.e. result in the recipient changing its behaviour so that it increases its level of R&D&I activity. As a result of the aid, the R&D&I activity should be increased in size, scope, amount spent or speed.

The Commission considers that the aid does not present an incentive for the beneficiary in all cases in which the R&D&I-activity⁽⁴⁰⁾ has already commenced prior to the aid application by the beneficiary to the national authorities.

If the aided R&D&I-project has not started before the application, the Commission considers that the incentive effect is **automatically met** for the following aid measures:

- project aid and feasibility studies where the aid beneficiary is an SME and where the aid amount is below EUR 7,5 million for a project per SME,
- aid for industrial property rights costs for SMEs,
- aid for young innovative enterprises,
- aid for innovation advisory services and innovation support services,
- aid for the loan of highly qualified personnel.

For all other measures⁽⁴¹⁾, the Commission will require that an incentive effect is demonstrated by the notifying Member States.

In order to verify that the planned aid will induce the aid recipient to change its behaviour so that it increases its level of R&D&I activity, the Member States shall provide an *ex-ante* evaluation of the increased R&D&I activity **for all individual measures assessed by the Commission**, on the basis of an analysis comparing a situation without aid and a situation with aid being granted. The following criteria may be used, together with other relevant quantitative and/or qualitative factors submitted by the Member State that made the notification:

increase in project size: increase in the total project costs (without decreased spending by the aid beneficiary by comparison with a situation without aid); increase in the number of people assigned to R&D&I activities;

increase in scope: increase in the number of the expected deliverables from the project; more ambitious project illustrated by a higher probability of a scientific or technological breakthrough or a higher risk of failure (notably linked to the higher risk involved in the research project, to the long-term nature of the project and uncertainty about its results);

⁽⁴⁰⁾ If the aid proposal is to grant aid for an R&D&I-project, this does not exclude that the potential beneficiary has already carried out feasibility studies which are not covered by the request for State aid.

⁽⁴¹⁾ I.e. project aid for large undertakings and for SMEs for aid exceeding EUR 7,5 million; aid for process and organisational innovation in services and aid for innovation clusters.

increase in speed: shorter time before completion of the project as compared to the same project being carried out without aid;

increase in total amount spent on R&D&I: increase in total R&D&I spending by the aid beneficiary; changes in the committed budget for the project (without corresponding decrease in the budget of other projects); increase in R&D&I spending by the aid beneficiary as a proportion of total turnover.

If a significant effect on *at least one* of these elements can be demonstrated, taking account of the normal behaviour of an undertaking in the respective sector, the Commission will normally conclude that the aid proposal has an incentive effect.

If the Commission undertakes a **detailed assessment** of an individual measure, these indicators may not be considered sufficient demonstration of an incentive effect, and the Commission may need to be provided with complementary evidence.

When **assessing an aid scheme**, the conditions relating to the incentive effect shall be deemed to be satisfied if the Member State has committed itself to grant individual aid under the approved aid scheme only after it has verified that an incentive effect is present and to submit annual reports on the implementation of the approved aid scheme. In the annual reports, the Member State must demonstrate how it has assessed the incentive effect of the aid before granting the aid through the use of the quantitative and qualitative indicators given above.

7. COMPATIBILITY OF AID SUBJECT TO A DETAILED ASSESSMENT

The Commission considers that an increase in the level of R&D&I activity in the Community is in the common interest of the Community as it can be expected to significantly contribute to growth, prosperity and sustainable development. In this context, the Commission recognises that State aid has a positive role to play when it is well targeted and creates the right incentive for undertakings to increase R&D&I. Nevertheless, State aid may also lead to significant distortions of competition which must be taken into consideration.

7.1. Measures subject to a detailed assessment

For the following measures, due to the higher risk of distortion of competition, the Commission will carry out a more detailed assessment.

For measures covered by a BER

- for all cases notified to the Commission following a **duty to notify aid individually** as prescribed in the BER.

For measures covered by this framework:

Where the aid amount exceeds :

- for **project aid** ⁽⁴²⁾ and **feasibility studies**:
 - if the project is predominantly fundamental research ⁽⁴³⁾, EUR 20 million per undertaking, per project/feasibility study;
 - if the project is predominantly industrial research ⁽⁴⁴⁾, EUR 10 million per undertaking, per project/feasibility study;
 - for all other projects, EUR 7,5 million per undertaking, per project/feasibility study.
- for **process or organisational innovation** in services activities, EUR 5 million per project per undertaking;
- for **innovation clusters** (per cluster), EUR 5 million.

The purpose of this detailed assessment is to ensure that high amounts of aid for R&D&I do not distort competition to an extent contrary to the common interest, but actually contribute to the common interest. This happens when the benefits of State aid in terms of additional R&D&I outweigh the harm for competition and trade.

The detailed assessment is a proportionate assessment, depending on the distortion potential of the case. Accordingly, the fact that a detailed assessment will be carried out does not necessarily imply the need to open a formal investigation procedure, although this may be the case for certain measures.

Provided Member States ensure full co-operation and provide adequate information in a timely manner, the Commission will use its best endeavours to conduct the investigation in a timely manner.

7.2. Methodology of the detailed assessment: R&D&I criteria for economic assessment of certain individual cases

Below, the Commission presents guidance as to the kind of information it may require and the methodology it would follow

⁽⁴²⁾ For EUREKA projects, this ceiling is set at twice the amount.

⁽⁴³⁾ A project is considered to consist 'predominantly' of fundamental research, if more than half of the eligible project costs is incurred through activities which fall within the category of fundamental research.

⁽⁴⁴⁾ A project is considered to consist 'predominantly' of industrial research, if more than half of the eligible project costs is incurred through activities which fall within the categories of industrial research or fundamental research.

for measures subject to a detailed assessment. This guidance is intended to make the Commission's decisions and their reasoning transparent and foreseeable in order to create predictability and legal certainty.

Detailed assessment will be conducted on the basis of the following positive and negative elements which will apply in addition to the criteria set out in Chapter 5. In some cases, the applicability and the weight attached to these elements may depend on the form or objective of the aid. The level of the Commission's assessment will be proportional to the risk of distortion of competition. This means that the scope of the analysis will depend on the nature of the case. State aid for activities that are far away from the market is therefore less likely to give rise to very extensive scrutiny.

Member States are invited to provide all the elements that they consider useful for the assessment of the case. The Member States are, in particular, invited to rely on evaluations of past State aid schemes or measures, impact assessments made by the granting authority, risk assessments, financial reports, internal business plans that any company should realise for important projects, expert opinions and other studies related to R&D&I.

7.3. Positive effects of the aid

The fact that the aid induces undertakings to pursue R&D&I in the Community which they would not otherwise have pursued constitutes the main positive element to take into consideration when assessing the compatibility of the aid.

In this context, the Commission will notably pay attention to the following elements:

- the net increase of R&D&I conducted by the undertaking,
- the contribution of the measure to the global improvement of the sector concerned as regards the level of R&D&I,
- the contribution of the measure to the improvement of the Community situation regarding R&D&I in the international context.

7.3.1. Existence of a market failure

As indicated in Chapter 1, State aid may be necessary to increase R&D&I in the economy only to the extent that the market, on its own, fails to deliver an optimal outcome. It is established that certain market failures hamper the overall level of R&D&I in the Community. However, not all undertakings and sectors in the economy are confronted to these market failures to the same extent. Consequently, as regards measures subject to a detailed

assessment, the Member State should provide adequate information whether the aid refers to a general market failure regarding R&D&I in the Community, or to a specific market failure.

Depending on the specific market failure addressed, the Commission will take into consideration the following elements:

- **Knowledge spillovers:** the level of information dissemination foreseen; the specificity of the knowledge created; the availability of IPR protection.
- **Imperfect and asymmetric information:** level of risk and complexity of research; need for external finance; characteristics of the aid beneficiary to receive external finance.
- **Coordination failures:** number of collaborating undertakings; intensity of collaboration; diverging interest between collaborating partners; problems in designing contracts; problems of third parties to coordinate collaboration.

For State aid targeting R&D&I projects or activities located in assisted areas, the Commission will take into account: (i) disadvantages caused by the peripherality and other regional specificities, (ii) specific local economic data, social and/or historic reasons for a low level of R&D&I activity in comparison with the relevant average data and/or situation at national and/or Community level as appropriate; and (iii) any other relevant indicator showing an increased degree of market failure.

7.3.2. *Appropriate Instrument*

State aid for R&D&I can be authorised under Article 87(3)(c) of the EC Treaty when it is necessary to achieve an objective of common interest, as an exception to the general prohibition of State aid. An important element in the balancing test is whether and to what extent State aid for R&D&I can be considered an appropriate instrument to increase R&D&I activities, given that other less distortive instruments may achieve the same results.

In its compatibility analysis, the Commission will take particular account of any impact assessment of the proposed measure which the Member State has made. Measures for which the Member State has considered other policy options and for which the advantages of using a selective instrument such as State aid are established and submitted to the Commission, are considered to constitute an appropriate instrument.

7.3.3. *Incentive effect and necessity of aid*

Analysing the incentive effect of the aid measure is the most important condition in analysing State aid for R&D&I. Identifying the incentive effect **translates** into assessing whether

the planned aid will induce undertakings to pursue R&D&I which they would not otherwise have pursued.

Chapter 6 provides a series of indicators that can be used by Member States to demonstrate an incentive effect. However, when a measure undergoes a detailed assessment, the Commission will require that the incentive effect of the aid is substantiated more precisely, to avoid undue distortions of competition.

In its analysis, the Commission will, in addition to the indicators mentioned in Chapter 6, take into consideration the following elements:

- **Specification of intended change:** the intended change in behaviour State aid aims at in the notified case has to be well specified (new project triggered, size, scope or speed of a project enhanced).
- **Counterfactual analysis:** the change of behaviour has to be identified by counterfactual analysis: what would be the level of intended activity with and without aid? The difference of the two scenarios is considered to be the impact of the aid measure and describes the incentive effect.
- **Level of profitability:** if a project would not, in itself, be profitable to undertake for a private undertaking, but would generate important benefits for society, it is more likely that the aid has an incentive effect. To evaluate the overall profitability (or lack thereof) of the project, evaluation methodologies can be used which are standard practice in the particular industry concerned ⁽⁴⁵⁾.
- **Amount of investment and time path of cash flows:** High start-up investment, low level of appropriable cash flows and a significant fraction of cash flows arising in the very far future will be considered positive elements in assessing the incentive effect.
- **Level of risk involved in the research project:** On the basis of e.g. feasibility studies, risk assessments and expert opinions, the assessment of risk will in particular take into account the irreversibility of the investment, the probability of commercial failure, the risk that the project will be less productive than expected, the risk that conducting the project would undermine other activities and the risk that the project costs undermine the undertaking's financial viability. For State aid targeting R&D&I projects or activities located in assisted areas, the Commission will take into account disadvantages caused by the peripherality and other regional specificities, which negatively impact on the level of risk in the research project.

⁽⁴⁵⁾ These may include methods to evaluate the Net Present Value of the project (that is to say, the sum of the discounted expected cash flow resulting from the investment minus the investment cost), the internal rate of return (IRR) or the return of capital employed (ROCE). Financial reports and internal business plans containing information on demand forecasts; cost forecasts; financial forecasts (for example, NPV, IRR, ROCE), documents that are submitted to an investment committee and that elaborate on various investment scenarios or documents provided to the financial markets could serve as evidence.

- **Continuous evaluation:** measures for which (low scale) pilot projects are foreseen, or which define well specified milestones resulting in termination of the project in case of failure and where a publicly available *ex post* monitoring is foreseen will be considered more positively as regards the assessment of the incentive effect.

7.3.4. Proportionality of the aid

Independently of the criteria mentioned in Chapter 5, the Member State concerned should provide the additional following information:

- **Open selection process:** Where there are multiple (potential) candidates for undertaking the R&D&I project in a Member State, the proportionality requirement is more likely to be met if the project has been allocated on the basis of transparent, objective and non-discriminatory criteria.
- **Aid to the minimum:** Member States have to explain how the amount given has been calculated to ensure that it is limited to the minimum necessary.

7.4. Analysis of the distortion of competition and trade

State aid for R&D&I may impact on competition at two levels: (i) competition in the innovation process, i.e. competition in terms of R&D&I which takes place upstream of product markets and (ii) competition in the product markets where the results of the R&D&I activities are exploited.

In assessing the negative effects of the aid measure, the Commission will focus its analysis of the distortions of competition on the foreseeable impact the R&D&I aid has on competition between undertakings in the product markets concerned. The Commission will give more weight to risks for competition and trade that arise in a predictable future and with particular likelihood.

The impact on competition in the innovation process will be relevant insofar as it has a foreseeable impact on the outcome of future product market competition. In certain cases the results of R&D&I, for example, in the form of intellectual property rights, are themselves traded in so-called technology markets, for instance through patent licensing. In these cases, the Commission may also consider the effect of the aid on competition in the technology markets.

The impact of R&D&I on product markets is largely dynamic and the analysis will therefore be of a forward-looking nature. Frequently, the same innovative activity will be associated with multiple future product markets. If so, the impact of State aid will be looked upon on the set of markets concerned.

There are three distinct ways in which R&D&I aid can distort competition in product markets:

- (1) R&D&I aid can distort the dynamic incentives of market players to invest (crowding out effect);
- (2) R&D&I aid can create or maintain positions of market power;
- (3) R&D&I aid can maintain an inefficient market structure.

State aid may also have a negative effect on trade in the common market. In particular where R&D&I aid leads to the crowding out of competitors, the aid measures may essentially result in a shift of trade flows and location of economic activity.

7.4.1. Distorting dynamic incentives

The main concern related to R&D&I aid to undertakings is that competitors' dynamic incentives to invest are distorted. When an undertaking receives aid, this generally increases the likelihood of successful R&D&I on the part of this undertaking leading to an increased presence on the product market(s) in the future. This increased presence may lead competitors to reduce the scope of their original investment plans (crowding out effect).

In its analysis, the Commission will consider the following elements:

- **Aid amount.** Aid measures which involve significant amounts of aid are more likely to lead to significant crowding out effects. The significance of the aid amount will be measured with reference to total private R&D expenditure in the sector, and the amount spent by the main players.
- **Closeness to the market/category of the aid.** The more the aid measure is aimed at R&D&I activity close to the market, the more it is liable to develop significant crowding out effects.
- **Open selection process:** Where the grant is given on the basis of objective and non-discriminatory criteria, the Commission will take a more positive stance.
- **Exit barriers:** Competitors are more likely to maintain (or even to increase) their investment plans when exit barriers to the innovation process are high. This may be the case when many of the competitors' past investments are locked in to a particular R&D&I trajectory.
- **Incentives to compete for a future market:** R&D&I aid may lead to a situation where competitors to the aid beneficiary renounce competing for a future market, because the advantage provided by the aid (in terms of the degree of technological advance or in terms of timing) reduces the possibility for them to profitably enter this future market..

- **Product differentiation and intensity of competition:** Where product innovation is rather about developing differentiated products (related, for example, to distinct brands, standards, technologies, consumer groups) competitors are less likely to be affected. The same is true if there are many effective competitors in the market.

7.4.2. *Creating market power*

Aid in support of R&D&I may have distortive effects in terms of increasing or maintaining the degree of market power in product markets. Market power is the power to influence market prices, output, the variety or quality of goods and services, or other parameters of competition on the market for a significant period of time, to the detriment of consumers. The Commission will assess the market power before the aid is granted, and the change in market power, which can be expected as a result of the aid.

The Commission is concerned mainly about those R&D&I measures allowing the aid beneficiary to transfer or strengthen market power held on existing product markets to future product markets. The Commission is therefore unlikely to identify competition concerns related to market power in markets where each aid beneficiary has a market share below 25 % and in markets having a market concentration with Herfindahl-Hirschman Index (HHI) below 2 000.

In its analysis, the Commission will consider the following elements:

- **Market power of aid beneficiary and market structure:** Where the recipient is already dominant on a product market, the aid measure may reinforce this dominance by further weakening the competitive constraint that competitors can exert on the recipient undertaking. Similarly, State aid measures may have significant impact in oligopolistic markets where only a few players are active.
- **Level of entry barriers:** In the field of R&D&I, significant entry barriers may exist for new entrants. These barriers include legal entry barriers (in particular intellectual property rights), economies of scale and scope, access barriers to networks and infrastructure, and other strategic barriers to entry or expansion.
- **Buyer power:** The market power of an undertaking may also be limited by the market position of the buyers. The presence of strong buyers can serve to counter a finding of a strong market position if it is likely that the buyers will seek to preserve sufficient competition in the market.
- **Selection process:** Aid measures which allow undertakings with a strong market position to influence the selection process, for example, by having the right to recommend undertakings in the selection process or influencing the research path in a way which disfavours alternatives path on unjustified grounds, is liable to raise concern by the Commission.

7.4.3. *Maintaining inefficient market structures*

R&D&I aid may, if not correctly targeted, support inefficient undertakings and hence lead to market structures where many market players operate significantly below efficient scale. In its analysis, the Commission will consider whether the aid is granted in markets featuring overcapacity, in declining industries or in sensitive sectors. Concerns are less likely in situations where State aid for R&D&I aims at changing the growth dynamics of the sector, notably by introducing new technologies.

7.5. **Balancing and decision**

In the light of these positive and negative elements, the Commission balances the effects of the measure and determines whether the resulting distortions adversely affect trading conditions to an extent contrary to the common interest. The analysis in each particular case will be based on an overall assessment of the foreseeable positive and negative impacts of the State aid. For that purpose the Commission will not use the criteria set out in sections 7.3 and 7.4 mechanically but will make an overall assessment based on the proportionality principle.

The Commission may raise no objections to the notified aid measure without entering into the formal investigation procedure or, following the formal investigation procedure laid down in Article 6 of Regulation (EC) No 659/1999, decide to close the procedure with a decision pursuant to Article 7 of that Regulation. If it takes a conditional decision within the meaning of Article 7(4) of Regulation (EC) No 659/1999, it may in particular consider attaching the following conditions, which must reduce the resulting distortions or effect on trade and be proportionate:

- lower aid intensities than the maximum intensities allowed in Chapter 5, including claw-back mechanisms and different conditions for repaying reimbursable advances,
- diffusion of results, collaboration and other behavioural commitments,
- separation of accounts in order to avoid cross-subsidization from one market to another market, when the beneficiary is active in multiple markets,
- no discrimination against other potential beneficiaries (reduce selectivity).

8. **CUMULATION**

As regards cumulation, the aid ceilings fixed under this framework shall apply regardless of whether the support for the aided project is financed entirely from State resources or is partly financed by the Community, except in the specific and limited context of the conditions established for Community funding under the RTD Framework Programmes, adopted

respectively in accordance with Title XVIII of the EC Treaty or Title II of the Euratom Treaty.

Where the expenditure eligible for aid for R&D&I is eligible in whole or in part for aid for other purposes, the common portion will be subject to the most favourable ceiling under the applicable rules. This limitation does not apply to aid granted in accordance with the Community guidelines on State aid to promote risk capital investments in SME ⁽⁴⁶⁾.

Aid for R&D&I shall not be cumulated with *de minimis* support in respect of the same eligible expenses in order to circumvent the maximum aid intensities laid down in this framework.

9. SPECIAL RULES FOR AGRICULTURE AND FISHERIES

As regards R&D aid concerning products listed in Annex I to the EC Treaty, and by way of derogation from aid intensity limitations or supplements specified elsewhere in this framework, the Commission will continue to allow an aid intensity of up to 100 %, subject to fulfilment in each case of the four following conditions:

- it is of general interest to the particular sector or sub-sector concerned;
- information that research will be carried out, and with which goal, is published on the internet, prior to the commencement of the research. An approximate date of expected results and their place of publication on the internet, as well as a mention that the result will be available at no cost, must be included;
- the results of the research are made available on internet, for a period of at least 5 years. This information on the internet shall be published no later than any which may be given to members of any particular organisation;
- aid shall be granted directly to the researching institution or body and must not involve the direct granting of non-research related aid to a company producing, processing or marketing agricultural products, nor provide price support to producers of such products.

The Commission will allow State aid for cooperation pursuant to Article 29 of Council Regulation (EC) No 1698/2005 of 20 September 2005 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) ⁽⁴⁷⁾ if such cooperation has been approved for Community co-financing under that Article and/or the State aid is granted as additional financing pursuant to Article 89 of Regulation (EC)

No 1698/2005 under the same conditions and at the same intensity as the co-financing.

Cases of R&D aid for products listed in Annex I to the EC Treaty not fulfilling the conditions in this chapter are to be examined under the normal rules of this framework.

10. FINAL PROVISIONS

10.1. Reporting and monitoring

10.1.1. Annual reports

In line with the requirements of Regulation (EC) No 659/1999 and Commission Regulation (EC) No 794/2004 of 21 April 2004 implementing Council Regulation (EC) No 659/1999 laying down detailed rules for the application of Article 93 of the EC Treaty ⁽⁴⁸⁾, Member States must submit annual reports to the Commission.

Beyond the requirements stipulated in those provisions, annual reports for R&D&I-aid measures shall contain for each measure, including the granting of aid under an approved scheme, the following information:

- the name of the beneficiary,
- the aid amount per beneficiary,
- the aid intensity,
- the sectors of activity where the aided projects are undertaken.

In case of fiscal aid, the Member State must only provide a list of those beneficiaries who have received an annual tax relief in excess of 200 000 EUR.

In case of clusters, the report must also give a brief description of the activity of the cluster and its effectiveness in attracting R&D&I activity. The Commission may request additional information regarding the aid granted, to check whether the conditions of the Commission's decision approving the aid measure have been respected.

The annual reports will be published on the internet site of the Commission.

For all aid granted under an approved scheme to large undertakings, Member States must also explain in the annual report how the incentive effect has been respected for aid given to such undertakings, notably using the indicators and criteria mentioned in Chapter 6 above.

⁽⁴⁶⁾ OJ C 194, 18.8.2006, p. 2.

⁽⁴⁷⁾ OJ L 277, 21.10.2005, p. 1. Regulation as amended by Regulation (EC) No 1463/2006 (OJ L 277, 9.10.2006, p. 1).

⁽⁴⁸⁾ OJ L 140, 30.4.2004, p. 1. Regulation as amended by Regulation (EC) No 1627/2006 (OJ L 302, 1.11.2006, p. 10).

10.1.2. Access to full text of schemes

The Commission considers that further measures are necessary to improve the transparency of State aid in the Community. In particular, it appears necessary to ensure that the Member States, economic operators, interested parties and the Commission itself have easy access to the full text of all applicable R&D&I aid schemes.

This can easily be achieved through the establishment of linked internet sites. For this reason, when examining R&D&I aid schemes, the Commission will systematically require the Member State concerned to publish the full text of all final aid schemes on the internet and to communicate the internet address of the publication to the Commission. The scheme must not be applied before the information is published on the internet.

10.1.3. Information sheets

Besides, whenever aid for R&D&I is granted on the basis of aid schemes without falling under the duty for individual notification, and exceeds EUR 3 million, Member States must, within 20 working days starting from the granting of the aid by the competent authority, provide the Commission with the information requested in the standard form laid down in the Annex to this framework. The Commission will make summary information available to the public through its website (http://ec.europa.eu/comm/competition/index_en.html).

Member States must ensure that detailed records regarding the granting of aid for all R&D&I measures are maintained. Such records, which must contain all information necessary to establish that the eligible costs and maximum allowable aid intensity have been observed, must be maintained for 10 years from the date on which the aid was granted.

The Commission will ask Member States to provide this information in order to carry out an impact assessment of this framework three years after its entry into force ⁽⁴⁹⁾.

10.2. Appropriate Measures

The Commission herewith proposes to Member States, on the basis of Article 88(1) of the EC Treaty, the following appropriate measures concerning their respective existing research and development aid schemes:

In order to comply with the provisions of this framework, Member States should amend, where necessary, such schemes in order to bring them into line with this framework within twelve months after its entry into force, with the following exceptions:

- Member States have twenty four months to introduce amendments regarding the provisions covered in point 3.1.1 of this framework;

- the new threshold for large individual projects will apply as from the entry into force of this framework;
- the duty to provide more detailed annual reports pursuant to point 10.1.1. and the duty to submit information sheets pursuant to point 10.1.3. will apply to existing aid schemes six months after the entry into force of this framework.

The Member States are invited to give their explicit unconditional agreement to these proposed appropriate measures within two months from the date of publication of this framework. In the absence of any reply, the Commission will assume that the Member State in question does not agree with the proposed measures.

10.3. Entry into force, validity and revision

This framework will enter into force on 1 January 2007 or, if it has not been published in the *Official Journal of the European Union* before that date, on the first day following its publication therein and will replace the Community Framework for State aid for Research and Development.

This framework will be applicable until 31 December 2013. After consulting the Member States, the Commission may amend it before that date on the basis of important competition policy or research policy considerations or in order to take account of other Community policies or international commitments. The Commission intends to carry out a review of the framework 3 years after its entry into force.

The Commission will apply this framework to all aid projects notified in respect of which it is called upon to take a decision after the framework is published in the *Official Journal*, even where the projects were notified prior to its publication. This includes individual aid granted under approved aid schemes and notified to the Commission following an obligation to notify such aid individually.

In line with the Commission notice on the determination of the applicable rules for the assessment of unlawful State aid ⁽⁵⁰⁾, the Commission will apply in the case of non-notified aid,

- this framework if the aid was granted after its entry into force,
- the framework in force when the aid was granted in all other cases.

⁽⁴⁹⁾ In that process, Member States may want to support the Commission by providing their own *ex post* assessment of schemes and individual measures.

⁽⁵⁰⁾ OJ C 119, 22.5.2002, p. 22.

ANNEX

Form for the provision of summary information for aid under the extended reporting obligation (section 10.1)

- (1) Aid in favour of (name of the undertaking/undertakings receiving the aid, SME or not):
-
- (2) Aid scheme reference (Commission reference of the existing scheme or schemes under which the aid is awarded): .
- (3) Public entity/entities providing the assistance (name and co-ordinates of the granting authority or authorities):
-
- (4) Member State where the aided project or measure is carried out:
- (5) Type of project or measure:
- (6) Short description of project or measure:
-
-
- (7) Where applicable, eligible costs (in EUR):
- (8) Discounted aid amount (gross) in EUR:
- (9) Aid intensity (% in gross grant equivalent):
- (10) Conditions attached to the payment of the proposed aid (if any):
-
- (11) Planned start and end date of the project or measure:
- (12) Date of award of the aid:
