

# Enhancing the economic assessment of EU state aid cases

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(\*) Disclaimer: the views expressed in this presentation are those of the author and are not necessarily those of the European Commission.

# Overview



- n Introduction
- n Illustration : Neoval
- n Some insights after one year of implementation
- n Conclusion

# Introduction



- n State aid rules important aspect of EC competition rules
  - n National state aid measures, even when pursuing valuable policy goals, may distort competition and trade in the EU
- n Underlying aim in recent reforms of state aid rules: “Less and better targeted aid” (political mandate EU Council)
  - n Commission: State Aid Action Plan (2005)

# State Aid Action Plan



- n “Less and better targeted aid”: enhance effectiveness of state aid by striking a better balance between
  - benefits of state aid
    - efficiency rationales: correcting market failures
    - equity rationales: redistribution/cohesion
  - costs of state aid (distortions)
- n Formulated as a “balancing test”
- n Locus: Art. 87(3) EC
- n Architecture of state aid rules: when to do a more in-depth analysis (and when not)

# Balancing test: three steps



1. Is the aid measure aimed at a well-defined objective of common interest? (e.g. economic growth, employment, cohesion, environment)?
2. Is the aid well designed to deliver the objective of common interest i.e. does the proposed aid address a market failure or other objective?
  - Is State aid an appropriate policy instrument?
  - Is there an incentive effect, i.e. does the aid change the behaviour of firms?
  - Is the aid measure proportional to the problem tackled, 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?

# Implementation



## n In Guidelines/BER

- n Risk capital (2006)
- n R&D&I (2006)
- n Regional aid (2006)
- n BER (2008), Environmental aid (2008), R&R (2009), ...

## n In cases

- n So far mainly in the field of R&D&I (Neoal, Soitec, Nanosmart, Homes, TVMSL, Bernin, Osiris,...)
- n Cases under Art. 87(3), e.g. broadband, digital TV

# Illustration: NeoVal (R&D&I)



- n First case to be analysed under the new R&D&I Framework
- n NeoVal: R&D project by Siemens Transport Systems (STS) and Lohr
- n A metro system with innovative features
  - n e.g.: on-board energy storage, modular train composition; single-coach configuration
- n Eligible costs: EUR 60 mln (IR: 22 mln; ED: 38 mln)
- n Aid: EUR 23 mln for STS (10 mln in grants; 13 mln in repayable advances)
- n Detailed assessment for STS

# Possible market failures



n R&D&I framework => specific market failures:

- n positive externalities/knowledge spill-overs
- n imperfect and asymmetric information
- n coordination and network failures

# Externalities



- n Claim: NeoVal creates positive externalities (energy savings; less CO2 emission; less noise/vibration; more fluid traffic; less repair & maintenance)
- n Can the benefits / externalities be appropriated by STS? (if so there is no market failure)
  - Higher pricing for NeoVal possible due to environmental benefits? Due to lower running costs? Ability for STS to win more contracts?
  - Decision making customers (municipalities/airports) appeared relevant
- n Could competitors in the EU develop the same innovations without aid?
  - Competitors affected by the same market failures
  - Competitors appear not to have the same technology readily available

# Coordination/information



n Claim: coordination problem between buyer – supplier / asymmetric information problem

- Industry practice: new development partly triggered or sponsored by first customers
- Customers unwilling to buy into risky project ex ante
- Difficulty for suppliers to finance investment in case of an empty order book (appeared central -> analysed further under incentive effect)

n Can't a supplier finance the investment upfront? (Asymmetric information issues?)

n Are customers really reluctant to be launch customer? Could a rebate be given to first buyer in exchange for higher risks?

# Incentive effect



- n Incentive effect: does the aid change the behaviour of the firm?
  - n Does the aid result in an increase in project size, scope, speed or amount spent?
- n Counterfactual: what would the company do without aid?
  - According to French authorities, without the aid STS would have done a reduced project (APM03)
  - Information provided in notification suggests prima facie increase in project size (project costs, number of researchers), scope (ambition, risk), speed and total amount spent on R&D&I

# Counterfactual



## n Validation

- NPV - Net Present Value of NeoVal (with and without aid) with NPV of reduced project
- Probability of success ? Fall back option in case of failure ?
- "critical probabilities of success" (rates of success above which NeoVal would be attractive even without aid)
- Risk level of NeoVal appeared of an order of magnitude such that aid indeed appeared necessary (incentive effect)
- Cost of capital

# Neoval – profitability



n Expected profitability of NeoVal\* and the base project:

(\*) NeoVal figures: in case of technological success at the R&D stage  
(sales scenario: reasonable scenario of success)

	Base project	NeoVal with aid	NeoVal without aid
Present value of the R&D investment	$I_1$	$I_2 - \text{aid}$	$I_2$
Present value of the net revenues	$R_1$	$R_2$	$R_2$
NPV of the project	$NPV_1$ [EUR 0-50 mln]	$NPV_2 + \text{aid}$ [EUR 50-100 mln]	$NPV_2$ [EUR 50-100 mln]
IRR	[10-15%]	[15-20%]	[15-20%]

(Note:  $I_2 > I_1$ ,  $R_2 > R_1$ ,  $NPV_2 > NPV_1$ )

# Financing constraints



- n French authorities/STS pointed out that
  - n STS, in principle, has to auto-finance R&D investment
  - n Strict profit margin targets imposed on STS by Siemens management • STS could not finance the NeoVal project on its own
  - n Background: targets for all Siemens divisions (cf. Annual Report 2006)
- n Should internal constraints in the allocation of capital be considered ? Scope for abuse
- n French authorities/STS provided internal documents (business plans, board minutes) showing that STS intended to do APM03, not the complete NeoVal

# Impact on competition/trade



- n Concerns about
  - Distorting dynamic incentives
  - Reactions of competitors
  - Shifts in trade flows and location of economic activity across member states
- n Relevant market: metro systems (automatic, turn-key), world market
- n Effect on dynamic incentives rivals should be limited
  - Growing market
  - Product differentiation
  - Announcements of new development
- n => Overall positive balance

# Issues – Market failures



- n Long shopping lists
- n Careful consideration of underlying principles (e.g. pecuniary external effects)
- n Validation is often very crude
- n Environmental concerns
- n Government failures
- n => Focus the analysis  
Develop validation methods

# Issues – Incentive effects



- n Financing constraints
  - Internal ?
  - External ? Bank loans and equity
- n Cost of capital
- n Confidence in the numbers presented by the parties
- n Marginal effect of public support on overall financial prospects
- n => Access to documents
  - Implement a consistent framework

# Issues – Competition and balancing



- n Unresolved issues of principles
    - What is distortion of competition
    - Relevant market (by comparison with antitrust)
  - n Balancing without scale
  - n => Focus the analysis of distortions
    - n Are competitors affected
    - n Are consumers likely to be hurt
- Provide a structure for balancing
- n Distortion of competition as necessary condition

# Concluding remarks



- n Important progress
- n Transparent trade-offs
- n Reorganisation
- n Procedural reform