Anticipating cartel and merger control

seo economisch onderzoek

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NMa

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'The knowledge that it is good'

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Foreword

'In 2008 the activities of the NMa have delivered benefits for consumer welfare worth, according to conservative estimates, approximately €700 million. This is some €85 million more than in 2007. These benefits consist of the short-term effects, which are capable of being directly calculated, of formal decisions on prices and quantities. This does not include the preventive effect of competition policy and control and the effect of alternative enforcement instruments because they are very hard to quantify.'
Dutch House of Representatives, 2008–2009 session, 31 700 XIII, no. 55

Under the Dutch Competition Act the remit of the NMa (the Dutch Competition Authority) is to take action against companies that form cartels or abuse dominant positions and to assess mergers and acquisitions. Does enforcement action by the NMa produce an anticipatory response in the sense that companies themselves – without direct intervention of the regulator – modify their conduct and merger plans in such a way as to remain within the bounds of the Competition Act? And, if so, how large is the anticipatory effect and what factors are of importance in this connection? These questions are answered in this report.

The authors of this report would like to express their sincere thanks to the members of the monitoring committee – Hans Schönau, Ron Kemp and Annemieke Karel (all of the NMa) and Jo Seldeslachts (of the University of Amsterdam) – for their valuable observations and suggestions. We should also like to thank Freek Bruggert (NMa) for his useful comments.

The study of the anticipatory effect of cartel and merger control is based on extensive field research. This would not have been possible without the help of the following parties: the Chamber of Commerce, Marianne van de Water-Hogervorst (Quorum Preliminary Sales) and Bureau Veldkamp. Finally, we take this opportunity to thank the interlocutors with whom we held discussions when drafting the questionnaires and all companies, lawyers, accountants and other advisers who were prepared to complete the questionnaire.

The members of the monitoring committee and the interviewed companies and advisers are not responsible for the content of this study. This responsibility rests solely with the authors.

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Barbara Baarsma
Director, SEO Economic Research

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Conclusions

Enforcement action by the NMa (the Dutch Competition Authority) has a preventive effect. Merger plans that may fail to gain clearance from the NMa are not notified and the possibility of detection helps to reduce the number of cartels.

The NMa enforces the Competition Act (*Mededingingswet*). The aim of cartel and merger control is to influence business practices in such a way that anti-competitive conduct and concentrations do not occur. The question is how does the enforcement action by the NMa influence business conduct. What is the anticipatory response to the enforcement action? To answer this question SEO Economic Research has carried out surveys among companies and their advisers.

Surveys among companies show that 5% of the <u>notified</u> mergers were modified before notification to forestall possible objections from the NMa. For every 100 notifications of mergers there are 13 proposed mergers that are abandoned due to merger control.

Of …	
100 <u>notified</u> mergers	5 have been modified before notification (company survey)
For every …	**there are …**
100 <u>notified</u> mergers	13 other planned mergers that are abandoned due to merger control (company survey)

Companies also take account of the Competition Act when drafting contracts, conducting negotiations and holding meetings. The survey among lawyers and other advisers shows that for every sanction decision taken by the NMa there are almost five cases in which, unbeknown to the NMa, a prohibited act has been terminated or modified in response to advice on competition law.

For every …	**there are …**
<u>discovered</u> infringement of section 6 of the Competition Act	5 unknown cases in which activities have been modified or terminated (survey of advisers)

Mergers

The NMa mainly takes action in respect of notified mergers and is often unaware of merger plans that do *not* result in notification. Does NMa enforcement action also result in merger plans being modified or terminated before notification? For what reason might a merger plan not be pursued through to notification? Are plans not notified to the NMa because they are expected to be blocked or are they not attractive or not practicable for other reasons?

Anticipatory effect in theory

A merger (concentration) may follow different paths (see the diagram in Figure 1.1). The starting point is always the preparation of a plan for a merger. This plan may or may not be anti-competitive. In many cases this is not entirely clear to the company concerned. This uncertainty is shown in the diagram by the dotted oval: the company does not know whether the plan comes in the first or second box. After the plan has been examined in more detail and discussed with the intended partners and advisers, it becomes clear whether it is attractive. Once a concentration has been established it provides a benefit (U), excluding the costs and uncertainties of competition enforcement. If there were no merger control, the plans where the benefit is U > 0 would result in a concentration. An impractical or unattractive plan has a negative net benefit (U ≤ 0). The arrow in the figure indicates that the plan may be modified: after phases 2 and 3 it may be recast.

Figure 1.1   From drafting to notifying a plan: anticipating merger control
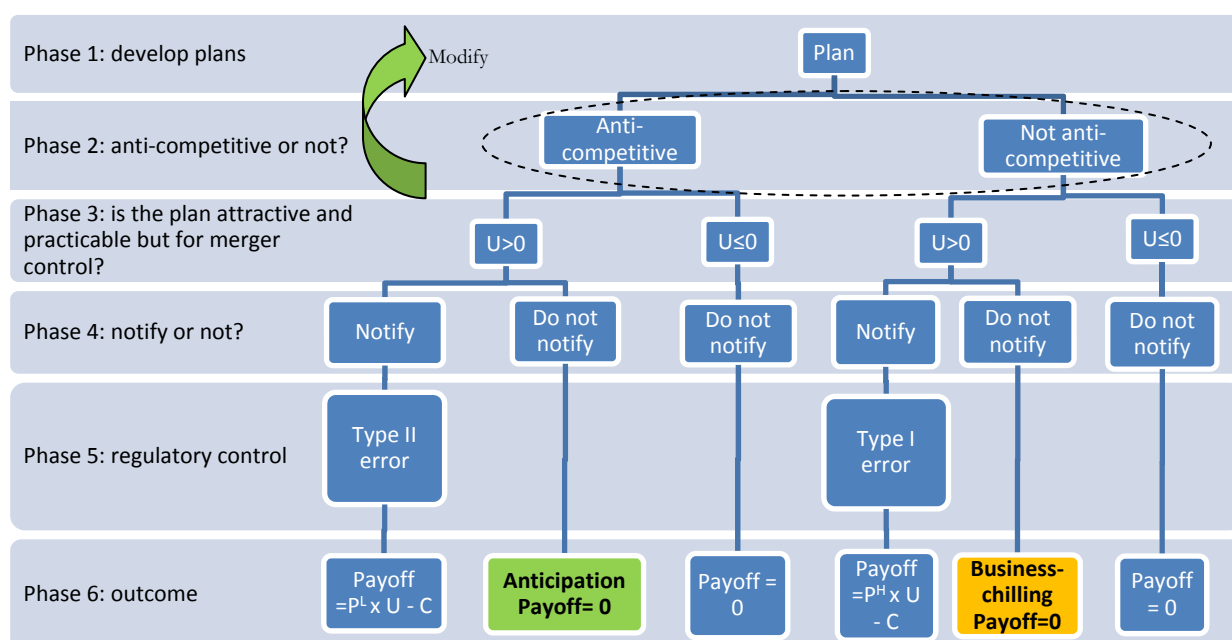
Source: SEO Economic Research

Phase 4 in the diagram represents the decision to proceed with the merger through to notification. If the merger is notified, the NMa decides whether a licence is required.[1] The likelihood of obtaining clearance is P and the total costs of the notification phase are C. The expected payoff is therefore P x U – C. A company will notify its plan only if P x U – C > 0. To estimate P it is important to gauge how the NMa will assess the merger. The company can obtain advice in order to estimate and increase P. The decision of the competition authority will depend on the assessment about Phase 2 of the Figure: the less the concentration restricts competition, the greater the

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[1]   See section 2 on page 3.

chance of getting clearance. The probability of obtaining clearance is P^L in the case of a plan that restricts competition and P^H in the case of a plan that does not restrict competition.

Figure 1.1. shows the anticipatory effect. The aim of competition enforcement is to ensure that only mergers that do not restrict competition materialise. How can this aim be achieved? First of all, the regulatory body can take the correct decision in Phase 5: only plans that do not restrict competition are given clearance. Second, the aim is achieved if in Phase 4 the company refrains from notifying a plan that would restrict competition. The abandonment of anti-competitive plans is the anticipatory effect of merger control.
A competition authority can make mistakes. In the case of merger control a type II error occurs when a competition authority clears a merger without realising that the proposal is anti-competitive. A type I error occurs where it prohibits a merger that is not anti-competitive.

'Business chilling' occurs when plans for mergers that do *not* restrict competition are abandoned or modified in anticipation of enforcement action. The fifth outcome in Phase 6 constitutes business chilling. In the pre-notification phase the plan can be modified in order to maximise the likelihood of clearance. However, this may make the plan less attractive. In other words, there may be interaction between P and U: P may be increased, but this may sometimes be at the expense of U. Business chilling therefore also occurs where plans that are not anti-competitive are modified to increase the likelihood of obtaining clearance.

Results

How do the merger plans formulated in the Netherlands in the last five years fit in the above diagram? The results of the survey are shown in Figure 1.2. As it is not apparent from the survey what plans are anti-competitive, this distinction is omitted.

The survey of companies shows that the participating companies considered a total of 354 mergers. 131 of them resulted in a notification (37%). 223 proposals did not result in a notification and 17 of them were abandoned on competition grounds. This corresponds to 5% of the proposals (see Figure 1.2). Of the 131 notified mergers, 7 were modified before notification in order to forestall potential objections on the part of the NMa. The 354 merger proposals included instances of business chilling (deterrence of mergers that are not anti-competitive). Further analyses show that, according to the respondents, business chilling is fairly uncommon.[2]

As noted previously in this conclusion, the survey shows that 5% of <u>notified</u> mergers are modified before notification in order to forestall any objections on competition grounds. For every hundred merger notifications there are 13 proposals that are abandoned on account of merger control. These figures are based on the number of notified mergers, and those in Figure 1.2 are based on the total number of mergers considered (companies) and the number of merger plans submitted for advice (advisers).

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[2]   See section 4.2.
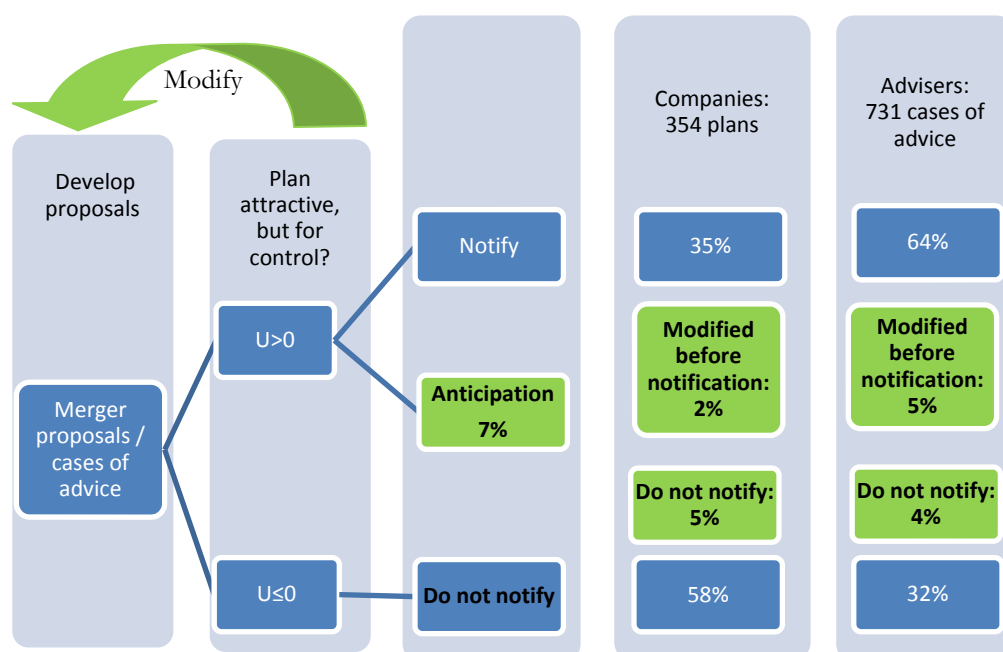
Source: SEO Economic Research
          The 'modified before notification' category is included in the notified plans.

The survey among advisers gives the following picture. The participating advisers together pro-
vided advice on 731 proposals. 64% of the proposals on which they advised resulted in a notifica-
tion. 4% of the merger proposals were abandoned because of the expected outcome of the as-
sessment by the NMa (see also Figure 1.2). Of the 469 merger notifications, 39 were modified in
order to maximise the likelihood of gaining clearance. Here too, any cases of business chilling are
not specified separately. Advisers indicate that business chilling does occur, but not frequently.[3]

A merger plan is first formulated by a company, and the advice of a lawyer or other adviser is not
sought until the company has given the matter further thought. It follows that the cases on which
advice is given are, on average, the most serious plans of the companies. This is borne out by the
results in Figure 1.2. They show that the percentage of the company plans that ultimately prove
to be unattractive or impracticable is higher for companies than for advisers. Similarly, the per-
centage of company plans resulting in notification is smaller than that of the plans on which
advice is given.

Cartels

Anticipatory effect in theory: deterrence

Figure 1.3 shows the decision tree for anticipating cartel control. The starting point is an existing
or intended action, for example a cartel agreement. However, it is not always clear whether a
particular activity restricts competition and therefore infringes the Competition Act. The dotted
oval indicates that a company sometimes does not know whether behaviour comes in the first or

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[3]   See section 5.1.

second box. Phase 3 of the diagram shows the action taken by the company: does it start or continue its activity or not?

Phase 4 represents the action of the competition authority: if the company engages in the behaviour, there are two possibilities: the authority either discovers and punishes the behaviour (*detection*) or does not do so (*non-detection*). The competition authority can make mistakes in this phase: a type II error occurs where illegal behaviour goes unnoticed and a type I error occurs when innocent behaviour is penalised.

Anticipation is said to occur where conduct that would restrict competition does not materialise due to the risk of detection and prosecution. This phenomenon is commonly termed 'deterrence' and is represented by the third outcome in phase 5 in Figure 1.3.

Business chilling can arise in two ways. First, the probability of a type I error (unjustified detection and prosecution) may imply that a company abandons a strategy that is in fact innocent (the sixth outcome in Phase 4). Second, a company may be uncertain about how an activity will be assessed under competition law: it does not know whether or not the activity is anti-competitive (phase 2). If a company considers engaging in conduct that does not restrict competition, the possibility cannot be excluded that the *first* outcome will occur (justified detection and prosecution). In other words, two forms of uncertainty can produce business chilling: the chance of a type I error by the competition authority as a result of which the company abandons its plans and the uncertain assessment by the company.[4]

In Phase 5, detection (whether justified or unjustified) is followed by loss for the company, for example a fine and reputational harm.

Figure 1.3   Deterrence of cartel control
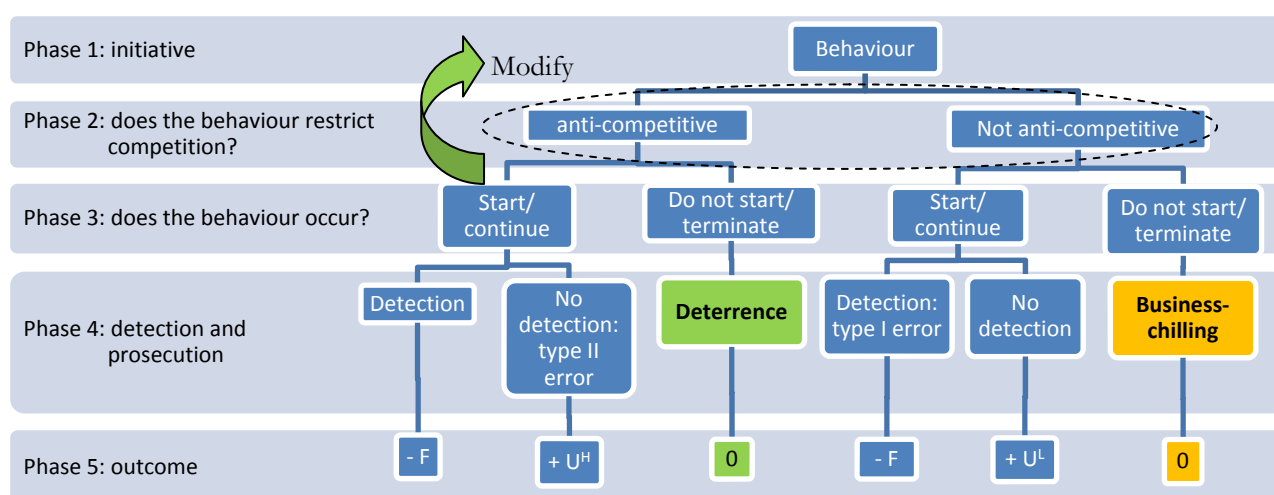
Source: SEO Economic Research

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[4]   This second form of uncertainty is disregarded in the rest of this report.

Results

Figure 1.3 shows that the payoff of engaging in or abstaining from a particular form of conduct depends in theory on possible detection and enforcement by the competition authority, whether justified or unjustified. Do companies in practice take the possibility of detection into account?

The survey produces the following results. On average, a company takes account of objections based on section 6 of the Competition Act on 14 occasions every five years. On average companies have modified or terminated an arrangement or negotiations about once in the last five years in order to forestall intervention by the NMa. Companies make an internal assessment of whether conduct is compatible with the Competition Act about six times every five years. The majority of the companies (70%) consider that the cartel prohibition is clear.

In the survey of advisers, a distinction is made between conduct that is clearly prohibited and conduct about which the client is uncertain whether it is prohibited. The results of the survey of advisers are shown in Figure 1.4 and Figure 1.5.

Figure 1.4   Deterrence effect where conduct is clearly anti-competitive (survey of advisers)
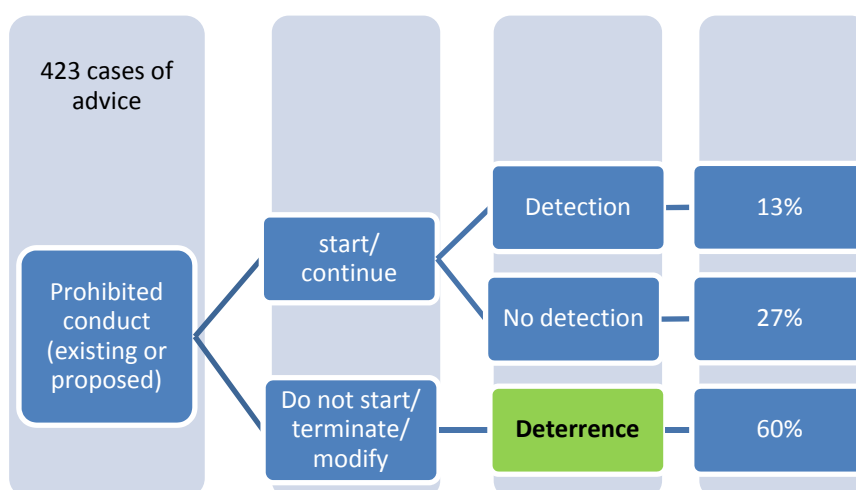
Source: SEO Economic Research

The advisers had advised in total on 423 cases of clearly prohibited conduct. 13% of these cases became known to the NMa; in these cases the NMa took a sanction decision. The anticipatory effect applied in 60% of cases: in other words, the prohibited act was either not started or was discontinued or modified on competition grounds as a result of the advice. On the basis of these data it can also be calculated that for every sanction decision of the NMa there are almost five cases in which a prohibited acts is terminated or modified on competition grounds, unbeknown to the NMa, as a result of advice received.

The results of cases in which the legality is uncertain to the company are shown in Figure 1.5.

Figure 1.5   Deterrence effect when there is uncertainty about whether conduct is prohibited (survey of advisers)[5]
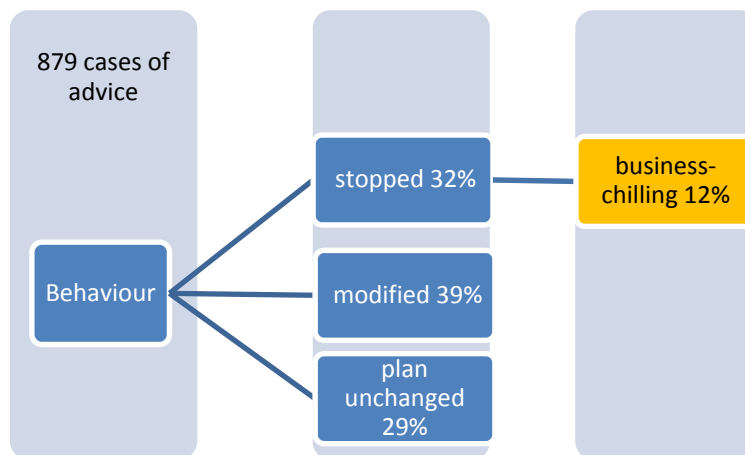
Source: SEO Economic Research, based on Table 5.8.

The respondents advised on 879 cases in which it was unclear to the company whether or not the conduct was anti-competitive. As a result of the advice 32% of plans were abandoned and 39% modified. In the remaining 29% of cases the plan was neither modified nor abandoned as a result of the advice.

According to the respondents, 12% of the cases on which they advised involved business chilling, in other words a company was deterred by the prospect of enforcement action from pursuing a plan that was not expected to infringe the cartel prohibition. An incorrect assessment (unjustified detection and prosecution) was expected in 19% of all cases of advice.

Factors influencing anticipatory effect

What factors influence the extent of the anticipatory effect? Figure 1.1 (mergers) and Figure 1.3 (cartels) show clearly when there is an anticipatory effect: i.e. when a company abandons an anti-competitive merger proposal on account of the low probability of obtaining clearance or when a form of anti-competitive conduct is not started or continued because of the possibility of detection.

What determines the choice made by the company? This question is answered on the basis of the surveys. Hypothetical situations were presented to the respondents, who were asked to indicate the probability of a particular course of action. Questions of this kind are called conjoint analysis.

Mergers

For merger control Figure 1.6 below shows the factors from Figure 1.1 and the variables measured in the conjoint analysis. How this is expected to affect the anticipatory response is shown in parenthesis. Combinations of these variables were presented as hypothetical situations to the

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[5]   Besides business chilling, the NMa is expected to make a wrong assessment in 19% of the cases on which advice is given. This group cannot be linked to an act from the second column.

respondents. In each case they were asked to indicate the probability that the company would proceed with the merger up to notification on a scale of one (lowest probability) to 10 (highest probability).

The answers have been analysed econometrically. For companies, all these variables are shown to have a significant effect on the anticipatory effect. As regards the variable market share, the higher the market share of the concentration the more likely the plan is to be continued. A possible explanation for this is that achieving a high market share contributes to the attractiveness of a merger plan. The market share could therefore influence both the likelihood of clearance P (negative effect) and the attractiveness of the merger U (positive effect). These two effects are opposites, and the results show that the latter outweighs the former.

Regression analysis also shows the magnitude of the different variables. The unavailability of remedies for a specific merger has the greatest effect on the anticipatory response and the effect of an increase in costs from €15,000 to €30,000 is almost as strong. In third place comes the extension of the lead time from 6 to 12 weeks.

Figure 1.6   Factors influencing anticipation on merger control and expected effect

U: attractiveness of merger	• constant: 10% profit increase
P: probability of clearance after notification phase	• market share of combined company: less than 40% or 40% to 70% (+) • possibility of submitting remedies during notification phase: yes, no (-)
C: costs of notification	• the costs of notification: nil, € 5,000, € 15,000 or € 30,000 (+) • lead time: 2, 6 or 12 weeks (+)
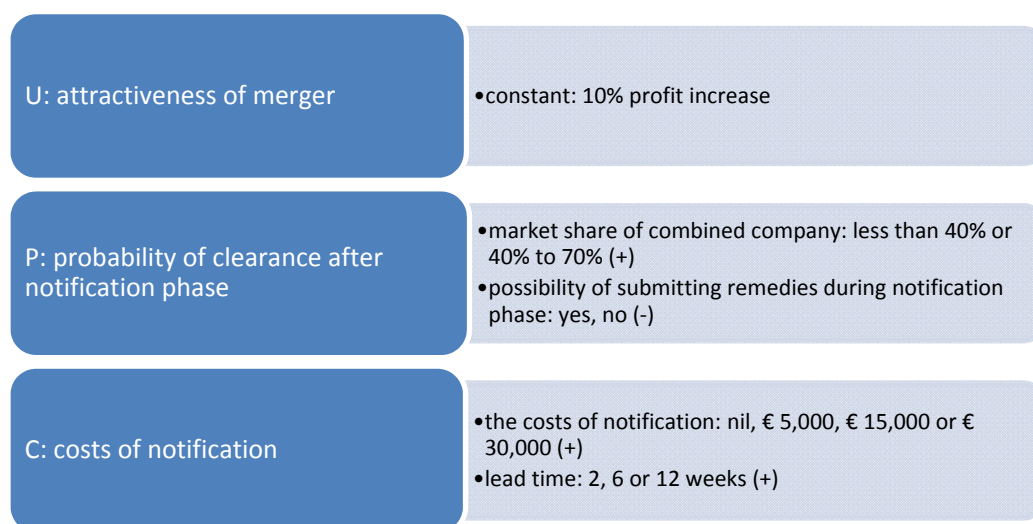
Source: SEO Economic Research

For advisers, however, a higher market share reduces the likelihood that the merger plan will be continued. They regard market share as indicative of the probability of obtaining clearance. This variable has by far the greatest effect of all the factors on their advice. For advisers increasing the costs or reducing the lead time has no effect on the anticipatory response.

Cartels

Figure 1.7 shows the factors examined in respect of cartel control and how they relate to the diagram in Figure 1.3. The respondents were asked to consider the hypothetical situation that they had discovered that their company was participating in a cartel. The variables in the figure were also included in the questions. In each case the respondents were asked to indicate the probability that instructions would be given for termination of the cartel.

The econometric analysis shows a large anticipatory effect: many respondents indicated a high inclination to terminate the hypothetical cartel or, in case of the adviser survey, advise that it be terminated. Many of the responses indicated that their decision would not be affected by variations in the factors studied. The answers given by companies showed that only variations in the personal fine and the company fine would affect the anticipatory response. The other factors examined in Figure 1.7 have no effect.

The answers given by competition lawyers and other advisers showed that only an increase in the company fine would affect their advice. Other elements of loss, such as the extent of adverse publicity and personal fine, were not shown to have any effect on the advice. Nor was any effect demonstrated for the listing of the sector in the NMa Agenda or for the leniency programme.

Figure 1.7   Factors influencing anticipation on cartel control and expected effect

U: attractiveness of cartel	• constant, 20% extra annual turnover (-)
P: probability of detection	• industry listed in NMa-Agenda : yes, no (+) • leniency: possible/not possible, first or later applicant (?)
F: loss after detection	• personal fine: nil, € 450,000 or € 650,000 (+) • company fine: 2%, 10%, 20% or 30% of annual turnover (+) • extent of adverse publicity: NMa website, trade journals, newspapers, TV news (+) • leniency: possible/not possible, first or later applicant

Source: SEO Economic Research

1 Introduction

The NMa (Dutch Competition Authority) enforces the Dutch Competition Act (*Mededingingswet*). This involves taking action against businesses that form cartels or abuse a dominant position and assessing mergers and acquisitions. The aim of competition enforcement is to influence the behaviour of businesses in such a way as to minimise illegal business practices and deter mergers and acquisitions that restrict competition. This aim is partially achieved where businesses themselves modify their behaviour without direct intervention by the competition authority. The terms used to describe this in the academic literature are deterrence and anticipation.

The NMa wishes to test empirically the hypothesis that Dutch businesses modify their behaviour in anticipation of action by the NMa when considering whether to establish concentrations and/or engage in activities or enter into agreements that may potentially restrict competition. If this hypothesis is correct,[6] the NMa wishes to ascertain the extent of this anticipatory response and what factors are of particular importance in this connection.

SEO Economic Research has carried out a study to answer these questions. This report sets out the findings of the study.

1.1 Research questions

The central aim of the study is to quantify the extent to which Dutch businesses anticipate the effect of the Competition Act and NMa enforcement action either by abandoning proposed concentrations or potentially anti-competitive agreements and business practices or by modifying them in a way that would not have occurred without NMa competition enforcement. The study answers the following questions:

1. Does enforcement action by the NMa in the case of cartels and mergers produce an anticipatory effect? Does this effect exist in the Netherlands?
2. What is the scale of the anticipatory effect?
3. Does the extent of the anticipatory effect vary according to the sector and the size of the companies concerned?
4. What factors determine the anticipatory response on cartel and merger control? How important are these factors? And how do these factors rank in relation to one another?
5. What individual decisions have (or have had) a major impact on compliance by companies?
6. To what extent do companies anticipate a negative ruling by the NMa and to what extent does uncertainty or incorrect anticipation result in business chilling?
7. What steps do businesses take to check that they comply with the Competition Act?

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[6] Most of the literature shows that an anticipatory response occurs, but that the effect is not complete. After all, cartels are still fined and anti-competitive mergers are still notified. However, some researchers have found no evidence of an anticipatory effect. For example, Crandall and Winston state that: 'In any event, we have not found any evidence that antitrust enforcement has deterred firms from engaging in actions that would have seriously harmed consumers.' (Crandall & Winston, 2003, p. 20).

1.2   Research methods

The anticipatory effect has been examined using the following research methods:
- literature study
- a number of in-depth interviews with advisers and business executives;
- structured online surveys of 512 companies (with 100 or more employees);
- structured online surveys of 97 advisers on competition law (mainly lawyers).

The anticipatory effect has been studied in relation to both merger control and cartel control. Both online surveys contain a combination of closed questions, open questions, propositions and a conjoint assignment.

1.3   Structure of the report

Chapter 2 discusses the theoretical and empirical literature on the anticipatory effect. Chapter 3 describes the research methods employed. The results of the company survey are explained in chapter 4 and those of the survey of advisers in chapter 5. Finally, chapter 6 describes the factors involved in the anticipatory effect. The conjoint measuring method is explained in that chapter.

The report contains the following appendices:
- Appendix A describes the sample used
- Appendix B contains the questionnaire.

2   The anticipatory effect

In the literature the anticipatory effect is discussed mainly in relation to prohibited business practices. However, the anticipatory response to merger control is equally relevant. In the case of merger control the effect is measured not by the extent to which illegal activity is deterred but by the extent to which companies modify or abandon their plans. Where a planned merger that would restrict competition is abandoned before notification the authority need not investigate the plan. The anticipatory response to mergers and cartels is explained below.

Mergers

The NMa is generally only aware of mergers that are notified and is generally unaware of those that are *not* notified. Does enforcement action by the NMa result in the modification or termination of merger plans before notification? For what reasons are planned mergers abandoned prior to notification? Do companies refrain from notification because they expect the plan to be blocked or is it simply that the plan is unattractive or impractical for other reasons?

A merger (concentration) may follow different paths (see the diagram in Figure 2.1). The starting point is always the preparation of the plan for a concentration. This plan may or may not be anti-competitive. In many cases this is not entirely clear to the company concerned. This uncertainty is shown in the diagram by the dotted oval: the company does not know whether the plan comes in the first or the second box. After the plan has been examined in more detail and discussed with the intended partners and advisers, it becomes clear whether it is attractive. Once a concentration has been established it provides a benefit (U), excluding the costs and uncertainties of regulatory clearance. If there were no merger control, the plans where the benefit is $U > 0$ would result in a concentration. An impractical or unattractive plan has a negative net benefit ($U \leq 0$). The arrow in the figure indicates that the plan may be modified: after Phases 2 and 3 it may be recast.

Phase 4 in the diagram represents the decision whether or not to proceed with the plan and to notify the merger. If the merger is notified, the NMa decides whether a licence is required. The likelihood of obtaining clearance is P and, conversely, the likelihood that a licence will be required is equal to 1-P.[7] The total costs of the notification phase are C, the amount of these costs being dependent in part on the costs charged by the NMa and the lead time.

The payoff in case of clearance is $U - C$ and the payoff without clearance is $0 - C$. The expected payoff is therefore $P \times U - C$. A company will notify its plan only if $P \times U - C > 0$. To estimate P it is important to gauge how the NMa will assess the merger. The company can obtain advice in order to estimate (and increase) P. The decision of the competition authority will depend on the assessment of Phase 2 in the figure: the less the concentration restricts competition, the greater

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[7]   If a licence is required, the second phase becomes relevant in practice. For the purposes of this study, however, the only matter of importance is whether the merger is approved or rejected. The fact that this can happen in two phases is not important. For this study the second phase is not relevant; we assume that if a licence is required the net benefit of the merger will decrease from U to 0.

the chance of obtaining clearance. This is shown in the figure: the figure indicates that the probability of obtaining clearance for a plan that does not restrict competition is equal to P^H, whereas the probability is P^L for a plan that does restrict competition. In the case of an ideal competition authority $P^H>P^L$ will hold, specifically $P^H= 1 > P^L =0$. However, a competition authority can make mistakes. In the case of merger control a type II error occurs when a competition authority clears a merger without realising that the proposal is anti-competitive. A type I error occurs where it prohibits a merger that is not anti-competitive.

The diagram below shows the anticipatory effect. The aim of competition enforcement is to ensure that only concentrations that do not restrict competition materialize. How can this aim be achieved? First of all, the regulator can take the correct decision in Phase 5: only plans that do not restrict competition are given clearance. Second, the aim is achieved if in Phase 4 the company either refrains from notifying a plan that would restrict competition (the second outcome in Phase 6) or modifies the plan. The arrow in the diagram indicates that the plan can be modified in the pre-notification phase to remove competition objections. The abandonment or modification of plans before notification is the anticipatory effect of merger control.

Figure 2.1   From drafting to notifying a plan: anticipating merger control
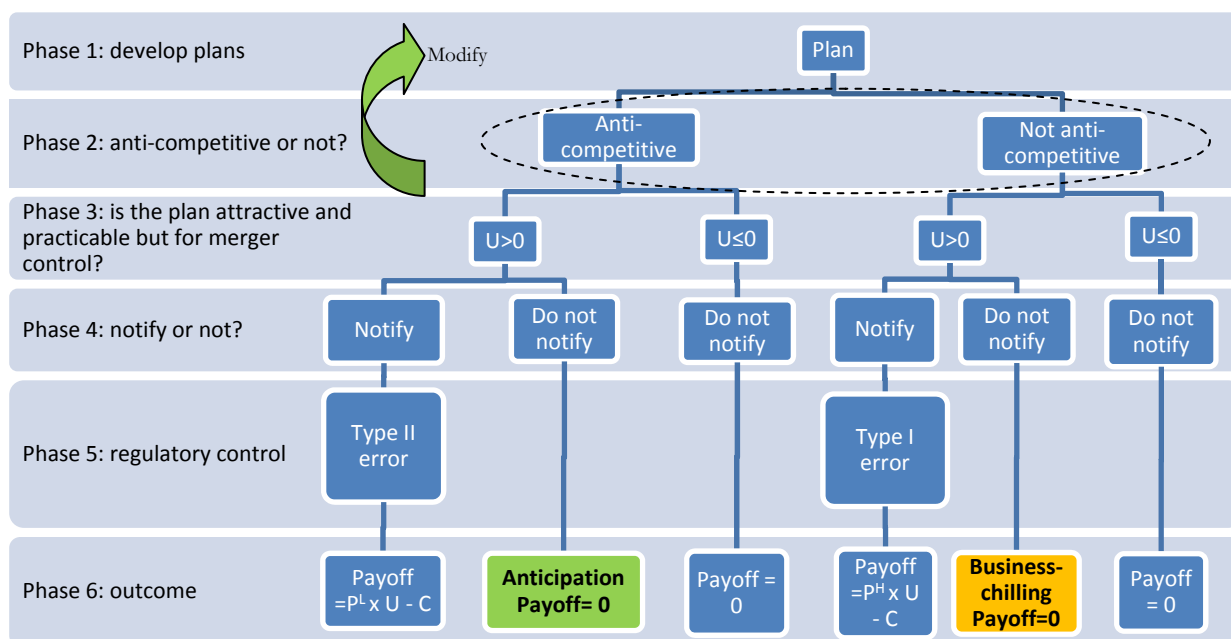
Source : SEO Economic Research

'Business chilling' (or 'over-deterrence' as it is sometimes referred to) occurs when plans for mergers that do not restrict competition are abandoned or modified in anticipation of merger control. The fifth outcome in Phase 6 constitutes business chilling, which manifests itself in the form of abandonment of the plan. The modification of a plan that is not anti-competitive also qualifies as business chilling. This is because the modification of a plan can sometimes be at the expense of the benefit the merger delivers to the businesses (U). This is not visible in the figure.

> The modification or abandonment of merger plans, prior to NMa involvement, in view of the probability of clearance is termed the 'anticipatory effect' of merger control. A related term is 'deterrence', which in the literature mainly applies to illegal conduct. Both terms are used interchangeably in this report, for both merger control and illegal conduct.

Not all plans that are terminated before notification are cases of business chilling. Some plans are abandoned for other reasons (the third and sixth outcomes in the diagram). It is therefore difficult to measure the anticipatory effect: first, plans that are not notified must be identified and, second, it is necessary to determine whether these plans would or would not have been abandoned (U≤0 and U>0 respectively in the diagram) if a merger control system had not existed .

Box 2.1   The payoff of a merger and the probability of clearance

> In Phase 3 a company decides whether or not to press ahead with a merger plan. If the plan does not yield a benefit (U), i.e. $U \leq 0$, the company will abandon the plan and there will be no notification.
>
> If $U > 0$ the company may choose whether or not to notify. Assuming that the company knows whether or not the plan is anti-competitive, the question of what the different strategies would yield is relevant.
>
> The payoff in Phase 6 for notifying a merger, whether or not it is anti-competitive, is equal to:
> $$P \times U - C \tag{1}$$
> where C is equal to the total costs of the notification phase.
>
> A company will notify the merger plan only if $P \times U - C > 0$.
>
> Assume that the probability of a type I error is equal to a1 and that of a type II error to a2. On the basis of this study no inferences can be made about the magnitude of these probabilities or the relationship between them. Probabilities a1 and a2 have been incorporated in P^H and P^L respectively. For an ideal competition authority we will have:
> $$P^H = 1 > P^L = 0. \tag{2}$$
>
> It follows that the payoff of notifying a <u>merger that is anti-competitive</u> is equal to:
> $$P^L \times U - C \tag{3}$$
>
> The payoff for a notifying a <u>merger that is not anti-competitive</u> is equal to:
> $$P^H \times U - C \tag{4}$$
>
> Also in the situation of a merger that is not anti-competitive, the company may decide against notification. In that case, the perceived low probability of clearance P and the level of costs C cause business chilling.
>
> It follows from (2) that in the case of an ideal competition authority, harmless mergers are only notified when:
> $$(U - C) > 0 \tag{5}$$

Source: SEO Economic Research.

Cartels

Figure 2.2 shows the decision tree for anticipating cartel control. The starting point is an existing or intended form of conduct, for example a cartel agreement. However, it is not always clear whether a particular activity restricts competition and therefore constitutes a cartel. The dotted oval indicates that a company sometimes does not know whether behaviour comes in the first or second box. Phase 3 of the diagram shows the action taken by the company: does it start or continue its activity or not?

Phase 4 represents the action of the competition authority: if the company engages in the behaviour, there are two possibilities: the authority either discovers and punishes the behaviour (*detection*) or does not do so (*non-detection*). The competition authority can make mistakes in this phase: a type II error occurs where illegal behaviour goes unnoticed and a type I error occurs where innocent behaviour is penalised.

Deterrence occurs where conduct that would restrict competition does not occur because of the risk of detection and prosecution. Business chilling can arise in two ways. First, the probability of a type I error (unjustified detection and prosecution) may mean that a company abandons a course of action that is in fact innocent (the sixth outcome in Phase 4). Second, a company may be uncertain about how an activity will be assessed under competition law: it does not know whether or not the activity is anti-competitive. If a company considers engaging in conduct that does not restrict competition, the possibility cannot be excluded that the *first* outcome will occur (justified detection and prosecution). In other words, two forms of uncertainty can result in business chilling: the chance of a type I error by the competition authority as a result of which the company abandons its plans and the chance of an error of judgement by the company.[8]

In Phase 5, detection (whether justified or unjustified) is followed by loss for the company, for example a fine and reputational harm.

Figure 2.2   Anticipating cartel enforcement
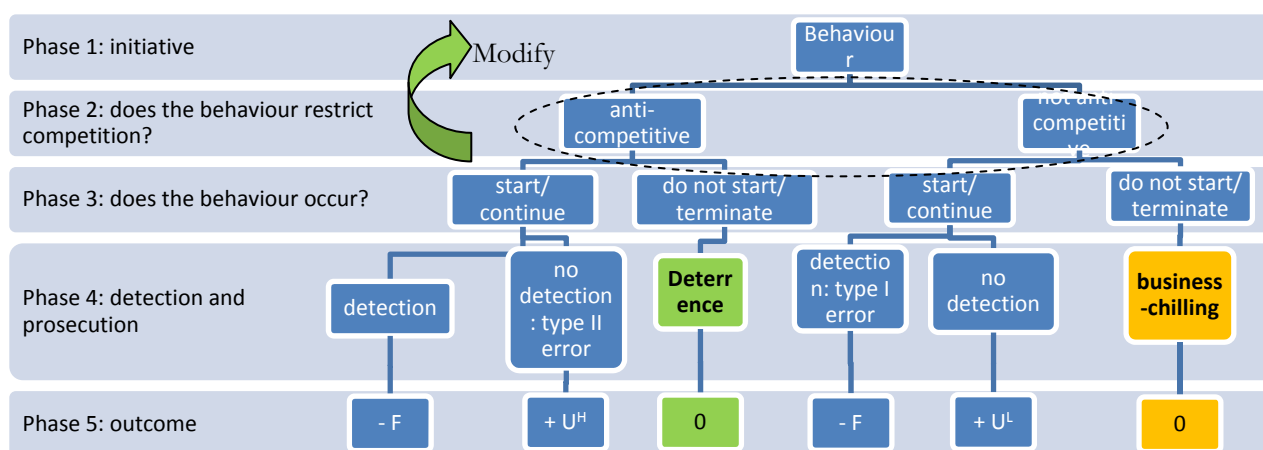
Source: SEO Economic Research

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[8]   This second form of uncertainty is disregarded in the rest of this report.

Box 2.2 focuses on Phase 5 and explains how the strategy of a rational company is affected by the risk of (unjustified) detection and loss after detection.

Box 2.2   The cartel payoff and the probability of detection

In Phase 3 the company can decide whether or not to engage in a particular form of conduct. On the assumption that the company knows whether or not its actions are anti-competitive, the question of what the different strategies would yield is relevant. Assume that the probability of a type I error is equal to a1 and that of a type II error to a2. It follows that the expected value of the strategy of starting or continuing anti-competitive behaviour is:

$(1-a2) \, (-F) + a2 \, (U)$.

If the competition authority does *not* make a type II error (probability 1-a2), the cartel is discovered and the company suffers loss F. If the authority does make this error (probability a2), the company continues its conduct and enjoys benefit U. The payoff of the 'do not start/terminate' strategy is 0. The illegal conduct is therefore displayed when:

$(1-a2) \, (-F) + a2 \, (U) = -F + a2 \, (F + U) > 0$ \hfill (1)

The expected payoff of the strategy of starting or continuing <u>conduct that does not restrict competition</u> can be inferred in the same manner:

$(a1) \, (-F) + (1-a1) \, (U)$

If the detection and prosecution by the competition authority is unjustified (probability a1) the company suffers loss F. If the authority does not make this error (probability 1-a1) the company enjoys benefit U. The conduct therefore occurs when:

$(a1) \, (-F) + (1-a1) \, (U) = U - a1 \, (F + U) > 0$. \hfill (2)

Source: SEO Economic Research

The difficulty of measuring the anticipatory effect is shown in the figure: conduct that is not displayed should be identified. To distinguish between anticipation and business chilling, it is necessary to know whether or not the conduct is anti-competitive.

2.1   Deterrence in theory

The aim of competition enforcement is to influence business practices in such a way that anti-competitive conduct no longer occurs.[9] A distinction has been made above between merger control and cartel control. In the case of merger control, the anticipatory effect is measured not by the extent to which illegal activity is deterred but by the extent to which companies modify or abandon plans. Where a planned concentration that would restrict competition does not result in a notification the authority need not investigate the plan. However, the literature focuses mainly on illegal anti-competitive conduct. In a recent article providing an overview of deterrence in competition law Buccirossi et al. (2009b) define deterrence as follows:

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[9]   'The aim of competition policy is to protect social welfare by deterring anticompetitive conducts,' cf. Buccirossi et. al. (2009b).

General deterrence consists of preventing agents from undertaking illegal behaviors by threatening violators with sufficiently heavy sanctions. (Buccirossi et. al., 2009b, p. 4).

A rational individual engages in illegal activity only if the expected benefits outweigh the expected costs. In a seminal article on the economics of crime, Gary Becker (1968) argued that the greater the total loss that a company and its employees will suffer if they are convicted and the greater the perceived chance of being caught, the greater is the deterrent effect of a law (or its enforcement). It is also clear that the perceived chance of errors in detection and prosecution disrupts the decision on compliance and anticipation. After Becker's paper on the economics of crime in general, a series of academic papers were published on the deterrent effects of competition policy.[10] In theory, as also described in these academic papers, the degree of anticipation is determined by three factors: (i) the loss suffered after detection and prosecution (F in Box 2.2), (ii) the perceived chance of justified detection and prosecution ((1-a2) in Box 2.2), and (iii) the perceived chance of unjustified detection and prosecution (a1 in Box 2.2).[11]

Loss after detection and prosecution

Various types of loss can be identified. First, fines and other sanctions can be imposed under the Competition Act. The policy on sanctions can affect both companies and individuals, depending on the jurisdiction. Sanctions against natural persons are possible not only in the Netherlands but also in some other countries such as the United Kingdom and United States. Second, there may be civil liability to companies prejudiced by the infringement. Third, the conviction may affect the confidence of business partners and shareholders in the convicted company or its executives, or harm the general reputation of the company or the industry in the mind of businesses or consumers. The total of all these types of loss is important in determining the anticipatory effect. The theory predicts that the anticipatory effect will increase in the amount of loss. In Box 2.2 the left-hand side of equation (1) decreases in F.

Perceived probability of justified detection and prosecution

The probability of detection and prosecution depends on a large number of institutional factors. First, the capacity and power of the competition authority plays a role. The greater the capacity (and quality) of the authority and the greater its powers, the greater is the chance of detection and prosecution. Second, there may be indications that a specific sector is monitored more closely by the NMa.[12] If the competition authority communicates its enforcement priorities and specifically mentions a number of sectors, companies in these sectors will probably adjust their expectations about detection. Expectations may also depend on the publicity given to infringements. The greater the probability of detection and prosecution, the greater is the anticipatory effect. In Box 2.2 the probability of justified detection is equal to (1-a2) and the left side of (1) decreases in (1-a2).

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[10] For a list, see footnotes 1-4 in the paper of Buccirossi et al. referred to above (2009b).

[11] Determining the optimum level of anticipation falls outside the scope of this study. The literature includes papers on this subject which take account of the costs of enforcement, detection and prosecution in determining this optimum level.

[12] The likelihood of cartels occurring in particular industries can be classified by the NMa by reference to structural characteristics. See Van der Noll and Visser (2009).

In order to increase the expected probability of discovering existing cartels, leniency programmes have been introduced in many countries. Under these programmes, a company that participates in a cartel may voluntarily notify the competition authority of the cartel in order to qualify for a reduction in the fine. The purpose of the programme is to provide an incentive to stop cartels. However, there is no agreement in the economic literature about the effect of leniency programmes on the stability and formation of cartels; their stability may be either decreased or increased by such programmes (see Buccirossi, 2008).

The perceived probability of unjustified detection and prosecution

If a company is wrongly punished a type I error has been made. The probability of such an error is a1. The greater the perceived probability of such an error, the less worthwhile it is to choose compliance rather than illegal conduct. This is clearly demonstrated in Figure 2.2 and Box 2.2. If it is assumed that illegal conduct yields U^H and compliance U^L, that the loss after detection is F and that the probability of a type II error is a2, the company will choose compliance as long as:

$$U^L - a1 \left(F + U^L \right) > a2 \left(F + U^H \right) - F$$

The left-hand side of this equation decreases in a1: the greater the probability of unjustified detection, the smaller is the anticipatory effect.

The extent to which type I errors are made depends, among other things, on the quality of the Competition Act and its enforcement. Buccirossi et al. (2009a) give a complete overview of the institutional determinants of type I and type II errors. Examples include the political independence of the regulatory body, the distinction between detection and prosecution, the quality of the rules, the policy on penalties and the skills of the staff.

Business chilling

Business chilling is one of the outcomes in Figure 2.1 and Figure 2.2. From a social perspective only conduct that causes harm to society as a whole should be deterred. Can the anticipatory response be excessive? This occurs where conduct that is *not* harmful to society is deterred by enforcement activities. The complexity of competition policy is a major cause of business chilling. First, it is sometimes difficult for a company to gauge whether or not an activity infringes competition rules (in Phase 2 of the diagrams). If a company wrongly assumes that the activity (concentration) is anti-competitive, it may decide to abandon the activity (i.e. not notify the competition authority of the concentration). Second, if the company does have clear information, it may still expect the competition authority to make an error. A company may assume that the competition authority will wrongly classify its activity as an infringement (not give clearance), for example because the regulatory body has acted strictly in previous cases. Here too, conduct that is not harmful is deterred.

2.2   Measuring the anticipatory effect

It follows from the definition of anticipation given above that in any event the following two building blocks are needed in order to measure empirically the anticipatory effect of enforcement:
- a criterion for gauging the extent to which illegal conduct/anti-competitive concentrations do not materialise;
- a criterion for gauging the extent to which a causal connection exists between the fact that the conduct does not materialise and the enforcement of the Competition Act.

Both building blocks provide considerable methodological and practical challenges. It is, for example, impossible to measure the intentions of economic agents if they do not result in actions. Nor is it possible in a country such as the Netherlands to measure the actions of companies or individuals in a hypothetical situation without competition policy. This problem is dealt with in various ways in the literature. Table 2.1 provides an overview.

Table 2.1   Chronological overview of empirical literature

Source	Method	Conclusion
G.J. Stigler (1966)	Studies the deterrent effect of concentration and collusion enforcement actions by comparing the situation in the United States (where enforcement existed) with the situation in the UK (where there was no enforcement). Distinguishes between horizontal, vertical and conglomerate mergers.	The stricter policy in the US reduced the number of horizontal mergers relative to the number of conglomerate and vertical mergers.
M.K. Block, F.C. Nold and J. Sidak (1981)	Using empirical data on bakeries in the United States, the authors check whether the tendency to engage in collusive pricing is affected by the strictness of antitrust enforcement.	An increase in enforcement levels and penalties for price fixing produces a deterrent effect that reduces the mark-up in the bread industry.
A.R. Beckenstein and H.L. Gabel (1983)	Written surveys among antitrust lawyers in companies and law offices in the United States: gross sample 2,935, response rate 29.3% (n=859). Examines deterrent effect of antitrust enforcement.	Respondents were asked about the frequency of compliance with the law for each type of activity, how this had changed in recent years and the significance of the change. The frequency was not higher than 'often' for any of the different types of activity.
R.M. Feinberg (1984)	Deterrent effect estimated by examining price reductions that occur after a cartel has been convicted in a given market. If a price reduction occurs in the market, how long does it exist? The author studies five American industries in which cartels have been convicted and 23 industries in which there have been no convictions.	After a cartel case prices can remain lower than the pre-investigation prices for some considerable period.
R.M. Feinberg (1985)	Written interviews with Brussels antitrust lawyers; gross sample 135; response rate 18% (n=24). Examines deterrent effect of antitrust sanctions.	The risk that a cartel investigation may be started has risen. However the competition authority did not discover the majority of the cartels. Profit was the main reason for participating in a cartel.
M.K. Block and J.S. Feinstein (1986)	Data on more than 200 convictions for bid rigging in the United States were examined to determine whether the deterrent effect in other industries in the same region or in the same industries in other regions increases as a consequence of these convictions (there were no cartel convictions in either of the situations used for the comparison).	Raising the level of sanctions for bid rigging has a deterrent effect in the state highway construction industry.
J.C. Bosch and E.W. Eckard (1991)	Deterrence calculated from an analysis of the profitability of price fixing in 127 American cases by reference to the stock price reaction to federal indictments. Hypothesis to be tested: if the fall in the stock prices after indictment is much larger than the costs (fines and damages), this indicates price reductions.	The stock market views price fixing as profitable; this is also apparent from the number of companies involved. The evidence suggests that the deterrent effect is low since the profit exceeds the penalties..
R. Aaronson (1992)	Interviews with companies from the Financial Times Top 500 about their perception of the activities of the competition authorities in relation to mergers. The study focused on the United Kingdom.	Competition policy has a low deterrent effect. This is due to the companies' ignorance of the rules and to uncertainty about the criteria applied by the authorities.
B.E. Eckbo (1992)	Compares the pre-1985 situation in Canada (no antitrust policy) with that in the US (where antitrust policy existed). Is the probability of a horizontal merger being anti-competitive higher in Canada than in the US? Analyses stock returns of merging and non-merging competitors as a function of industry concentration in the two countries.	The market share and concentration criteria of the US authority do not deter potential mergers. It is not the case that the probability of a horizontal merger being anticompetitive is higher in Canada than in the US.

Source	Method	Conclusion
DoJ (2000)	Written interviews among antitrust lawyers (number and response rate unknown) in the United States. Examines deterrent effect of antitrust enforcement activity.	If enforcement of section 1 of the Sherman Act were to be discontinued, there would be a 150% increase in the number of conspiracies.
G. Symeonidis (2000)	Comparison of the situation before the introduction of the Restrictive Trade Practices Act 1956 and thereafter. This English statute prohibited price fixing agreements. Using data on manufacturing industry for the period 1954-1973 the author examines the effect of the legislation on profit. He compares parts of industry in which cartels existed before 1956 with those in which there were no cartels.	The introduction of the cartel legislation brought about an increase in price competition in industries where cartels had existed, but had no impact on other industries. The introduction did not affect company profits, but did change the market structure.
J.S. Thompson and D.L. Kaserman (2001)	Follows the method introduced by Bosch and Eckhard (1991) and asks the same question as Feinberg (1984).	The deterrent effect of antitrust actions is short-lived. The stock price was soon back to its former level in the case of 85% of the sample.
S. Davies and A. Majumdar (2002)	The monetary equivalent of the deterrent effect of anti-cartel policy is derived from the following simple model. If the probability of a cartel being caught has a positive correlation with prices within the cartel, it can be inferred – based on typical values from the literature on the probability of being caught, the price cost margin and demand elasticities – that significant price reductions can be achieved by means of effective enforcement action (in preventing cartels).	Competition policy in the United Kingdom has a deterrent effect on cartels, thereby resulting in lower prices than if there were no competition policy. However, this only applies where there is a price elasticity of less than 8.5.
J.L. Clarke and S.J. Evenett (2003)	A comparison of the situation with and without anti-cartel enforcement action. The study examines whether the prices set by the international vitamins cartel in countries with 'active anti-cartel enforcement regimes' were lower than in countries without such a regime. The countries studied included the United States, Canada and Japan as well as European countries.	The export of vitamins to countries where there was no active anti-cartel enforcement action rose in value. As a result of price inelasticity the price of vitamins increased in these countries.
C.E. Parker and V.L. Nielsen (2005)	Written survey among Australia's largest companies: gross sample 2,321 companies; response rate 43% (n=999). Study examines deterrent effects of anti-cartel enforcement action.	Most companies indicated that they had a high rate of compliance with the competition legislation and that the threat of sanctions was high. The results did not differ much from one industry to another.
Twijnstra Gudde (2005)	Interviews with 16 competition lawyers (14 law firms), some investment bankers, venture capital companies and businesses (healthcare institutions, energy companies and a publishing house). No data available on the response rate. Studies the anticipatory effects of Dutch merger control activities.	Companies are aware of the NMa's policy and aim to minimise the probability of intervention by the NMa. As a result, merger proposals are modified or – where there is a high probability that the merger will not be authorised – abandoned.
Deloitte (2007)	30 interviews with competition lawyers (12), economists (3) and companies (15). Followed up by 234 telephone interviews with competition lawyers (response rate overall 32%; 40% in the United Kingdom and 19% in Brussels) and 202 companies (>200 employees; response rate unknown). Studies the deterrent effects of anti-cartel enforcement and merger control.	Ratio of abandoned or modified mergers to mergers in which the OFT intervened is 5:1. In the case of cartels the ratio is 5:1 (according to lawyers) and 16:1 (according to companies).

Source	Method	Conclusion
P. Buccirossi, L. Ciari, T. Duso, G. Spagnolo and C. Vitale (2009a)	The extent to which enforcement action deters mergers, hard-core cartels and abuses of a dominant position is studied on the basis of surveys among lawyers and competition economists in various countries, including France, Germany, Italy, Spain, the United Kingdom and the United States.	The probability of being caught averages 21% in the case of cartels. The probability of being discovered by the competition authority increased in the period from 2000 to 2007. The most common reasons for abandoning a merger were the risk that it would not be approved and the high costs of the remedies.
S. Brenner (2009)	Studies 61 cartel cases to determine whether the deterrent effect of anti-cartel enforcement action increased in the period 1990-2003 as a result of the 1996 European leniency programme. The hypothesis is that agencies are better informed about cartel conduct as a result of the leniency programme and that this is reflected in tougher penalties and that companies know this.	The quantity of information about infringements has risen as a result of the leniency programme and the length of investigations has fallen. However, the study does not reveal that the leniency programme has a deterrent effect.
N. Miller (2009)	Using a dataset on all American cartel sanctions between 1985 and 2005 the author examines whether the unexpected introduction of a new leniency programme by the DoJ in 1993 resulted in fewer cartels.	Rates of detection and deterrence rose in the US after the introduction of the leniency programme. The conclusion is robust in various statistical tests. More study is needed, for example in the EU, to analyse cross-section variation as well.
J. Seldeslachts, J. Clougherty, and P. Barros (2009)	What instrument in merger control ensures that fewer concentrations subsequently occur? On the basis of a 1992-2005 dataset on mergers in different countries (including the United States and European countries) the deterrent effect of prohibiting mergers is compared with the imposition of remedies and monitoring.	The deterrent effect of prohibiting mergers reduces future merger frequency. The introduction of remedies is less effective as a deterrent to future mergers.

Source: SEO Economic Research

Research based on interviews or surveys

Interviews and surveys are the only ways of obtaining direct information about the relationship between changes in the anti-competitive practices of economic agents and the risk of intervention by the competition authority. In the case of mergers it is in theory also possible to analyse the merger decisions of regulatory bodies and the plans of companies as described in the media. However, even in the case of mergers it is impossible to measure the number of plans modified as a result of anti-competitive enforcement action without the use of interviews. Interviews and surveys enable the researcher to discover the plans of companies and managers and to examine whether and, if so, to what extent they have been modified as a result of anti-competitive enforcement action.

Box 2.2   Research into anticipation/deterrence in the Netherlands and the United Kingdom

Twynstra Gudde (2005) studied the anticipatory effect of merger control in the Netherlands on the basis of interviews with 16 competition lawyers and a number of businesses. The study focused on the period from 2000 to 2003. The interviews with a number of companies showed that in cases in which two parties together have more than 80% of the market, no energy is expended on a merger notification. The authors describe this as an improvement in relation to the period shortly after the NMa came into existence. The interviews with lawyers show that almost half of the ideas were not carried through into the form of an initiative. Around 12% of the original initiatives are amended as a result of the anticipatory effect.

Deloitte (2007) carried out a study in the United Kingdom for the Office of Fair Trading (OFT) by interviewing 30 lawyers, economists and companies. A questionnaire was also completed by 234 competition lawyers and 202 companies. The study showed that a merger is more likely to be abandoned at an early stage if there has recently been an investigation in the sector concerned. This was the case in 30% of the planned mergers. Deloitte presents the results of the study in the form of ratios. The ratio for mergers is five to one, which means that for each merger in which the OFT intervened five merger proposals were modified or abandoned without intervention by the OFT. Deloitte indicates that this ratio should be interpreted as a lower limit, since the study took account only of merger proposals that were abandoned or modified after the company concerned had taken external legal advice. However, some proposals are abandoned by the company itself without obtaining external advice.

The ratio for cartels was five to one according to the interviews with lawyers, and sixteen to one according to the interviews with companies. For other infringements of the cartel prohibition (i.e. commercial agreements), the ratios were seven to one and twenty-nine to one respectively. Although the ratios derived from the interviews with companies are higher, they rank in the same order.

Source: SEO Economic Research

However, the use of interviews and questionnaires has limitations. For example, there is no certainty about the reliability of the information provided by the respondents. Managers, for example, may be reluctant to indicate that the anticipatory effect is low in order to avoid stricter enforcement action in the future (strategic bias). Managers may also be reluctant to provide information about anti-competitive activities. As the term cartel has a strongly negative connotation,

the answers may be distorted by a desire for respectability. This distortion will be lower where the answers are provided by an adviser (such as a competition economist or lawyer) (Buccirossi et. al., 2009b).

Moreover, measuring errors can occur, for example where respondents find it difficult to answer a specific question and thus make mistakes. It may be hard for respondents to indicate precisely why, say, a merger proposal was abandoned (Twynstra Gudde 2005). Two studies that make use of interviews are relevant to the anticipatory effect of NMa enforcement action and the results of this study. These studies are explained briefly in Box 2.2.

3 Research method

The anticipatory effect has been studied using the following research methods:

- literature survey
- in-depth interviews with advisers and managers
- structured online surveys sent to 512 companies
- structured online surveys sent to 97 advisers on competition law (mainly lawyers).

The two online surveys relate to both merger and cartel enforcement and contain a combination of closed questions, open questions and propositions as well as a conjoint assignment. The field-work is explained below in relation to both target groups. Thereafter the conjoint measuring method is discussed. The chapter concludes with the operationalisation of the anticipatory effect: how has the anticipatory effect been measured in this study?

3.1 Online surveys for companies

The sample was compiled on the basis of a Chamber of Commerce database containing companies with a workforce of 100 or more.[13] The design of the online survey was tested by means of in-depth interviews with five companies and discussed with the NMa.[14] The web survey was hosted by Bureau Veldkamp. In order to achieve maximal response, companies were approached by telephone, in writing and by e-mail.[15] The telephone interviews were carried out by Quorum Preliminary Sales (QPS).[16]

The surveys were addressed to the managing director or in-house lawyer and the fieldwork was conducted in the period from April to August 2010. The online survey was completed (wholly or partially) by 512 companies, of which 342 completed it in full. During the fieldwork, those persons who had not yet completed the questionnaire were reminded by telephone, e-mail or letter of our request for cooperation. Table 3.1 gives a breakdown of the response by communication channel. The total response was 7% according to a strict definition (designated as the *net response*, consisting only of fully completed questionnaires) and 11% according to a wider definition (designated as the *gross response*, including partially completed questionnaires).

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[13] Dutch companies with fewer than 100 employees are not generally subject to merger control. Approximately 80% of these companies are below the turnover threshold of 30 million euros (calculations on the basis of Statistics Netherlands Statline data). If these firms are excluded from the sample, it is possible to prevent a (substantial) non-response to questions about merger control. However, this means that the extent to which smaller businesses anticipate cartel enforcement falls outside the scope of the study. Nonetheless, the answers of the competition lawyers and other advisers relate to all sizes of business and thus also provide information about the extent to which smaller businesses anticipate enforcement action.

[14] Lessons were also learned from previous anticipation and deterrence surveys (and questionnaires) by Deloitte (2007) and Twynstra Gudde (2005).

[15] The telephone survey sample was determined on a random basis from the total company database, which had been previously checked for duplications.

[16] The telephone survey included two filter questions about the respondent's familiarity with the NMa and its enforcement activities and about the size of the company in terms of workforce. Two companies had never heard of the NMa.

Table 3.1   Company response percentages

	Telephone/e-mail	Letter	Total
Number of companies approached	614[17]	4,217	4,831
Partially completed (gross response)	188 (31%)	324 (8%)	512 (11%)
Fully completed (net response)	98 (16%)	244 (6%)	342 (7%)

Source: SEO Economic Research

Appendix A reports on the representativeness of the sample, and Appendix B contains the questionnaire.

3.2   Online surveys for advisers

The design of the questionnaire for advisers was coordinated with the NMa. The database with advisers was compiled by SEO Economic Research specifically for this study. For this purpose we were able to make use of various existing datasets in order to reach as many competition advisers as possible. The database consisted of 343 advisers, who were approached by e-mail. 20 e-mails were undeliverable. Of the 323 advisers reached, 97 completed the questionnaire (a gross response rate of 30%). 40 of them completed the questionnaire in full (a net response rate of 12%). The advisers who had not yet taken part were reminded of the survey by e-mail and telephone.

The web survey was hosted by Bureau Veldkamp and the fieldwork was carried out in the period from April to August 2010. To be certain that the participant had sufficient experience with competition matters, they were first asked a filter question. Appendix B contains the questionnaire.

3.3   Measuring the deterrence effect

This study analyses the deterrence effect of two types of competition enforcement. In the case of merger control, the deterrence effect is the extent to which companies or advisers take the outcome of merger control into account and modify or abandon their plans accordingly, before notifying them. If a company assesses the outcome of the notification and decides on this basis whether or not to continue or modify a merger plan, merger control is said to have a deterrent effect (see the diagram in Figure 2.1). If the cost and time required for the notification procedure play a role in the decision, deterrence is taking place as well. It should be noted that compliance with the duty of notification falls outside the scope of this study: the strategy for proceeding with a merger without notification is not analysed. If a merger plan is not continued up to notification, it is assumed that the proposal as a whole has been abandoned.

A different type of deterrence occurs in the case of cartel control. We distinguish between conduct for which the respondent is aware that it is clearly prohibited and conduct about which it is not clear in advance whether it is prohibited (see Figure 2.2). If the situation is clear, the company knows whether or not their behavior is anti-competitive. The deterrence effect consists of the

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17   267 of these companies indicated their willingness to participate by telephone and received an internet link to the questionnaire.

extent to which the company does not carry out anti-competitive conduct, or terminates or modifies it in order to prevent detection and conviction.

The online survey consists of two parts: a standard questionnaire and a conjoint assignment. Both parts measure the deterrence effect in a specific manner.

Measuring deterrence by respondents' realized initiatives

Respondents are asked about their actual initiatives and plans in the last five years, through open and closed questions. According to Figure 2.1 and Figure 2.2, some of these initiatives can be seen as deterrence. The greater the number of these initiatives, the greater the deterrence effect.

Hypothetical deterrence measured by conjoint analysis

The respondents were faced with various hypothetical situations. The specific assignment was to indicate a probability. The respondents were asked to indicate for each situation, on a scale of 1 to 10, the probability of their taking a particular course of action. In the case of merger control, they were asked how probable it would be that they would not continue a hypothetical, attractive merger up to the stage of notification. Or, to put it another way, how probable it would be that the respondent would abandon the merger. It was assumed for this purpose that if the merger is *not* notified, the plan would be abandoned in its entirety. The deterrence effect can be measured as follows: the *greater* the specified probability, the *greater* the deterrence effect. In this part of the survey, deterrence in the form of modifying a plan has been disregarded.

In the case of cartel control, the hypothetical situation always consists of the discovery by the management of a prohibited price fixing agreement in their own organization. The respondents were also informed that the price fixing resulted in an increase in the company's profit. They were asked to indicate how probable it would be that they would give instructions internally to terminate the illegal behavior. The deterrence effect is measured as follows: the *greater* the specified probability, the *greater* the deterrence effect.

4 Results of the company survey

This chapter presents the results from the company survey. The questions relate to the last 5 years.

4.1 Compliance

The respondents were asked what external advisers are consulted about matters relating to NMa enforcement. Table 4.1 shows the answers: lawyers were consulted by far the most frequently, followed by accountants in second place. It is noteworthy that the category 'none' is in third place, above consultants and banks.

Table 4.1   What external advisers do you consult about matters relating to NMa enforcement?

Category	Number	Percentage
Lawyers	301	43%
Accountants	171	25%
None	105	15%
Consultants	66	9%
Other, namely:…	35	5%
Banks	19	3%
Total	697	100%

Source: SEO Economic Research, question 10 sorted in descending order. Response obligatory, multiple answers possible.

The answers of respondents who opted to specify another category of advisers are shown in Table 4.2. Note that the 'banks' category appears here again. The 'in-house lawyer' category is frequently mentioned: evidently, the respondents were unaware that they had been asked about *external* advisers.

Table 4.2   Other external advisers?

Category	Number
In-house lawyer	13
Lobby group, trade association and umbrella organisation	6
Bank	1
Colleagues	1
Choice of adviser depends on the nature of the problem	1
Often decide these matters myself, but use lawyers for specific cases	1
Limited use made of adviser	1
Not applicable	11
Total	35

Source: SEO Economic Research, question 10, open part.

The respondents were then asked whether a member of staff was specifically involved in compliance. A small majority of the companies in the sample did not have a person with such responsibility.

Table 4.3   Has a member of staff been assigned to monitor compliance with the Competition Act? (N=506)

Category	Number	Percentage
No	295	58%
Yes	211	42%

Source: SEO Economic Research, question 20.

The respondents were asked in an open question about (other) ways of ensuring awareness of competition rules. The answers were divided into categories (see Table 4.4). Of the 418 companies 75% mentioned a way in which compliance was assured. The majority of these methods consisted of the provision of information, procedures such as handbooks, and support from senior management.

Table 4.4   Other ways of ensuring within a company that employees are aware of the competition rules (N=418)

Category	Number	Percentage
None	103	25%
Provision of information/training	101	24%
Handbook, guidelines and procedures	74	18%
Through management or head office	60	14%
Through legal department	34	8%
Always part of discussions of projects and processes, competition test (not by the legal department)	22	5%
Through advice or updates provided by external parties	10	2%
Other (see appendix)	9	2%
Trade literature	5	1%
Total	418	100%

Source: SEO Economic Research, question 30. Open question, categories sorted in descending order; the question is not obligatory.

4.2   Merger control

136 of the respondents reported that they had notified one or more merger proposals. The total number of merger proposals for these companies was 354. The numbers notified do not differ greatly. The figure below shows the frequency for each number reported.

Figure 4.1   Breakdown of the reported number of merger proposals
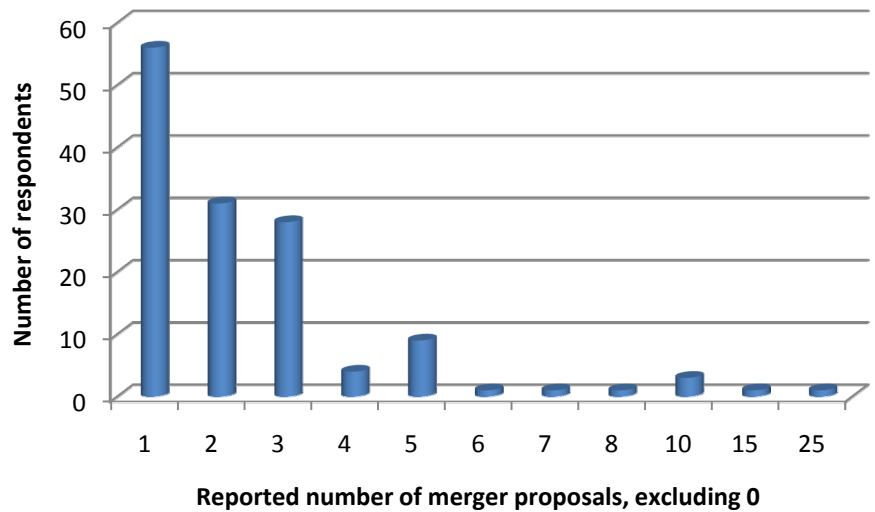
Source: SEO Economic Research, question 40. N=512. 71 respondents did not answer the question. 305
         respondents entered a 0.

Companies that have considered mergers were asked what factors were of importance. First, the respondents were asked to tick the factors in Table 4.5 that were judged to be of importance (multiple answers possible). Second, the respondents were asked to assess the ticked factors on a Likert scale from 1 (very unimportant) to 5 (very important).

Table 4.5 shows the number of companies assigning the factor to the degree of importance concerned. The factor 'external reporting' was seen as important by 69 of the 134 respondents. Subsequently these 69 respondents were asked to indicate how important this factor was on a scale of 1 (very unimportant) to 5 (very important), including the 'don't know' option.

Competition grounds and the NMa were mentioned by the largest number of respondents as 'important', followed by 'works council and staff'. It should be noted that this result may be biased due to the fact that the subject of the research was competition. The respondents might therefore have unconsciously attached more importance to the Competition Act. If we look at the importance on a scale of 1 (very unimportant) to 5 (very important), the 'Other' category takes top place, followed by 'consent of owners' and 'financing'.

Table 4.5   Factors in considering merger proposals (N=134)

Factor	Number of respondents not ticking the factor (not important)	Number of respondents ticking the factor (important)	Average on a scale of 1 to 5	Standard deviation
External reporting	65	69	3.8	1.3
Works council and staff	26	108	4.0	1.0
Financing	36	98	4.3	0.8
Tax legislation	74	60	3.8	1.0
Consent of owners	45	89	4.8	0.7
Competition grounds / NMa	18	116	4.2	1.0
Other, namely: …	125	9	4.8	0.7

Source: SEO Economic Research, questions 50 and 60 combined. This question was asked only to respondents who had considered mergers.

Nine respondents described a factor themselves. It should be noted that enforcement action by the NMa/Office of Energy Regulation was once again mentioned here by a respondent.

Table 4.6   Other factors of importance in considering

               merger proposals? (N=9)

Answer
Ministry of Social Affairs and Employment
Media Act
Other (regulatory) legislation
Economic feasibility
Corporate factors
Enforcement by NMa/Office of Energy Regulation
Synergy
Strategic fit
Client council

Source: SEO Economic Research, question 50.

Deterrence effect

The number of concentrations for which the company assumes in advance that the NMa will not authorise the plans gives an indication of the scale of the deterrence effect. The results show that this type of deterrence effect is very limited. The majority of respondents indicated that there were no or only very few concentrations of this nature.

Table 4.7   How many mergers that you consider desirable would not, in your opinion, be cleared by the NMa?

Category	Number (N=133)
1 (none)	64
2	45
3	18
4	5
5 (very many)	1

Source: SEO Economic Research, question 70.

The main type of deterrence is measured on the basis of actual plans. Table 4.8 below lists the number of merger proposals.

Table 4.8   Deterrence of mergers (companies)

Question (no.)	N	Number of proposals	Percentage of proposals	Number per notification
Number of mergers considered (40)	441	354	100%	2.70
External advice sought (90)	130	200	56%	1.53
Internal estimate of notification procedure (100)	127	165	47%	1.26
Proposal abandoned on competition grounds (110)	93	17	5%	0.13
Modified before notification (120)	80	7	2%	0.05
Number of mergers notified (80)	131	131	37%	1.00

Source: SEO Economic Research. Question numbers refer to the appendix.

In the past five years 131 mergers have been notified by the surveyed companies. This corresponds to 37% of the mergers considered. For the sake of comparison, the actual number of merger notifications in the period from 2005 to 2009 was 542.[18] The companies concerned sought external advice about competition law enforcement in 56% of the cases. In 47% of the cases an estimate of the chances of clearance was made internally.

5% of the merger proposals were abandoned on competition grounds. Of the 131 merger proposals notified, 7 were modified to take account of expected objections based on competition grounds before notification to the NMa. This corresponds to 5% of the merger notifications.

The company survey shows that the scope of the deterrence effect, measured in terms of the number of proposals modified or terminated, is equal to approximately 18% of the number of merger notifications.[19] 5 out of every 100 merger proposals notified to the NMa are modified

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[18]   Source: NMa.

[19]   The above results were calculated by counting the missing variables as '0'. Can the results be distorted by incomplete observations? An incomplete observation may possibly produce an overestimate of the anticipatory effect if question 110 or question 120 has been completed but not question 80. There are no observations that meet this criterion. However, there are five respondents who mention a total of eight merger plans on question 40, but have not completed the other questions. These observations do not distort the results.

before notification. In addition, for every 100 merger notifications there are 13 plans that are abandoned on competition grounds.

Deloitte (2007) reports results that are somewhat comparable. Due to the enforcement activities of the OFT 8% of the proposed mergers were abandoned and 4% of the proposed mergers were modified. The percentage of abandoned mergers and modified mergers is therefore higher in Deloitte (2007).[20]

External advice

The respondents who modified or abandoned proposals on competition grounds (24 in total) were asked how often the modification or termination of the proposal was based on external legal advice. This was the case for 15 proposals.[21] Deterrence therefore also occurs in the absence of external advice.[22]

Business chilling

Three questions in the survey relate to proposed mergers that were abandoned and were considered by the respondent *not* to be anti-competitive. First of all, the respondents were asked to indicate how often this form of business chilling occurs, on a scale of 1 to 5:

Table 4.9   How often does NMa enforcement deter mergers that are not anti-competitive?

Category	Number (N=130)
1 (never)	19
2	45
3	28
4	10
5 (very often)	2
Don't know	26

Source: SEO Economic Research, question 150.

It is evident from Table 4.9 that instances of business chilling perceived by respondents are infrequent. It is probably difficult for respondents to assess whether a merger is anti-competitive: a fairly large proportion of respondents (20%) were unable to answer the question. The 12 respondents who gave a category 4 or 5 answer were then asked why they took this view. 11 of them answered the question.

The majority of these explanations relate to the substantive assessment: the respondent either disagreed with the (expected) substantive assessment or referred to the uncertainty concerning the outcome of the assessment. Another explanation referred to the great effort involved in preparing a notification. A number of these responses can be placed in the diagram in Figure 2.1. If in Phase 2 the company is considering a plan that is not anti-competitive but assumes that the chance of approval is nonetheless low, it is not worthwhile notifying the merger.

[20]   See Table 4.2 in Deloitte (2007).
[21]   Question 130.
[22]   The respondents were also asked whether the proposed merger partners generally consulted their own external adviser. 108 respondents answered 'yes, usually', 12 respondents answered 'no, generally not', and 10 respondents answered 'don't know' (question 140).

The respondents who scored the question about business chilling (Table 4.9) a 2 or higher and had abandoned a number of proposals (13 respondents with 17 proposals) on competition grounds were asked to indicate how many of the terminated proposals would not, in their opinion, have been anti-competitive. The total number was nine.[23] This is a striking result: it means that the respondents considered that the proposed merger was not anti-competitive in about half of the abandoned proposals.

Table 4.10   Why does it frequently happen in your sector that competition enforcement deters mergers that are not, in your view, anti-competitive? (N=11)

As a result of the application of an open standard and the rule of reason, a degree of uncertainty can exist about whether or not such mergers are permitted.

Unfamiliarity.

The NMa assumes that market forces have free rein in the [confidential], whereas in reality this is so only to a limited extent and it would be better for the content of the [confidential] to permit more cooperation.

Because regional cross-border consumer behaviour in the [confidential] is minimal.

There is still sufficient competition in this small market.

Companies that do not at present operate in the same market and do not intend to do so can, theoretically, be designated as potential competitors. This can be an obstacle.

Unclear legislation and possibly a form of arbitrariness from the past.

The quality of [confidential] would often benefit more from good cooperation/mergers than from competition, but the NMa assesses mergers simply on the basis of supposed restriction of competition.

From what has been published on this in the trade literature.

As even a small chance of rejection forms a great risk when a major effort is needed for preparation. Nowadays, competition enforcement, like financing, is one of the risks that must be estimated in the case of a merger.

An unduly narrow view of the market. Only the Dutch market is taken into account, whereas they should at least be looking at the European market.

Source: SEO Economic Research, question 155. Open question.

Company size

Does the deterrence effect differ between small and large companies? Table 4.11 below gives the percentage of companies that have considered mergers, modified mergers and notified mergers for a number of size categories. The first cell shows, for example, that of the 86 companies in the '100 to 120 persons' category, 23% (20 companies) have considered mergers.

The table shows that a higher proportion of the larger companies have considered mergers. The average size of companies that have considered mergers is also larger than the average in the sample. It should be noted that some size categories contain very few companies. This is particularly true of companies that have terminated, modified and notified mergers.

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[23]   N=9, question 160.

Table 4.11   Deterrence of merger control, by company size

Proportion of compa-nies in the size catego-ry …	100 to 120 persons		120 to 150 persons		150 to 200 persons		200 to 350 persons		350 persons or more		Average size
…that have considered merger(s) (v40>0)	23%	N=86	22%	N=90	24%	N=79	36%	N=95	47%	N=90	323
…that have terminated merger(s) before notifi-cation (v110>0)	19%	N=16	21%	N=14	7%	N=15	14%	N=22	12%	N=26	469
…that have modified merger(s) on competition grounds (v120>0)	0%	N=10	10%	N=10	0%	N=8	13%	N=23	0%	N=22	448
…that have notified merger(s) (v80>0)	50%	N=20	47%	N=19	39%	N=18	70%	N=33	58%	N=40	441

Source: SEO Economic Research

Sector

Appendix A shows that the sample is a good reflection of the Dutch enterprise population. However, the figures in Table 4.12 must be interpreted with some caution: this is because there are relatively few responses per sector in respect of the termination, modification and notification of mergers. Nonetheless, it is evident from this table that merger plans are most common in the healthcare and financial services sectors. The financial services sector has the highest percentage of merger plans that result in a merger notification (Transport & Storage is disregarded due to the low number of observations).

Table 4.12   Deterrence of merger control, by sector[24]

Proportion of companies in the sector that ...	…have consi-dered merger(s) (v40>0)		…have *terminated* merger(s) before notification (v110>0)		… have *modified* merger(s) on com-petition grounds (v120>0)		…have notified merger(s) (v80>0)	
Industry	31%	N=107	15%	N=26	5%	N=22	58%	N=33
Wholesale & retail	32%	N=53	0%	N=11	0%	N=7	50%	N=16
Financial institutions	40%	N=48	8%	N=13	0%	N=11	63%	N=19
Consultancy & research	26%	N=42	14%	N=7	0%	N=6	50%	N=10
Construction	23%	N=40	20%	N=5	0%	N=4	57%	N=7
Equipment hire	26%	N=34	0%	N=6	0%	N=4	44%	N=9
Healthcare	56%	N=27	13%	N=8	14%	N=7	53%	N=15
Transport & storage	13%	N=23	0%	N=3	0%	N=3	100%	N=3
Information & communica-tion	24%	N=21	50%	N=4	50%	N=2	40%	N=5

Source: SEO Economic Research

The deterrence effect (Table 4.8) has been differentiated by sector in Table 4.13. Sectors with one or no response have been left out of the table. In view of the limited number of responses per sector, it would not be appropriate to draw conclusions from this (i.e. about the difference in deterrence between sectors).

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[24]   Sectors containing less than 10 companies with (one or more) merger plans have been disregarded in the table.

Table 4.13   Influence of the sector on the deterrence effect of merger control[25]

	Anticipatory effect: ratio of estimates in notification phase to considered plans (V100/V40)		Anticipatory effect: ratio of *terminated* plans to considered plans (V110/V40)		Anticipatory effect: ratio of *modified* plans to considered plans (V120/V40)	
Industry	42%	N=32	12%	N=26	5%	N=22
Financial institutions	60%	N=18	2%	N=13	0%	N=11
Wholesale & retail	57%	N=15	0%	N=11	0%	N=7
Healthcare	45%	N=13	5%	N=8	7%	N=7
Consultancy & research	63%	N=11	14%	N=7	0%	N=6
Equipment hire	51%	N=9	0%	N=6	0%	N=4
Construction	47%	N=7	2%	N=5	0%	N=4
Information & communication	73%	N=5	25%	N=4	17%	N=2
Energy	75%	N=4	8%	N=2	0%	N=4
Water	33%	N=3	50%	N=2	20%	N=1
Transport & storage	67%	N=3	0%	N=3	0%	N=3
Total	**53%**	**N=127**	**8%**	**N=93**	**4%**	**N=74**

Source: SEO Economic Research

Propositions

The subject concludes with five propositions. The respondents were asked to indicate in respect of each proposition to what extent they agreed with it on a scale from 1 (strongly disagree) to 5 (strongly agree). The propositions were also intended to familiarise the respondent with the subject that would be dealt with in the conjoint assignment. Table 4.14 gives the results. This table shows the average on a scale from 1 to 5. Additionally, under each answer category the table shows the percentage of respondents choosing that category.

According to many respondents the rate of compliance with the duty of notification is high. The costs of merger notification do not appear to act as a strong deterrent. This also applies to the costs of the licence phase. Publicity was a deterrent for 36% of the respondents (categories 4 and 5). According to 37% of the respondents, the possibility of submitting remedies encouraged companies to continue with more merger proposals up to notification (categories 4 and 5). It is noteworthy that approximately 30% of the respondents expressed no opinion on each proposition.

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[25]   Sectors with 0 or 1 response have been omitted from the table.

Table 4.14   Propositions merger control

Proposition	Average on a scale of 1 to 5	N	Percentage of answers					
			1	2	3	4	5	No opinion
There is a high level of compliance by companies to the rule to notify the NMa of mergers above a given turn-over threshold.	3.9	456	0.7	2.0	15.6	32.5	14.5	34.9
The costs of a merger notification (€15,000 in 2009) deter companies from continuing with some merger plans up to notification and cause them to abandon the plans completely.	2.4	454	17.2	28.4	11.0	8.4	4.6	30.4
If after the notification phase a licence is needed, the costs of the licence (€30,000 in 2009) play a major role in the company's decision of whether or not to apply for a licence.	2.7	450	10.9	26.0	14.2	11.3	6.9	30.7
The publicity attendant on any decision by the NMa to block a merger deters companies from continuing with some merger plans up to notification.	3.3	446	4.0	13. 5	17.9	27.8	8.5	28.3
The possibility of submitting remedies during the notification stage encourages companies to continue with more merger proposals up to notification.	3.6	442	0.7	5.7	20.6	30.5	6.1	36.4

Source: SEO Economic Research, question 167. 1 = strongly disagree and 5 = strongly agree.

Conclusion on merger control

The study shows that the Competition Act and its enforcement give rise to deterrence effects. Indications of this are provided by various results from the survey. Competition grounds (i.e. the NMa and the Competition Act) are mentioned as important more often than other factors. Five out of every 100 notified mergers have been modified before notification in order to minimise the risk of regulatory objections. Moreover, for every 100 merger notifications there are 13 merger proposals that are abandoned on competition grounds before notification. External advice about competition enforcement is obtained for 56% of merger proposals, and for 47% of merger proposals companies assessed the notification procedure internally.

Business chilling is of little importance. The respondents who consider that the incidence of cases in which companies are deterred from proceeding with mergers that are not anti-competitive is high or very high tend to mention, above all, that they disagree with the (expected) substantive assessment by the NMa. It is striking, however, that for half of the proposed mergers that have actually been abandoned the respondent considers that the merger would not have caused any problem.

4.3   Cartel control

The second subject in the questionnaire concerns horizontal restraints. In how many cases in the last five years has the company taken account of the Competition Act in its contacts or consultations with other companies? Table 4.15 gives the results.

Table 4.15   How often has the company had to take account of NMa enforcement in the following situations involving horizontal cooperation?

Situation	N	Number of times	Average per respondent
Attending meetings	327	935	2.9
Contact with another company	319	1,451	4.5
Drafting of contract	311	1,828	5.9
Preparation of pricing policy or commercial strategy	309	1,292	4.2
Other cases	286	305	1.1

Source: SEO Economic Research, question 170. Closed question, with request to give a number of '0' or higher for each situation.

There are two outliers in these results.[26] The following table shows the results if these two observations are disregarded.

Table 4.16   How often has the company had to take account of NMa enforcement in the following situations involving horizontal cooperation? (excluding two observations)

Situation	N	Number of times	Average per respondent
Attending meetings	325	917	2.8
Contact with another company	317	1,191	3.8
Drafting of contract	309	1,078	3.5
Preparation of pricing policy or commercial strategy	307	987	3.2
Other cases	286	305	1.1

Source: SEO Economic Research, question 170. Closed question, with request to give a number of '0' or higher for each situation. Excluding two outliers.

For a conservative calculation of the deterrence effect we will use Table 4.16. On average a company takes account of the Competition Act 14 times every five years in matters relating to horizontal cooperation. The results indicate the existence of a deterrence effect: companies specifically take account of the Competition Act in the cases described. 286 respondents indicated that other cases played a role. They were given the opportunity to describe a situation in which they had taken account of the Competition Act. The answers have been divided by the researchers into categories (see table).

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[26]   These two respondents mentioned a total of 825 and 508 situations respectively. The numbers mentioned by the other respondents were much lower.

Table 4.17   Description of other cases of horizontal cooperation in which the Competition Act plays a role (N=45)

Category	Number
(Possible) cooperation agreements, for example R&D or technology agreements or trade agreements	9
Exchange of information (not about prices)	1
Lobbying	2
Ideas about acquiring parts of other businesses	3
Consultation with customers	2
Quotations and purchasing	2
Meetings and framing of cooperation within our franchise organisation and/or trade association	4
Other	10
Not applicable	12

Source: SEO Economic Research, question 170. See also Appendix B.

The answers are for the most part variations on the categories in Table 4.16 and refer to vertical relationships with suppliers and customers.

Deterrence effect

The following table lists the initiatives for which Section 6 of the Competition Act has played a role. The deterrence effect can be calculated using these figures.

Table 4.18   Deterrence effect of cartel control

Question (no.)	N	Number of initiatives	Average per respondent
Conduct modified or terminated (180)	333	315	0.9
Modification or termination based on external legal advice (190)	47	58	1.2
Internal assessment (200)	337	2,062	6.1

Source: SEO Economic Research

The results shed the following light on the scope of the deterrence effect: on average, companies had modified or terminated an arrangement or consultation with one or more other companies about once every five years in order to prevent intervention by the NMa. In 18% of the cases this was done after taking external legal advice.

About six times every five years companies made an internal assessment of whether conduct or an agreement could encounter objections from the competition authority.

The results can be compared with the results on commercial agreements and cartels in Deloitte (2007).[27] In that study 202 companies had modified or abandoned a total of 144 commercial agreements and 126 cartels, which was equal to an average of 1,3 cases per respondent in the period 2000-2007. This suggests that the deterrent effect in the United Kingdom is approximately equal to the deterrent effect in Table 4.18. In the English study external legal advice had been

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27   See Table 5.5 in Deloitte (2007).

sought in 49% of the cases in which initiatives were modified or abandoned. This is considerably higher than in the present study.

Clarity of cartel prohibition

Do respondents consider the cartel prohibition to be clear? The respondents were asked whether it was clear to them when the NMa considered arrangements and conduct to be prohibited.[28] This question was answered by 360 respondents. 252 of them (70%) answered in the affirmative and 108 in the negative. The latter group were asked to indicate why they considered the enforcement rules to be unclear. 85 respondents gave a reason.

Table 4.19 Why is it unclear when the NMa prohibits arrangements and conduct? (N=85)

Category	Number
Legislation is unclear about what is or is not prohibited, about what constitutes the market and about procedure	35
Other	23
Too little substantive knowledge	17
Situations are specific and deserve a custom-made approach	4
NMa has political motives and decision is predetermined	2
Considerations not made public	1

Source: SEO Economic Research, question 210.

Four categories in this table relate to the complexity or unpredictability of the cartel prohibition.

Business chilling

Next there are three questions about business chilling. Table 4.20 shows that many respondents did not know how often cartel control resulted in business chilling. 6% of those who were able to answer the question said 'never'. The picture that emerges from this is that business chilling does occur, but not often.

Table 4.20 How often does cartel control deter initiatives that are *not* anti-competitive?

Category	Number (N=355)	Percent (excl. 'don't know' category)
1 (never)	14	6.2%
2	78	34.4%
3	85	37.4%
4	40	17.6%
5 (very often)	10	4.4%
Don't know	128	

Source: SEO Economic Research, question 220.

Respondents whose answers were in categories 4 or 5 and who had modified or abandoned a number of proposals on account of cartel control were then asked why they considered that competition enforcement action often or very often deterred cooperative agreements that were not anti-competitive.

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[28] Question 210

Table 4.21   Why are arrangements or cooperation agreements that are not, in your view, anti-competitive often or very often deterred by Dutch competition enforcement? (N=46)

Description	Number
Unclear guidelines, assessment of thresholds, where the boundary lies between illegal and permissible	13
Fear of being suspect in the eyes of the NMa	3
Heavy penalties	3
NMa's aim is deterrence	3
Fear of undesired publicity	2
Market reports and press stories	1
Relevant market is not always adequately defined	1
An opinion is formed solely on the basis of the figures and formal grounds	1
NMa's prohibitions restrict the exercise of one's profession	1
Other	18

Source: SEO Economic Research, question 230.

The majority of these potential causes of business chilling indicate uncertainty about the substantive assessment by the NMa and fear of negative publicity. Respondents whose answers were in categories 2, 3, 4 or 5 and who had modified or abandoned a number of proposals on account of cartel control were then asked how many of these proposals were, in their opinion, not anti-competitive.

This concerned 315 proposals of 333 respondents. According to the answers, 226 of these proposals (72%) were not anti-competitive (comparison of question 240 with question 180). This question was answered by 35 respondents, one of whom entered the number 200 and 18 of whom entered a 0 (question 240). The outcome is therefore influenced to a large degree by the answer given by a single respondent. Without this data point, the result is that 26 cases out of the total of 115 modified or abandoned proposals were considered not anti-competitive, i.e. 22.6%.

Damage due to conduct of other companies

Finally, the respondents were asked whether their company had ever suffered damage as a consequence of illegal price agreements by other companies. 82 respondents answered in the affirmative and 107 in the negative. 164 stated that they did not know how to answer this question (question 290). The 82 companies that answered in the affirmative were asked whether they had considered taking legal action against the companies concerned.

Table 4.22   Did you consider taking legal steps against suspected illegal practices by other companies?

Category	Number (N=82)	Percentage
Yes, but no action taken	29	35%
Yes, action taken through the NMa	5	6%
Yes, action taken in the form of civil proceedings	17	21%
No	31	38%

Source: SEO Economic Research, question 300.

About one fifth of the respondents who had suffered loss instituted civil proceedings.

Company size

Does the deterrence effect differ by company size? Table 4.23 below shows the percentage of companies that have modified or terminated conduct on account of Section 6 of the Competition Act and the percentage that assessed internally whether conduct or an arrangement might encounter objections on competition grounds.

A slightly larger proportion of the large companies had modified or terminated arrangements or conduct on competition grounds. The large companies were also more likely to make internal assessments of whether conduct would comply with Section 6 of the Competition Act.

Table 4.23   Deterrence effect of cartel control, by company size

Proportion of companies in the size category …	100 to 120 persons	120 to 150 persons	150 to 200 persons	200 to 350 persons	350 persons or more	Average size
…that have modified or terminated arrangements or consultation (V180>0)	10% N=71	8% N=66	17% N=60	16% N=70	20% N=65	330
… that have made an internal assessment (V200>0)	50% N=70	57% N=69	62% N=60	64% N=69	75% N=68	329
… answered question 180	62% N=114	57% N=115	60% N=100	59% N=119	55% N=119	325

Source: SEO Economic Research

Sector

Table 4.24 sheds light on the deterrence effect of cartel control in the various sectors. In the healthcare sector in particular, a relatively large proportion of companies have terminated arrangements or cooperation with other companies in the past five years in order to forestall intervention by the NMa. Moreover, internal assessment of conduct/agreements on competition grounds occurs, in relative terms, most frequently in the healthcare sector. 4 out of 5 healthcare institutions have made an internal assessment at least once in the past five years.[29] As was the case for the breakdowns by sector above, the breakdown is subject to the caveat that percentages based on a small number of observations should be interpreted with caution.

It is therefore not possible to derive firm conclusions about the effect of sector on deterrence. However, Table 4.24 clearly shows that there is a considerable variation between sectors: the share of companies that modified or terminated potentially anti-competitive conduct ranges from 3% in the consultancy & research sector to 38% (see above) in the healthcare sector.

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[29]   The two forms of deterrence are closely interrelated. The correlation coefficient between the dummy variables of question 180 (modification or no modification/termination on competition grounds) and question 200 (internal assessment of compliance with Competition Act or not) is .33 and very significant ($\alpha = .01$).

Table 4.24   Deterrence effect of cartel control, by sector[30]

Proportion of companies in the sector that ...	…have modified or terminated arrange-ments or consultations (V180>0)		… have made an inter-nal assessment (V200>0)		… have answered ques-tion 180	
Industry	16%	N=85	64%	N=89	63%	N=136
Wholesale & retail	10%	N=40	59%	N=41	62%	N=65
Financial institutions	15%	N=33	67%	N=30	53%	N=62
Consultancy & research	3%	N=33	53%	N=32	65%	N=51
Construction	8%	N=26	63%	N=30	53%	N=49
Equipment hire	8%	N=24	54%	N=24	46%	N=52
Healthcare	38%	N=21	81%	N=21	60%	N=35
Transport & storage	6%	N=17	59%	N=17	52%	N=33
Information & communication	13%	N=16	56%	N=16	57%	N=28
Total	**14%**	**N=333**	**61%**	**N=337**	**58%**	**N=570**

Source: SEO Economic Research

Propositions

The following picture emerges from the respondents' assessment of the propositions below. About 90% of the respondents were able to assess most of the propositions. The leniency pro-gramme was an exception, 28% of the respondents had no opinion. were familiar with it. The five other instruments were all judged to have a marked impact on deterrence. This applies least to civil enforcement.

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[30]   Sectors in which fewer than 10 companies answered the question about change of conduct (V180) were omitted from the table.

Table 4.25   Cartel control propositions (company survey)

	Average on scale of 1 to 5	N	Percentage of answers					
			1	2	3	4	5	No opinion
NMa enforcement action is an important reason for complying with cartel prohibition.	3.9	353	3.4	6.5	13.9	41.6	28.6	6.0
The amount of the fines for a company (maximum of 10% of annual turnover) is effective in preventing cartels.	4.0	352	2.0	8.2	10.8	39.5	29.8	9.7
The personal fine (maximum of €450,000) is effective in preventing cartels.	4.1	351	3.1	6.0	10.5	33.3	36.5	10.5
If company directors were liable to imprisonment for cartel offences there would be fewer cartels.	3.7	351	6.0	11.4	14.5	29.1	26.8	12.3
The leniency programme of the NMa by which penalties can be remitted reduces the incidence of cartels.	3.0	351	5.1	19.4	25.6	17.4	4.8	27.6
The adverse publicity as a consequence of being suspected or convicted of a cartel offence reduces the incidence of cartels.	3.8	351	2.0	7.7	18.0	40.5	21.4	10.5
The possibility that civil damages may be awarded to those harmed by a cartel infringement reduces the incidence of cartels.	3.5	350	2.0	14.6	22.0	35.7	12.6	13.1

Source: SEO Economic Research, question 317. 1 = strongly disagree, 5 = strongly agree.

Conclusion on cartel control

The study has produced the following results about the scope of the deterrence effect. On average, a company takes account of possible objections based on Section 6 of the Competition Act on 14 occasions every five years. On average companies have modified or terminated an arrangement or negotiation about once in the last five years in order to forestall intervention by the NMa. Companies make an internal assessment of whether conduct is illegal about six times every five years. The majority of the companies consider that the cartel prohibition is clear.

213 respondents (60%) consider that business chilling occurs (Table 4.20). The majority of the potential causes of business chilling reported by respondents refer to uncertainty about the substantive assessment by the NMa and concern about adverse publicity.

5   Results of the adviser survey

5.1   Merger control

The respondents were asked to indicate the number of merger proposals on which they advised. Figure 5.1 shows the frequencies of the reported numbers. It is evident from the figure that 65 advisers indicated that they had been consulted on one or more proposals (731 in total).

Figure 5.1   Breakdown of the number of merger proposals
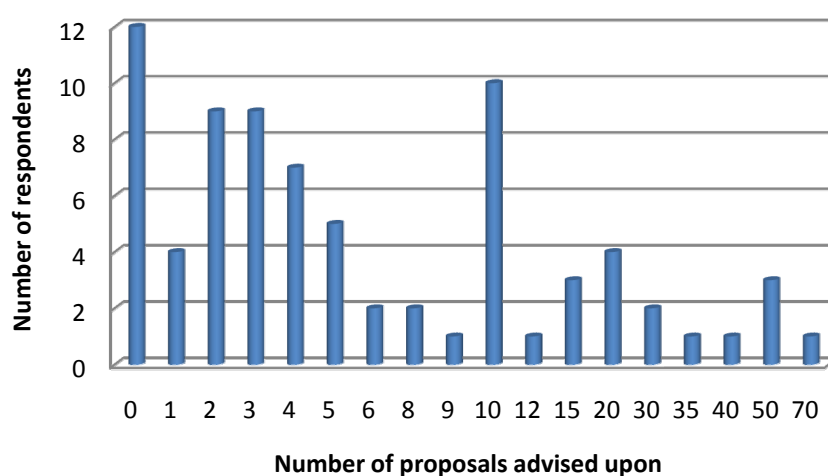
Source: SEO Economic Research, question 15. N=97, 20 respondents did not answer the question.

The respondents were also asked how many proposals had been modified by the parties themselves on account of expected problems under competition law (question 17), in other words before consulting an adviser. The total number is 28. The following table summarises the results on merger proposals.

Table 5.1: Deterrence and merger proposals on which legal advice was taken

Question (no.)	N	Number of proposals	Percentage of proposals	Number per notification
Number of merger proposals on which advice taken (15)	77	731	100%	1.56
Merger proposals modified by parties before taking legal advice (17)	62	28	4%	0.06
Proposal abandoned on competition grounds (50)	41	29	4%	0.06
Modified before notification (40)	55	39	5%	0.08
Number of notified mergers (22)	60	469	64%	1.00

Source: SEO Economic Research. The number of proposals has been aggregated for all respondents, with
           missing variables being treated as '0'. The question numbers are as listed in Appendix B.

The numbers of merger proposals in this table need not correspond with the actual number of merger proposals on which legal advice was taken, since two or more law firms may have advised on the same proposal.[31] As long as all advisers assess the merger proposals in the same way (i.e. assign the proposal to the same categories in the table), this does not affect the calculation of the scope of the deterrence effect. This assumption is necessary in order to be able to interpret the percentages.

These results paint the following picture. 4% of the proposals on which legal advice was taken had been modified by the parties themselves on competition grounds before they sought legal advice. Ultimately, 64% of the merger proposals had been continued up to the point of notification to the NMa. Of the 262 merger proposals that were abandoned, competition considerations and NMa enforcement action were important reasons in 11% of cases, the remaining 89% were abandoned for other reasons. 8% of the proposals that were eventually notified were modified before notification to remove potential objections of the NMa.

The online interview with advisers shows that the scope of the deterrence effect, measured in the number of modified or terminated proposals, is equal to approximately 14% of the number of merger notifications.

These results can be compared with the studies conducted by Deloitte (2007, for the Office of Fair Trading) and Twynstra Gudde (2005, for the NMa). As regards the OFT study, it should be noted that there is no duty in the UK to notify qualifying mergers. The results cannot therefore be directly compared when divided by the number of merger notifications. In the OFT study, the number of modified and abandoned proposals was, according to legal advisers, equal to 8% and 7% respectively of the total number of merger proposals. These numbers exceed the figures in the present study (5% and 4% respectively). This suggests that the deterrent effect was lower in the Netherlands than in the United Kingdom, although it should be noted that the studies were carried out in different periods.

Twynstra Gudde (2005) concluded as follows on the basis of interviews with lawyers. Approximately 68% of initiatives result in a notification. 12% of the initiatives are notified in modified form. Approximately 6% of the initiatives are abandoned on account of deterrence. The anticipatory effect as measured in the study by Twynstra Gudde (2005) was therefore higher in the period from 2000 to 2003 than in the period of the present study. However, a word of caution is appropriate.

Twynstra Gudde (2005) makes a distinction between ideas and initiatives. Proposals may also be abandoned in the idea stage on account of the anticipatory effect. The proposals to which reference is made in Table 5.1 might therefore have been treated as ideas in the interviews conducted by Twynstra Gudde (2005). It follows that the basis for the percentage of the anticipatory effect may possibly differ between the two studies, which would therefore distort the comparison. There are almost 74% more ideas than initiatives in the Twynstra Gudde study (2005). If all the ideas were treated as proposals, the percentage of modified proposals would fall to approximately 7% and the percentage of abandoned proposals would fall to 3% in that study.

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[31]   The actual number of merger notifications in the period 2005-2009 was 542.

Business chilling

In order to identify instances of business chilling (deterrence of mergers that are not anti-competitive) the survey also contains questions on concentrations that were not judged to be anti-competitive by the respondent. Instances of companies being deterred in such cases are conceivable (see, for example, Deloitte 2007). Companies may find the notification procedure too onerous or have insufficient information on which to gauge the likelihood of obtaining clearance from the NMa. In such a case the company may decide not to proceed with the notification. The respondents were asked to indicate how often this happened, on a scale of 1 to 5.

Table 5.2   Does it often happen that proposals that are not anti-competitive are deterred?

Category	Percentage (N=70)
1 (never)	18.6%
2	42.9%
3	8.6%
4	4.3%
5 (very often)	1.4%
don't know	24.3%

Source: SEO Economic Research, question 60.

The results show that many respondents consider that business chilling occurs. However, only few respondents consider that it occurs very often. Respondents who scored this a 4 or a 5 were asked a follow-up question (see Table 5.3).

Table 5.3   What is the most common reason for deciding against notification when the merger is not anti-competitive? (N=10)

Category	Number
Companies are uncertain about the outcome of the assessment by the NMa	6
The lead time is too long	3
The costs of external advisers are too high	1
The fees payable to the NMa are too high	
The procedure is too time-consuming for staff	
The company wishes to avoid media publicity	
Other, namely: ...	

Source: SEO Economic Research, question 61. This is a closed question: only one answer possible.

Uncertainty about the outcome is the reason most frequently mentioned for business chilling. Advisers who were consulted about proposals that were terminated on competition grounds were asked a follow-up question. They were asked to indicate how many of these proposals for mergers would not, in their opinion, have given rise to competition problems.[32] 8 respondents answered this question, and the total number of proposals said to have been wrongly deterred was four. This is corresponds to 14% of proposals abandoned on account of competition enforcement. The results indicate that the extent of business chilling was limited for the merger proposals that advisers in the sample advised on.

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[32]   The question was phrased as follows: 'In how many of these cases did you consider that the concentration would not have caused competition problems?', question 70.

Influential decisions

The respondents were asked what NMa decisions or court judgments had influenced their advice. They were allowed to specify a maximum of five cases, 26 unique cases were mentioned in total.

Table 5.4   Influential decisions and judgments on merger control

	Number of times mentioned
NUON/Reliant	5
Zeeland hospitals	4
Health care sector decisions	2
KPN/Reggefiber	2
Telefoongids/Gouden Gids (telephone directories)	2
Mentioned once:	
6114 24 -10-2007	
6169 - Amsterdam Home Care / Cordaan	
Ahold - Konmar	
Asito/Meavita care The Hague (6632)	
BAM/HBG	
Decisions on mergers of conglomerates	
Decisions on gun jumping	
Decisions on hospital mergers	
Trade and Industry Appeals Tribunal, G-Star v. Secon	
Cosun/CSM (5703)	
Supreme Court December 2004 (Floraholland)	
Cable companies merger 2008	
KPN/Telfort	
KPN/Tiscali	
LJN: AZ3274, Trade and Industry Appeals Tribunal, AWB 05/440	
NPM Capital/Buitenfood (6705)	
Recent NMa decisions imposing fines for non-notification or late notification	
Reggefiber/GNA/OGA	
Guidelines of the EU Commission and the NMa (where applicable)	
SaraLee/Duyvis	
Hilversum Hospital/Gooi-Noord Hospital (3897)	

Source: SEO Economic Research, question 80. N=18

Propositions

Various propositions were put to the respondents in order to form a general impression of the anticipatory effect and the role of competition enforcement in whether or not a company continues with a merger plan up to notification. A relatively large number of respondents (20%) were unable to express an opinion on media coverage and the cost of the licence phase. The respondents did not attribute a strong role to these two factors; this also applied to the costs of the notification phase. The effectiveness of control was rated as good (propositions 1 and 7). The penalty for non-compliance with the duty of notification was said to have a deterrent effect and remedies ensure that a merger is more likely to be continued through to notification.

Table 5.5   Propositions on merger control (adviser survey)

Proposition	Average	N	Percentage of answers					
			1	2	3	4	5	No opinion
Dutch competition enforcement ensures that anti-competitive mergers do not take place.	3.3	61	3.3	18.0	19.7	50.8	1.6	6.6
The fine that can be imposed for non-compliance with the notification duty ensures compliance by companies.	3.9	60	1.7	10.0	6.7	46.7	25.0	10.0
The costs of a merger notification (€15,000) deter some companies from continuing with merger plans up to notification and cause them to abandon the plans completely.	2.2	60	21.7	38.3	18.3	10.0	0.0	11.7
In the licence phase the costs (€30,000) play a major role in whether or not companies apply for a licence.	2.2	60	20.0	30.0	16.7	11.7	1.7	20.0
The media coverage that is expected if a merger is blocked by the NMa deters companies from continuing with merger plans up to notification.	2.4	60	11.7	40.0	18.3	8.3	1.7	20.0
The possibility of agreeing remedies causes companies to notify more mergers to the NMa.	3.3	59	3.4	11.9	30.5	30.5	8.5	15.2
The NMa permits mergers that are not anti-competitive.	3.9	59	0.0	8.5	11.9	52.5	22.0	5.1

Source: SEO Economic Research, question 83 (1 = strongly disagree, 5 = strongly agree)

Conclusion on merger control

The survey among advisers provides indications that the deterrence effect exists. Of every 100 merger notifications, eight had been modified before notification. Moreover, for every 100 merger notifications, there are six merger plans that have been terminated before notification on enforcement grounds. Many respondents considered that business chilling occurs, but not very often. Uncertainty about the outcome is the most common reason given for business chilling.

5.2   Cartel control

The respondents were asked about the cases in which they advised on matters that might be incompatible with Section 6 of the Competition Act. A distinction was made between cases where the client was aware whether or not the behaviour constitutes an infringement, and cases that were not clear to the client. Cartels fall under the former category, whereas questions about the design of contracts and so forth come in the second category.

Clearly prohibited conduct

Table 5.6 sets out the results. The first question (no. 90) is as follows: How many times have you been asked since 1 January 2005 to advise on an existing or proposed agreement or form of conduct which clearly is not or would not be compatible with the cartel prohibition (section 6 of the Competition Act)? 39 respondents entered a number, the total being 423. The respondents were then asked to indicate in how many of these cases the act or arrangement was not known to the

NMa and they had advised that it should be changed or discontinued (question 140). The number of cases was 255 (or 60%).

It should be noted that both existing and proposed activities were included here. The 168 cases that were not changed or discontinued following the advice may also include proposals that were not continued for other reasons. However, this was not investigated.

The respondents advised an infringer on 56 sanction decisions. This means that 56 of the 423 cases of advice became known to the NMa: in these cases the NMa took a sanction decision. This corresponds to 13% of the cases of advice. The last column of the table shows the number of cases divided by 56. For the sake of comparison, it should be noted that the NMa fines 10-15 cartels per year or 50-75 every five years.[33] This is an indication that the sample covers a large proportion of the sanction decisions. It should be noted, however, that various law firms may have advised on the same sanction decision. Given the assumption that advisers assess cases in the same way, this does distort the calculation of the deterrence effect.

Table 5.6   Deterrence effect of cartel control – clearly prohibited conduct (advisers)

Question	Question number	N	Number of cases	Percentage of cases in which advice given	Cases per NMa decision
Advice sought on agreements and conduct	90	39	423	100%	7.55
Advice sought on leniency programme	110	46	79	19%	1.41
Not applied for leniency following advice	120	14	54	13%	0.96
As result of advice activity changed or terminated, unknown to NMa	140	26	255	60%	4.55
Advice given on infringements of Competition Act	150	25	56	13%	1.00

Source: SEO Economic Research. Excluding seven incomplete observations and one outlier specifying numbers of 200, 15, 13, 125 and 5 respectively.

The deterrence effect can be calculated on the basis of Table 5.6. The ratio of NMa sanction decisions to cases in which an existing or proposed act or arrangement is terminated or changed because of competition advice, unknown to the NMa, is 1:5.

Leniency programme

In 79 cases advice was requested on the leniency programme. In 68% of these cases no application for leniency was ultimately made. The survey does not provide information about how these clearly prohibited cases were ultimately resolved. Some possibilities are that the conduct was discontinued or changed or resulted in the imposition of a sanction decision by the NMa.

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[33]   See www.fd.nl/artikel/19837314/persoonlijke-straf-bestuurders-dreigt-alle-kartelzaken.

Respondents who advised on leniency in cases that not resulted in an application were asked to explain why the client did not apply (see Table 5.7).

Table 5.7   Most common reasons for not submitting a request for leniency (N=12)

Category	Number
Client did not wish to lose the extra profit from the activity	1
Client did not wish to jeopardise its good relations with other members of the cartel	2
Client did not expect to be fined	6
Client thought the leniency programme was too difficult	
Possible reputational harm	
Possible consequences of personal liability	
Other, namely …	2
Don't know	1

Source: SEO Economic Research, question 130. Closed question, one answer possible.

Two respondents gave an answer in the 'other' category. They were asked for a description. The first description mentioned the uncertainty as to how the NMa would deal with the request for leniency. The second explained that as a result of the advice the clients had modified their plans for cooperation.

Conduct and agreements about which there is no clarity

The next subject concerns conduct and agreements (including restrictions of competition) between two or more companies where it was not apparent to the client in advance whether the restriction was compatible with the cartel prohibition. The respondents were asked to include both proposals and existing restrictions. Table 5.8 gives the results. This concerns activities unknown to the NMa.

In 32% of the cases in which advice was given, a restriction was terminated or not implemented. In 12% of the cases, an arrangement or agreement did not materialise due to the risk of competition enforcement even though the adviser had not expected that it would constitute an infringement of the cartel prohibition. In 19% of the cases in which advice was given the adviser expected the NMa to wrongly assess the act or arrangement as an infringement of the cartel prohibition. The results also show that 602 commercial initiatives were not terminated. 56% of them were modified as a result of the advice given.

We examined whether these results could be distorted by incomplete observations. This was not the case.[34]

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[34]   The highest observation was 175 in response to question 160. This observation is complete in respect of the other questions. If the observation is omitted, the differences are only minimal.

Table 5.8   Deterrence effect of cartel control on plans for which compatibility with Competition
             Act is unclear to the client

Question	Question number	N	Number of cases	Percentage of cases in which advice given
Advice given on conduct and agreements	160	40	879	100%
Initiative discontinued as a result of advice	170	30	277	32%
Initiative modified as a result of advice	180	26	339	39%
Initiative wrongly deterred	210	27	106	12%
Incorrect NMa assessment expected	220	28	169	19%

Source: SEO Economic Research

For those cases where the compatibility with the cartel prohibition is unclear, a deterrence effect is clearly present. In 70% of the cases in which advice was sought, conduct was modified or terminated on account of the advice given on competition enforcement. In 12% of all cases in which companies took advice the respondent considered that there was business chilling. An incorrect assessment was expected in 19% of all cases in which advice was given.

Influential decisions

Respondents were asked to indicate what NMa decisions or court judgments had influenced their advice. They could cite a maximum of five cases. 41 unique cases were mentioned in total.

Table 5.9   Influential decisions and judgments on cartel control

	Number of times mentioned
Trade and Industry Appeals Tribunal, Secon	3
Construction industry fraud	3
G-Star/Secon (CBb)	2
Heineken decision	2
Modint	2
Mentioned once:	
6114	
Trade and Industry Appeals Tribunal - T-mobile	
EU Court of Justice - T-mobile	
Court of First Instance O2	
Court of First Instance T-125/03 and T-253/03	
Heijmans/Nederveen (court judgment)	
Arnhem Court of Appeal, 18 December 2008 (Eastborn)	
Leeuwarden Court of Appeal, 4 October 2009 (Batavus)	
Supreme Court, December 2004 (Floraholland)	
EC Court of Justice C-8/08	
Interpolis/Cobac	
KPN/SNT	
Metro/NS	
NMa Guidelines on Commercial Arrangements	
NRP	
Pirtek	
Prisma (Supreme Court)	
NMa sanction decisions – roofing contractors	
NMa sanction decisions – painters and decorators	
Single complex continuous infringement	
Petrol stations	
Home care	
Vertical restrictions	
Insurance, The Hague District Court 13/10/2008 (Fortis v. Allianz)	
WBE	
Clabbers case (Rotterdam District Court)	
OSB case (2020) concerning the existence of infringement and proof	
Solétanche case (Rotterdam District Court) concerning potential competition	
Healthcare	

Source: SEO Economic Research, question 230. N=15.

Propositions

Various propositions were put to the respondents in order to form a general impression of the deterrence effect and the role of competition enforcement. The respondents were able to indicate to what extent they agreed with the proposition on a scale from 1 to 5.

Table 5.10   Propositions on cartel control (adviser survey)

Proposition	Average	N	Percentage of answers					
			1	2	3	4	5	No opinion
Dutch competition enforcement reduces the incidence of cartels.	3.8	42	2.4	9.5	19.1	45.2	23.8	0
The amount of the fines on companies reduces the incidence of cartels.	3.7	42	0	9.5	26.2	47.6	16.7	0
The personal fine that may be imposed on a manager or director reduces the incidence of cartels.	3.6	42	0	23.8	9.5	52.4	14.3	0
The NMa leniency programme reduces the incidence of cartels.	3.2	42	7.1	14.3	35.7	33.3	9.5	0
The negative publicity that accompanies a suspicion or conviction reduces the incidence of cartels.	3.6	42	9.5	26.2	20.0	50.0	9.5	4.8
Civil proceedings in which injured parties can claim damages reduce the incidence of cartels.	2.8	42	9.5	30.9	30.9	21.4	4.8	2.4
The NMa's competition enforcement does not interfere with arrangements that do not infringe the cartel prohibition.	2.9	42	7.1	19.1	40.5	19.1	2.4	11.9

Source: SEO Economic Research, question 240 (1 = strongly disagree, 5 = strongly agree)

These propositions show that many respondents had an opinion. The NMa's enforcement action is regarded as effective, as are the fines that can be imposed on companies and individuals. This applies to a lesser extent to the leniency programme and enforcement under civil law. Only about 23% of respondents agreed with the proposition that the NMa does not interfere with arrangements that do not infringe the cartel prohibition.

Conclusion on cartel control

The following conclusions can be drawn on the basis of the online survey completed by 97 competition law advisers. For every sanction decision taken by the NMa, there are almost 5 cases that are unknown to the NMa in which an existing or proposed act or arrangement is terminated or modified on account of the advice received. In the case of competition restrictions for which compatibility with the Competition Act is unclear, a deterrence effect is also present. In 70% of the cases in which competition advice was given, the conduct was amended or terminated as a result of the advice.

The part of the survey on cases for which compatibility with the Competition Act is unclear, indicates that business chilling occurred in 12% of cases. An incorrect assessment was expected for 19% of cases.

6   Factors influencing the deterrence effect

6.1   Introduction

What factors determine whether a company anticipates the effect of NMa competition enforcement? Chapter 2 shows that the strategy of a company depends in theory on competition enforcement. How do the variables of competition enforcement work in practice? And to what extent do the variables influence the company's strategy? To what extent do the variables of enforcement yield a deterrence effect?

One of the aims of this study is to measure the extent to which various factors determine the deterrence effect. Again, for the sake of exposition we use the term deterrence for both merger and cartel control. The factors that can influence the deterrence effect can be assessed jointly (rather than individually) by means of conjoint analysis (also known as the vignette method). Here various hypothetical situations are presented to the respondent, who is then asked to classify them, usually by assessing the situation described. In this study respondents are asked how likely it is they would take a particular form of action.

Conjoint analysis is the most suitable method for this study. It belongs to the group of methods that study behavior on the basis of stated preferences.[35] The advantage of conjoint analysis is that it minimises factors that could distort the results, such as strategic responses and social bias.

Situations are presented in brief descriptions (vignettes). A vignette consists of a (limited) number of attributes, which express the variables relevant to the problem. The art of vignette analysis lies in constructing a number of vignettes that represent a certain tension in the attributes. The term tension refers to the fact that it is not possible to predict in advance on basis of theory how a respondent will assess the vignettes.

The respondent then assesses the vignettes and in doing so is implicitly required to value the different attributes. The respondent then ranks the attributes in a way that was not possible on the basis of theory. From the information collected in this way it is then possible to infer what variables (attributes) influence the anticipatory effect to a greater or lesser extent. It can be inferred from the answers what relative weight is attached to attributes such as the level of fine, personal fine, leniency, adverse publicity, processing period and administrative costs.

The data have been analysed by means of ordered logistic regression. This chapter gives the results of the conjoint analysis.
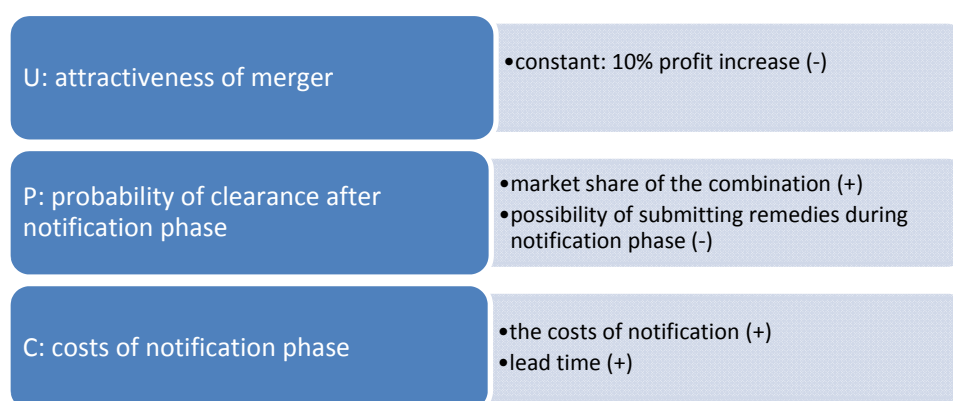
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[35]   The other group involves measurement on the basis of revealed preferences. For a complete overview see Van der Noll et al. (2010).

6.2   Factors influencing the deterrence effect

Mergers

The decision of whether to notify or abandon a merger proposal depends in theory on the attractiveness of the merger, the chance of obtaining regulatory clearance and the costs of the notification procedure. The effect of the last two determinants has been examined. Figure 6.1 shows the variables measured in the conjoint analysis. This concerns the market share of the combination to be created, the availability of remedies, the costs payable to the NMa and the lead time of the notification phase. How this is expected to influence the anticipatory effect is shown in parenthesis (see also chapter 2).

Figure 6.1   Factors influencing deterrence of merger control and expected effect

U: attractiveness of merger	•constant: 10% profit increase (-)
P: probability of clearance after notification phase	•market share of the combination (+) •possibility of submitting remedies during notification phase (-)
C: costs of notification phase	•the costs of notification (+) •lead time (+)

Source: SEO Economic Research

A conjoint assignment consists of hypothetical situations. First of all, an explanation was given to the respondent. This explanation is shown in brief in Box 6.1.

Box 6.1   Conjoint assignment merger control (company survey)[36]

> Below we will present you with six hypothetical situations. In each case the following applies.
> Your company wishes to merge with another company in the same sector. The merger plan is ready and you have reached agreement on the transaction. The transaction creates much extra value for both your company and for your merger partner. You assume that the joint profit will be 10% higher if the merger plan proceeds. Each situation describes a hypothetical merger control regime. Please indicate how probable it is in each of these situations that you would proceed with the merger up to notification? You can express the probability by assigning it a score on a scale of 1 to 10, 1 being the lowest probability and 10 the highest.[37] You can click on the underlined words for explanation.

Source: SEO Economic Research

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[36]   The text for competition lawyers is virtually the same. The main difference is that reference is made to 'your client' rather than 'your company'.

[37]   A score of 10 represents a low anticipatory response. This scale is reversed in the econometric analysis, where the anticipatory response increases in line with the score given. See section 6.5.

The situations consist of the market share of the combination to be created, the costs of the notification phase that should be paid to the NMa, the lead time of the notification phase and whether or not remedies are available in the specific situation. The situations are presented in pairs. Figure 6.2 shows the second screen. The respondent can click on the words underlined in blue for an explanation. After three pairs have been assessed the respondent is shown all six vignettes again at the same time and can adjust the scores provided previously.

Figure 6.2   Presentation of a pair of vignettes

Source: SEO Economic Research and Bureau Veldkamp

Figure 6.2 shows two arbitrary vignettes. The vignettes have been compiled on the basis of the attribute values in Table 6.1. The tables labeled "Situatie A" and "Situatie B" list in the left column a number of variables and in the right column their values.
Below the two tables, the text reads:

> *How likely is it that you would pursue the merger through to notification?*
>
> *Please assign a score on a 10-point scale, 1 being a very small probability and 10 a very large probability?*
>
> *Score for situation A:*
>
> *Score for situation B:*

The variables and their possible values are depicted in Table 6.1. The values marked in grey are explained in the discussion of the results in section 6.5.

Table 6.1   Conjoint analysis: attributes of merger control

Attribute	Value 1	Value 2	Value 3	Value 4
Market share of combination to be created	Lower than 40%	Between 40% and 70%		
Costs of notification phase	Zero	€ 5,000	€ 15,000	€ 30,000
Notification phase lead time	2 weeks	6 weeks	12 weeks	
Remedies[38]	Available	Not available		

Source: SEO Economic Research

Cartels

In theory, the stability of a cartel depends on the benefits produced by the cartel, the probability of detection and the loss after detection.[39] The factors studied in accordance are presented in Figure 6.3 below. The first column lists the factors resulting from Figure 2.2, and the second column indicates the attributes that have been used to capture these factors. The expected effect on deterrence is indicated with a plus or minus sign. The leniency programme is an exception to this. In theory, there are various hypotheses about how the leniency programme affects the stability of a cartel and the predictions are both negative and positive. On the basis of the theory, we do not know whether the effect is negative or positive. We have therefore marked this with a question mark.

Figure 6.3   Factors of deterrence of cartel control

U: attractiveness of cartel	• constant, 20% extra annual turnover(-)
P: probability of detection	• industry listed in NMa-Agenda (+) • leniency (?)
F: loss after detection	• personal fine (+) • company fine (+) • extent of adverse publicity (+) • leniency (?)

Source: SEO Economic Research

The instructions given to the respondent are summarised in Box 6.2. After this screen, the respondent is shown three pairs of vignettes, as in Figure 6.2.

Box 6.2   Conjoint instruction concerning cartel control

We are going to present you once again with six hypothetical situations. The following applies in each case.

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[38]   The explanation of this attribute is as follows: 'Remedies are adjustments to the merger plan that are intended to remove competition problems, for example through the divestment of business units. Remedies can be proposed to the NMa during the notification phase. The vignette states whether your specific situation is suitable for remedies.'

[39]   The conduct of other members of the cartel is disregarded in this study.

You have discovered that your company has entered into a price fixing agreement with a competitor. You strongly suspect that this agreement is not compatible with the cartel prohibition. The sales department has informed you that your business unit's annual turnover is 20% higher as a result of this price fixing agreement. Each situation describes a hypothetical regulatory regime. Please indicate how probable it is in each of these situations that you would give instructions to terminate the price fixing agreement. You can express probability by assigning it a score on a scale of 1 to 10, 1 being the lowest probability and 10 the highest. You can click on the underlined words for an explanation.

Source: SEO Economic Research

After assessing six vignettes, the respondent is shown all six again at the same time and can adjust the answers he has given previously. In the case of cartels the situations consist of the following attribute values. The fields marked grey are explained in section 6.6.

Table 6.2   Conjoint analysis: attributes of cartel control

Attribute	Value 1	Value 2	Value 3	Value 4
Personal fine	None	€450,000	€650,000	
Company fine	2% annual turnover	10% annual turnover	20% annual turnover	30% annual turnover
The sector is:	not listed in the NMa Agenda	listed in the NMa Agenda		
Leniency	Company expects to be the first applicant.	Company expects to be the second or subsequent applicant.	Not possible.	
Publicity	Only on the NMa website	NMa website and trade journals	All newspapers and television news	

Source: SEO Economic Research

6.3   Conjoint design

Designing a conjoint analysis involves making many choices. The design was based on a literature study and consultation with the NMa. The study uses scores on a 10-point scale as answer categories. This has the advantage that there are more than two answer categories. A simple yes/no assignment would have tempted the respondent to give the socially desirable answer. The data would have been less reliable in that case.

How have the vignette pairs been compiled? The vignettes were automatically generated.[40] For cartel control, for example, there are in total 3x4x2x3x3=216 unique vignettes.[41] Six different vignettes have been selected from them for each respondent. These were presented in three pairs as in Figure 6.2. Care was taken to ensure the attribute values of each pair did not deviate too markedly in a particular direction. The aim of the design was to ensure that the choice would not be 'easy'. If all the attributes in vignette A are more favourable than those in vignette B, there

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[40]   Bureau Veldkamp programmed the vignettes.
[41]   The design is explained by reference to cartels. The structure is analogous for mergers.

would be a danger that A would be given a 10 and B a 1. That would have had the disadvantage that the answers would not reveal the relative importance of the different attributes.

The design will now be explained in more detail. On the basis of theory it was decided what effect the attributes would have on deterrence. Table 6.2 ranks the attribution values from left to right in rising order of the deterrence effect: for example, the higher the fine, the greater the expected anticipatory effect. As no hypothesis is available for the effect of leniency in the case of cartel control an assumption has been made: if the company is expected to be the first applicant, the anticipatory effect is lower than if the company expects to be the second applicant. The anticipatory effect is greatest where leniency is not possible.

What restriction applies to the pairs? Assume that the first vignette in the pair consists of the cells hatched grey in Table 6.2. The second vignette must differ from the first. For some attributes the value in the second vignette will lie to the left of the grey cell, and for some to the right. At least one attribute must lie to the left or right of the grey cell.

How far the attribute of the second vignette differ from the grey cells is limited. A move to the left generates a -1, as in the case of a personal fine of zero. A step to the right generates a +1, as in the case of a company fine of 20% of the annual turnover. Two steps to the right produces a +2, for example publicity in all newspapers and the television news. In this way, the difference in points between the first and second vignettes can be determined for each attribute. The sum of these point differences per attribute must lie in the interval [-2.2].

Figure 6.4   Distribution of cartel vignettes by number of points
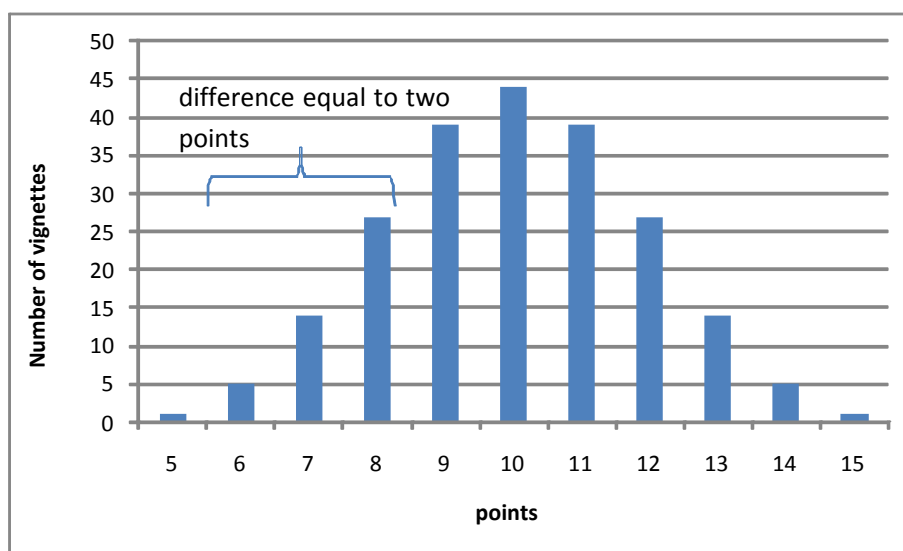
Source: SEO Economic Research

In this way a theoretical score can be assigned to each vignette. If one point is given to each attribute in the first column, the total score is 5. This situation occurs once. If the extremes on the right-hand side of the table are chosen, the score is 15. For example, a vignette with a score of 8 may be paired with a vignette with scores of 6, 7, 8, 9 and 10. 128 vignettes are possible (see

Figure 6.4). No restriction is imposed between pairs. It follows that in the six vignettes of a given respondent both the score 5 and the score 15 may occur.

An example clarifies this further. Assume that in the second vignette the company fine is equal to 30% of the annual turnover, which produces +2 points. This means that the sum of the points of the other attributes may not exceed zero. What is permitted, for example, is a lower personal fine (personal fine equal to zero, which gives -1) and a listing in the NMa Agenda (this gives +1). In that case the sum of the points is +2 -1 +1=+2. Leniency may involve two steps to the left; this gives + 2 -1 +1 -2=0. Publicity must remain the same as in the first vignette, otherwise the total points difference exceeds +2.

The attributes are always presented in an arbitrary order. The following procedure summarize the design of vignettes:
1. Two vignettes are drawn at random.
2. If the difference is less than -2 or more than +2, one vignette is put back and another drawn at random. This step is repeated until the difference lies in the interval [-2,+2]. The respondent is shown the screen that appears in Figure 6.2, and the sequence of the attributes is arbitrary.
3. The second pair is drawn at random from the set of vignettes excluding the first pair (i.e. 214 vignettes in the case of cartel control). After all, the six vignettes must differ. If the difference between the vignettes in the second pair is less than -2 or more than +2, one vignette is put back and another drawn at random. This step is repeated until the difference between the second pair lies in the interval [-2,+2]. The respondent is once again shown the screen that appears in Figure 6.2, now with the headings Situation C and Situation D.
4. The third pair is drawn from the set of vignettes, excluding the first four already drawn, in the same way as in steps 2 and 3. The respondent is shown the third pair, consisting of Situations E and F.
5. After assessing the third pair, the respondent is once again shown the six vignettes, including the scores she/he has given them. The respondent can then adjust the scores if he wishes.

To avoid cognitive stress, the vignettes are first presented in pairs and the differences between the vignettes in each pair are not too great. No restrictions are imposed on the differences between pairs. In step 5 the respondent assesses the six vignettes together in their mutual relationship. The econometric model takes this into account by clustering the standard errors per respondent.

6.4 Ordered logistic regression

The regression technique employed in this study is briefly described below. Suppose that the choice of the respondent consists of M alternatives 1, … , M and that these alternatives can be ranked. The researcher wishes to predict the probability that alternative j will be chosen by individual i. The ordered logistic model assumes that there is an underlying latent variable y_i^*:

$$y_i^* = x_i \beta + \varepsilon_i$$
$$y_i = j \text{ als } \gamma_{j-1} < y_i^* \leq \gamma_j$$

In the case of cartels y^*, for example, indicates the extent to which the individual is inclined to terminate the cartel. The values of the attributes of vignette i are represented as x_i and form the explanatory variables in the regression. The explained variable is the score given to vignette y_i, and variable ε_i is the error term. The domain of y^* is split into M-1 segments, each segment corresponding to one of the alternatives. The probability that an alternative m is chosen is now equal to the chance that the latent variable y^* lies in the corresponding segment. On the basis of maximum likelihood the coefficients β and the demarcations γ are estimated. Box 6.3 shows the complete regression model for cartel control; the model for merger control is analogous to this.

Box 6.3   The ordered response model for anticipating cartel control

The question in Box 6.2 is presented to the respondent. Each hypothetical situation is based on the values in Table 6.2. The values of the attributes of vignette i are denoted as x_i and are the explanatory variables in the regression. The explained variable is the score given to the vignette y_i, and the variable ε_i is the error term. The latent variable y^* can be interpreted as 'inclination to terminate the price fixing agreement'.

The model takes the following form:

$$y_i^* = x_i\beta + \varepsilon_i$$
$$y_i = 1 \ \text{alsif} \ y_i^* \le \gamma_1$$
$$y_i = 2 \ \text{alsif} \ \gamma_1 < y_i^* \le \gamma_2$$
$$y_i = j \ \text{alsif} \ \gamma_{j-1} < y_i^* \le \gamma_j$$
$$...$$
$$y_i = 10 \ \text{alsif} \ y_i^* > \gamma_9$$

The coefficients β and the demarcations γ are estimated on the basis of maximum likelihood. The higher is y^*, the greater the deterrence effect. A positive coefficient β implies that the variable makes a positive contribution to the deterrence effect.

The logit model imposes a specific probability distribution to variable γ_j: the logistic distribution. The probability distribution imposed is:

(1) $F(z) = \Pr(\gamma \le z) = \dfrac{e^z}{1+e^z}$

$F(z)$ gives for each arbitrary z the probability that γ is smaller than or equal to z. How likely is it that the respondent gives a 10 according to the estimated model?
The probability of score 10 is:

(2) $\Pr(y_i = 10 \,|x_i) = \Pr(y_i^* > \gamma_9) = \Pr(\varepsilon_i > \gamma_9 - x_i\beta) =$
$$1 - F(\gamma_9 - x_i\beta) = 1 - \dfrac{e^{\gamma_9 - x_i\beta}}{1 + e^{\gamma_9 - x_i\beta}}$$

Note that γ_9 and β are given by the estimation results. The values of the vignette give x_i. The above equation therefore no longer contains any unknowns and the resulting number is the probability of score 10.

Source: SEO Economic Research

The ordered logit model is preferable to other regression techniques. This is because the data from the conjoint measurement is multinomial: score 1 to 10 are discrete data and cannot take on more than these 10 values. This is an important distinction with, say, continuous data such as annual turnover in euros. Due to this distinction the ordered logit is preferable to, for example, OLS regression; see also Cameron & Trivedi (2005).

6.5   Results for mergers

The respondents were asked how probable it would be that they would notify a merger.[42] This is easier to ask than how probable it would be that they would not notify a merger. However, the latter indicates the deterrence effect. The scores have therefore been recoded using the following formula:

> score for anticipatory effect = 11 – original score.

Companies

Table 6.3 shows the frequency with which the different scores are given. One respondent completed two vignettes and 242 respondents completed six. This gives a total of 1,456 vignettes. The table shows that all possible scores were given. According to the table, 3 was the score given most often. As the scores have been recoded, this corresponds to answer 8 to the question of the probability that the merger would be notified. A 10 expresses the strongest anticipatory effect and was given to 5% of the vignettes.

Table 6.3   Scores given for concentrations (companies)

Score (recoded)	Number	Percentage
1	199	13.7%
2	131	9.0%
3	324	22.3%
4	262	18.0%
5	170	11.7%
6	146	10.0%
7	68	4.7%
8	45	3.1%
9	38	2.6%
10	73	5.0%
Total	1,456	100.0%

Source: SEO Economic Research

It became apparent in section 6.3 that the spread per respondent is important. A spread in the scores given shows that the attribute values influence the anticipatory effect and enables the researchers to determine the relative importance of the attributes. Table 6.4 shows that 83% of the respondents varied their scores, conversely, 40 respondents awarded the same score to each vignette. The design also attempted to prevent a situation in which the respondents gave mainly ones and tens since it would then have been impossible to determine the relative importance of the factors. This proved successful as the four respondents who gave a one and a ten also awarded other scores.

The table below shows the spread. The response {1,3,5,7,9,10} would generate a standard deviation of 3.5 and answers {10, 10, 10, 10, 10, 10} give a standard deviation of 0. The standard deviation per respondent in the six scores given was calculated. This varied from 0 to 4.

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[42]   A score of 10 indicates a high probability of notification.

Table 6.4   Spread in scores for mergers per respondent (company survey)

Standard deviation	Number	Percentage
0.0	40	16.5%
0.5	15	6.2%
1.0	62	25.5%
1.5	49	20.2%
2.0	31	12.8%
2.5	33	13.6%
3.0	8	3.3%
3.5	4	1.7%
4.0	1	0.4%
Total	243	100.0%

Source: SEO Economic Research, the standard deviations have been rounded to multiples of 0.5.

The model in Box 6.3 has been used to predict the scores. The variables in Table 6.5 are the regressors x and have been included as dummies in relation to the base situation. If, for example, the costs of the notification are zero in the vignette the variable 'costs zero' gets the value 1; if the costs are higher this variable gets a value 0. The outcomes of the regression are shown in Table 6.5. The second column shows the estimated coefficients β. The third and fourth columns show the significance of the coefficient: the further the z value lies from zero, the greater the chance that the effect found is statistically significant. The fourth column shows the probability that the effect does *not* exist.

Table 6.5   Ordered logit model: probability that a company will not notify a merger plan (compa-
nies)

Variable	Coefficient	Z value	p>|z|
Costs zero	-0.571**	-4.27	0.000
Costs of €5,000	-0.323**	-2.58	0.010
Costs of €30,000	0.395**	2.98	0.003
Lead time of 2 weeks	-0.207*	-1.87	0.061
Lead time of 12 weeks	0.232**	2.05	0.040
Market share 40% to 70%	-0.327**	-2.42	0.016
Remedies available	-0.547**	-5.57	0.000
γ_1	-2.508		
γ_2	-1.874		
γ_3	-0.796		
γ_4	-0.018		
γ_5	0.561		
γ_6	1.220		
γ_7	1.651		
γ_8	2.034		
γ_9	2.486		

Source: SEO Economic Research. The McFadden Pseudo-R2 is equal to 0.018 and the McKelvey & Zavoina
Pseudo-R^2 to 0.071 and the number of observations is 1456. The standard errors have been cor-
rected for clustering per respondent. ** significant at 5%, * significant at 10%.

All coefficients, except 'lead time 2 weeks', are significant at 5%; however, this variable is significant at a reliability level of 10%. A significant level of 5% means that there is a 95% probability that the effect is present.

If a coefficient has a positive sign, this indicates that deterrence increases in the independent variable. It should be noted that the distinction between deterrence and business chilling cannot be made here. The vignettes do not, after all, specify whether or not the concentration is anti-competitive. Only the market share of the combination to be created is indicative about the perceived chance of clearance.

Table 6.5 provides the following insights: a reduction of the costs which should be paid to the NMa reduces the anticipatory effect and an increase in costs causes a rise in the anticipatory effect. The availability of remedies weakens the anticipatory effect. Shortening the lead time of the notification phase reduces the anticipatory effect and extending the time increases the effect. A vignette in which the market share is between 40% and 70% provides a lower chance of an anticipatory response than a vignette in which the market share is under 40%. This result differs from the expected sign in Figure 6.1.

A possible explanation for this is that achieving a high market share contributes to the attractiveness of a merger plan. The market share can in theory influence both the probability of approval P (negative effect) and the attractiveness of the merger U (positive effect). These two effects counteract each other. The design of the vignette attempts to ensure that the attractiveness of the merger remains constant so that it is possible to study only the effect on the expected probability of NMa clearance. However, it is possible that respondents have interpreted a high market share as an indication that the plan is attractive, despite the description in Box 6.1. The results indicate in any event that the latter effect weighs more heavily than the effect on the perceived chance of approval.

The table uses the symbols ** and * to indicate which effects are statistically significant. In what other ways can the econometric model be assessed? In linear models it is possible to indicate by means of the R^2 how much variance in the y variable is explained by the model. R^2 lies between 0 and 1 and the higher the R^2, the more the variance is explained. If R^2 is lower than 1, this indicates that, apart from the x variables, there are other explanations for the variance in the outcome y. However, in a model in which the explained variable is not continuous, for example in the ordered logit model used in the present study, it is by no means easy to calculate an R^2 of this kind. Nonetheless, measures are available that try to imitate the R^2. For the experienced reader, both the McFadden Pseudo-R^2 and the McKelvey & Zavoina Pseudo-R^2 are therefore reported in the estimation results (see Box 6.4).

Box 6.4   Pseudo-R[2] for non-linear models

Various authors have made proposals for a Pseudo R^2, which attempts to approximate the function of R^2 in the standard linear model. Veall & Zimmerman (1996) survey and analyse these different attempts. The different methods often produce divergent outcomes: in a typical model with 1,000 observations the authors find that the McFadden R^2 is equal to 0.25, whereas the McKelvey & Zavoina R^2 is equal to 0.5. Which method is preferable? The authors state:

Our favoured approach is simply to choose a Pseudo-R2 in the limited dependent variable context that will be as comparable as possible with the accumulated experience from R2 in OLS regression. (Veall & Zimmerman 1996, p. 242)

For models with more than two discrete outcomes, the authors conclude that the McKelvey & Zavoina Pseudo-R2 is to be preferred. This is why the results in this chapter report this measure. Empirical applications in the literature show that the Pseudo-R2 levels found in this study are not unusual.

Source: SEO Economic Research

In order to test the robustness of the conclusions to other specifications, a number of variations on the above model are included in the annex at the end of this chapter.

What is the significance of the exact *value* of the coefficients for the estimated anticipatory effect? Interpreting the outcomes is more difficult than in the case of the standard linear regression models. The coefficients should be viewed in conjunction with the formulas in Box 6.3.

The following situation is taken as the basis for the interpretation of the results: the costs of notification are €15,000, the lead time is six weeks, the market share is low and it is not possible to submit remedies in the notification phase. The model in Table 6.5 predicts that there is an 8% probability of a score of 10 in this situation. The probability of a score of 8 or higher is 16%. How do these probabilities change if one of the attribute values changes? The following table shows the effects.

We proceed on the basis of the second column: if a respondent has given a score of 8 or higher, this indicates an anticipatory response. The table shows that if the merger notification were to be free of charge, the anticipatory effect would diminish: the probability of an anticipatory response declines from 16% to 10%. A smaller decrease in the costs has a weaker effect. A cost increase of €15,000 produces an increase in the anticipatory effect: the probability of an anticipatory response increases from 16% to 22%. Both a cost increase and a cost decrease have the expected effect on the anticipatory response; this suggests that the costs of the notification phase play a role in the company's strategy. The availability of remedies has a strong effect on the anticipatory response: the probability that the merger will be abandoned drops from 16% to 10%.

A doubling of the lead time has less effect than a doubling of the costs: the probability of an anticipatory response rises from 16% to 19%. However, halving the lead time has a weaker negative effect on the anticipatory response. The negative effect of a high market share on the anticipatory response is more or less offset by a doubling of the lead time.

Table 6.6   Effects of changes in merger control on anticipation (companies)

Change	Effect on the probability of y=10 (percentage points)	Effect on the probability of y>7 (percentage points)
Probability of outcome*	7.68	16.10
Costs reduced from €15,000 to zero	- 3.19	- 6.32
Costs reduced from €15,000 to €5,000	- 2.00	- 3.90
Costs increased from €15,000 to €30,000	+ 3.31	+ 6.07
Lead time reduced from 6 to 2 weeks	- 1.34	- 2.60
Lead time increased from 6 to 12 weeks	+ 1.82	+ 3.38
Market share increased from under 40% to 40%-70%	- 2.02	- 3.94
Remedies available	- 3.09	- 6.10

Source: SEO Economic Research
          * This row indicates the probability of the respective score in the given situation.

What policy changes from the NMa's current policy on merger control have the strongest effect on the anticipatory response, i.e. increasing the costs, increasing the lead time or limiting the possibility of submitting remedies?[43] The model can predict the effects of these changes. Table 6.7 ranks the effects. The higher the ranking, the greater the anticipatory effect. The change in the *last* rule produces the *strongest increase* in the number of merger notifications.

Table 6.7   What change has the greatest impact on concentrations (companies)?

Factor	Anticipatory effect	Ranking
Remedies not available	+	1
Costs increased from €15,000 to €30,000	+	2
Lead time increased from 6 to 12 weeks	+	3
Lead time reduced from 6 to 2 weeks	-	4
Costs reduced from €15,000 to €5,000	-	5
Costs reduced from €15,000 to zero	-	6

Source: SEO Economic Research

Limiting the possibility of submitting remedies has the strongest effect. This is also apparent from the last line of Table 6.6. On the basis of this table it is also possible to calculate the opposite changes: when remedies are not available (as opposed to when they are) the probability of an anticipatory response increases by six percentage points. It can also be inferred from the results that the effect of a cost increase from zero to €15,000 is approximately equal to the effect of the unavailability of remedies.

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[43]   As the market share of a proposed concentration cannot be influenced by the NMa, this variable has been disregarded.

Advisers

Table 6.8 shows how the scores given by the advisers are distributed. All possible scores were given. This table shows that 3 was the score most frequently given. As these scores have been recoded, this corresponds to the score 8 actually submitted by the respondent. A 10 was given to four vignettes. This picture corresponds with the results of companies' survey: in very few cases would the respondent assign the highest probability to the option of not notifying a merger. Since for none of the vignettes it is specified whether the merger is anti-competitive, this result is not surprising. It indicates that an attractive merger proposal is not likely to be abandoned on account of merger control.

Table 6.8   Scores given for mergers (adviser survey)

Score (recoded)	Number	Percentage
1	43	19.4%
2	31	14.0%
3	53	23.9%
4	38	17.1%
5	17	7.7%
6	16	7.2%
7	14	6.3%
8	4	1.8%
9	2	0.9%
10	4	1.8%
Total	222	100.0%

Source: SEO Economic Research

In the case of advisers, 36 respondents completed six vignettes, one respondent completed four and one completed two; this gives a total of 222 vignettes. The spread in the scores per respondent is shown in Table 6.9. Most respondents gave varied answers. The percentage of respondents giving the same score on six occasions is slightly higher than in the case of companies.

Table 6.9   Spread in scores per respondent (adviser survey)

Standard deviation	Number	Percentage
0	7	18.4%
0.5	1	2.6%
1.0	9	23.7%
1.5	10	26.3%
2.0	6	15.8%
2.5	3	7.9%
3.5	2	5.3%
Total	38	100%

Source: SEO Economic Research.
         The standard deviations have been rounded to multiples of 0.5.

The results of the econometric estimation of the anticipatory effect are shown below. The further the z value lies from zero, the more reliable is the effect. The fourth column shows the probabili-

ty that the effect does *not* exist. All variables have been included as dummies in relation to the basic situation shown in Table 6.1.

Table 6.10   Ordered logit model: probability that a company will not notify a merger plan (adviser survey)

Variable	Coefficient	z value	P>|z|
Costs zero	-0.586*	-1.90	0.057
Costs of €5,000	-0.876**	-2.54	0.011
Costs of €30,000	-0.111	-0.40	0.689
Lead time of 2 weeks	0.394	1.36	0.172
Lead time of 12 weeks	0.511*	1.68	0.092
Market share increased from 40% to 70%	2.499**	6.72	0.000
Remedies available	-0.978**	-3.77	0.000
γ_1	-1.157		
γ_2	-0.210		
γ_3	1.185		
γ_4	2.184		
γ_5	2.750		
γ_6	3.476		
γ_7	4.512		
γ_8	5.070		
γ_9	5.502		

Source: SEO Economic Research. The McFadden Pseudo-R^2 is equal to 0.107 and the McKelvey & Zavoina Pseudo-R^2 to 0.347. The number of observations is 222. The standard errors have been corrected for clustering per respondent. ** significant at 5%, * significant at 10%.

As two of the seven variables are not significant in this model, we cannot conclude that they produce an anticipatory effect. This applies to a shortening of the expected lead time and to an increase in costs. However, an extension of the lead time does have an effect, as does a reduction of the costs.

The strongest effects are produced by the availability of remedies and the market share. The advice provided by the adviser is more strongly influenced by the perceived likelihood of clearance than by the costs of the notification phase. This is hardly surprising: the adviser is consulted in order to estimate or influence the outcome of the notification phase and does not himself bear the costs.

The coefficient for market share is 2.5. This in itself shows that the variable has a very strong effect on the anticipatory response. It should be noted that the direction of the response is positive, unlike the results for companies. In the case of companies the result indicated that a high market share contributes to the attractiveness of the merger. For advisers, however, the market share of the merging parties is an indication of the probability of clearance, as was expected on the basis of the theory.

The following situation is again taken as the basis for interpreting the results: the costs of the notification are €15,000, the expected lead time is six weeks, the market share is less than 40% and no remedies are available. In this situation the probability of a score of 10 is less than 1%. As the market share is low in the basic situation, the adviser will not lightly recommend abandoning the plan. It should be noted that this probability is estimated to be higher in the case of the company. If the market share does exceed 40%, there is a 5% probability of a score of 10.

As respondents may arguably be less inclined to express a preference for extremes, the probability of a score of 8 or higher is also examined. The probability of a score of 8 or higher is equal to 1% in the initial situation and rises to 12% if the market share exceeds 40%.

How do these probabilities change if the other variables of merger control change? Table 6.11 reports the marginal effects.

Table 6.11   Effects of changes in merger control on anticipation (adviser survey)

Change	Effect on the probability of y=10 (percentage points)	Effect on the probability of y>7 (percentage points	Effect on the probability of y>5 (percentage points)
Probability of outcome*	0.14	1.09	6.01
Costs reduced to zero	- 0.18	- 0.48	- 2.57
Costs reduced from €15,000 to € 5,000	- 0.24	- 0.63	- 3.42
Lead time increased to 12 weeks	+ 0.27	+ 0.71	+ 3.62
High market share of 40%-70%	+ 4.32	+ 10.70	+ 37.75
Remedies available rather than not available	- 0.25	- 0.67	- 3.66

Source: SEO Economic Research
          * This row indicates the probability of the respective scores in the given situation.

As the scores 8, 9 and 10 are not given often, the probability of a score of 6 or higher is also included. By way of illustration, the probability of a score higher than 7 falls by 0.67 percentage points from 1.09% to 0.41% if remedies are available. The market share of the concentration has a relatively large effect on whether the adviser recommends that the proposal be notified or abandoned. These results also make clear that the costs, lead time and remedies have a much smaller effect.

It is noteworthy that the decrease in costs of €10,000 has a stronger effect than a decrease in costs of €15,000. As this is inconsistent, only the most reliable effect in statistical terms is therefore shown in Table 6.12 below.

The table shows how the different factors are ranked in relation to one another in terms of the anticipatory response. Market share stands head and shoulders above the other factors. It should be noted that the other effects are similar in magnitude.

Table 6.12   Ranking of factors affecting anticipatory response to merger control (adviser survey)

Factor	Effect	Ranking
Market share 40% - 70%	+	1
Lead time 12 weeks	+	2
Costs reduced from €15,000 to €5,000	-	3
Remedies available	-	4
Lead time reduced	No significant effect	
Costs increased	No significant effect	

Source: SEO Economic Research.

Conclusion merger control

For both companies and advisers, the costs of notification in terms of both financial costs and lead time have an effect. A cost increase has an effect for companies but not for advisers. However, a cost reduction does have an effect on the advice. Whether market share serves as an indication of the perceived chance of clearance is unclear in the case of companies, but it does have this effect in the case of advisers.

There is a low probability that a concentration will be abandoned. This can be explained by the fact that it is not specified whether the concentration is anti-competitive. The probability of clearance does influence the decision whether or not to abandon a plan: the possibility of submitting remedies has an effect on the anticipatory response for both groups. In the case of advisers the results indicate that the market share of the combination influences the perceived chance of clearance.

6.6   Results cartel control

In the case of cartel control the respondents were asked to indicate how probable it would be that they would terminate (or, as the case may be, advise termination) of a price fixing agreement. The description of the hypothetical situation left no doubt about the illegal nature of the agreement. In the case of companies, the respondent was asked how probable it would be that the director of the company would give instructions internally to terminate the price fixing agreement. The respondents were informed that the agreement generates a higher annual turnover.

In the case of the advisers, the description of the situation states that the client has discovered that the company has made a price fixing agreement with a competitor. It also states that the client strongly suspects that the agreement is not compatible with the cartel prohibition. Moreover, the sales department of the relevant company has informed the client that the business unit for which the client is responsible has generated 20% more annual turnover as a result of the price fixing agreement. The vignettes are explained in section 6.2.

Companies

Table 6.13 shows the frequencies of the scores given. 248 respondents completed six vignettes. Note that the score most commonly given is 10.

Table 6.13   Scores given for cartels (by companies)

Score	Number	Percentage
1	53	3.6%
2	3	0.2%
3	15	1.0%
4	30	2.0%
5	29	2.0%
6	47	3.2%
7	95	6.4%
8	244	16.4%
9	156	10.5%
10	816	54.8%
Total	1,488	100.0%

Source: SEO Economic Research

The spread in the scores per respondent is low (see Table 6.14).

Table 6.14   Spread in scores per respondent

Standard deviation	Number	Percentage
0.0	152	61.3%
0.5	22	8.9%
1.0	36	14.5%
1.5	15	6.1%
2.0	11	4.4%
2.5	6	2.4%
3.0	2	0.8%
3.5	4	1.6%
Total	248	100.0%

Source: SEO Economic Research. The standard deviations have been rounded to multiples of 0.5.

The results show that 152 respondents submitted the same score to the six vignettes. This indicates that the variation in attribute values has no effect for these respondents. This may possibly be explained by the fact that the criminal nature of the cartel provides a strong incentive to terminate the behavior, regardless of the specific circumstances described in the attributes.

It is therefore interesting to examine the following vignette: no personal fine, lowest fine for the company and no listing of the sector in the NMa Agenda. These vignettes describe a relatively low loss after detection and a relatively low probability of detection. There were 66 vignettes that fulfilled these requirements and 72% of them were scored with a high level of deterrence (a score of 8 or higher). No statistical conclusions can be drawn on that basis however. To obtain statistical results, the econometric model is used (see Table 6.15). The variables have been included as dummies in relation to the cells marked grey in Table 6.2.

Table 6.15   Ordered logit model: probability that a cartel will be ended (company survey)

Variable	Coefficient	z value	P>|z|
Personal fine zero	-0.477**	-3.76	0.000
Personal fine of €650,000	0.148	1.14	0.253
Company fine of 2% of annual turnover	-0.250*	-1.95	0.051
Company fine of 20% of annual turnover	0.017	0.13	0.900
Company fine of 30% of annual turnover	0.080	0.54	0.591
Sector listed in the NMa Agenda	0.027	0.28	0.781
Company expects to be first applicant for leniency	0.008	0.06	0.952
Company expects to be second or subsequent applicant for leniency	0.079	0.67	0.500
Publicity: NMa website and trade journals	-0.140	-1.13	0.257
Publicity: all newspapers and TV news	0.036	0.26	0.797
γ_1	-3.503		
γ_2	-3.446		
γ_3	-3.198		
γ_4	-2.823		
γ_5	-2.548		
γ_6	-2.200		
γ_7	-1.687		
γ_8	-0.804		
γ_9	-0.354		

Source: SEO Economic Research. The McFadden Pseudo-R^2 is equal to 0.009 and the McKelvey & Zavoina Pseudeo-R^2 to 0.028. The number of observations is 1488. The standard errors have been corrected for clustering per respondent. ** significant at 5%, * significant at 10%.

Only the personal fine and the company fine are statistically significant. We are unable to conclude whether any of the other variables does or does not have a deterrence effect. The listing in NMa Agenda does yield the expected sign, on the basis of theory there is no clear expectation of the effect of the leniency programme.

Many respondents did not show variation in their scores. How do the econometric results change if these respondents are disregarded? This step is carried out in the annex. The conclusion is that in the modified model only the decrease in the personal fine from €450,000 to zero has an effect. The other variables are not significant at 10%.

The following situation is taken as the basis for interpreting the results: the fine for the company is 10% of the annual turnover, the personal fine is €450,000, the sector is not listed in the NMa Agenda, leniency is not possible and any investigation is published only on the NMa's website. The ordered logit model predicts that in this situation there is a 59% probability of a score of 10 and an 84% probability of a score of 8 or higher. These results bear out the fact that many respondents gave a score of 10. It should be noted that this deterrence effect is much higher than in the case of merger control. In the case of merger control, the issue is not whether to display illegal behaviour or not. Moreover, it is not known whether the merger is anti-competitive, whereas this is clearly the case with cartels. This distinction has a strong bearing on the deterrence effect. How does the predicted deterrence effect change if one of the attribute values changes? The following table shows the effects of the statistically significant variables.

Table 6.16   Effects of changes cartel control (company survey)

Change	Effect on the probability of y=10 (percentage points)	Effect on the probability of y>7 (percentage points)
Probability in base situation*	58.76	84.38
Personal fine reduced from €450,000 to zero	- 11.84	- 7.36
Company fine reduced from 10% to 2%	- 6.16	- 3.58

Source: SEO Economic Research. * This row gives the probability of the respective scores in the given situation.

It should be noted that the effect of an *increase* in the personal fine from zero to €450,000 can also be calculated on the basis of Table 6.16. The probability of a score of 8 or higher would increase from 77% to 84%, which is a rise of precisely 7.36 percentage points. The same applies to the company fine.

The personal fine has a much greater deterrence effect than the company fine. The estimation results also show that if the fines are raised in comparison with the basic situation this has no effect on deterrence, but a reduction in the fines does produce a decrease in the response. How the factors rank in relation to one another is shown in Table 6.17.

The conclusions that can be drawn from the conjoint analysis are as follows. If respondents discover a prohibited price fixing agreement in their own company, they are strongly inclined to terminate it. The expected financial loss after detection has an effect on the extent of this deterrence. No effect has been shown for reputational harm, the listing of the sector in the NMa Agenda (a proxy for the probability of being caught) or the leniency programme. Financial loss affecting the director personally has a greater effect than financial loss suffered by the company.

Table 6.17   Factors of deterrence cartel control (company survey)

Factor	Effect	Ranking
Personal fine	+	1
Company fine	+	2
NMa Agenda	No effect shown	
Leniency programme	No effect shown	
Publicity	No effect shown	

Source: SEO Economic Research.

Advisers

As regards advisers, the distribution of scores and the spread per respondent are shown in

Table 6.18 and Table 6.19 respectively. 182 vignettes were completed: 30 respondents completed six vignettes and one respondent completed two.

Table 6.18   Frequency table: scores given by advisers (cartel control)

Score	Number	Percentage
1	6	3,3%
4	2	1.1%
5	13	7.1%
6	11	6.0%
7	11	6.0%
8	33	18.1%
9	27	14.8%
10	79	43.4%
Total	182	100.0%

Source: SEO Economic Research.

Scores 2 and 3 were not given.

Table 6.19   Spread in scores per adviser (cartel control)

Standard deviation	Number	Percentage
0	19	61.4%
0.5	5	16.1%
1.0	5	16.1%
1.5	1	3.2%
2.0	1	3.2%
Total	31	100.0%

Source: SEO Economic Research. The standard deviations have been rounded to multiples of 0.5.

As also noted in the company survey, advisers often submitted a 10 and there is little spread in the individual answers. The answers of nineteen respondents showed no variation at all, and twelve of them submitted 10 for all six vignettes. These results indicate that the advice given by many advisers is independent of the variations in damage, probability of detection and leniency programme. The outcomes of the econometric estimate of the deterrence effect are shown in Table 6.20. The cells marked grey in Table 6.2 form the basis for the dummy variables.

Raising the company fine has a statistically significant effect, but the other variables do not. The company fine shows the expected sign.

Many respondents did not show variation in their scores. How do the econometric results change if these 19 respondents are disregarded? This step is carried out in the annex, where it is concluded that even in the modified model only the increase in the company fine from 20% to 30% is significant (the p value is equal to 0.020). The McKelvey & Zavoina Pseudo-R^2 shows a substantial improvement for that model (to 0.215).

Table 6.20 Ordered logit model: probability that a cartel will be terminated (adviser survey)

Variable	Coefficient	z value	P>|z|
Personal fine zero	0.238	0.59	0.557
Personal fine of €650,000	-0.356	-1.19	0.232
Company fine of 2% of annual turnover	-0.105	-0.22	0.822
Company fine of 20% of annual turnover	0.602	1.53	0.126
Company fine of 30% of annual turnover	0.995**	2.71	0.007
Sector listed in the NMa Agenda	-0.358	-1.29	0.197
Company expects to be first applicant for leniency	-0.404	-1.55	0.122
Company expects to be second or subsequent applicant for leniency	-0.293	-0.79	0.429
Publicity: NMa website and trade journals	0.296	0.81	0.419
Publicity: all newspapers and TV news	-0.036	-0.11	0.915
γ_1	-3.546		
γ_4	-3.245		
γ_5	-2.186		
γ_6	-1.677		
γ_7	-1.287		
γ_8	-0.371		
γ_9	0.282		

Source: SEO Economic Research. The McFadden Pseudo-R^2 is equal to 0.029 and the McKelvey & Zavoina Pseudo-R2 to 0.090. The number of observations is 182. The standard errors have been corrected for clustering per respondent. ** significant at 5%. Please note: scores 2 and 3 were not given.

The following situation is once again taken as the basis for interpreting the results: the company fine is 10% of the annual turnover, the personal fine is €450,000, the sector is not listed in the NMa Agenda, leniency is not possible and any investigation is published only on the NMa's website. In this situation there is a 43% probability of a score of 10 and a 78% probability of a score of 8 or higher. Just as in the case of the companies' answers, there is a large probability that the adviser will recommend the cartel be terminated immediately. It should be noted that this probability is slightly lower than in the case of companies. The deterrence effect of cartel control on the advice is many times higher than in the case of advice on concentrations. How do these probabilities change if the company fine is increased to 30% of the annual turnover?

Table 6.21 Effects of changes cartel control (adviser survey)

Change	Effect on the probability of y=10 (percentage points)	Effect on the probability of y>7 (percentage points)
Probability of outcome*	43.01	78.36
Company fine increased to 30%	+ 24.12	+ 14.84

Source: SEO Economic Research. * This row gives the probability of respective scores in the given situation.

The probability of a score 10 increases from 43% to 67% if the company fine is tripled from 10% to 30%. No effect has been demonstrated for other changes in damage after detection (e.g. the

personal fine, reduction of the company fine and publicity). For changes in the probability of detection (i.e. the listing in the NMa Agenda) and the leniency programme no effect was found either.

Table 6.22   Ranking of factors deterrence cartel control (adviser survey)

Factor	Effect	Ranking
Company fine	+	1
Personal fine	No effect shown	
Publicity	No effect shown	
NMa Agenda	No effect shown	
Leniency programme	No effect shown	

Source: SEO Economic Research

In general, the fewer the observations the more difficult it is to demonstrate statistically significant effects. The estimation results above are based on relatively few observations (182 in the basic model and 72 in the model that excludes the 19 respondents whose answers contain no variation). This fact strengthens the conclusion about the company fine. If the study were to be repeated with more observations, other variables could in theory also be shown to have a significant effect.

Conclusion on cartel control

The results show that the cartel prohibition has a high deterrence effect. Companies and advisers indicate that there is a high probability that they would (advise to) terminate a price fixing agreement. Indeed, the variations in the factors studied have little influence on many responses.

The only factor shown to have an effect in the case of advisers is financial loss for the company after detection. Factors for which no effect was found are the personal fine for the manager, publicity, the listing of the sector in the NMa Agenda and the leniency programme. The study has therefore not demonstrated an effect for the probability of detection on deterrence. In the company survey, only the expected financial loss after detection has an effect on deterrence. The financial loss that the manager suffers has a larger effect than the financial loss for the company.

Regression Analysis Annex

This annex examines two variations on the basic model:

- including the control variables 'company size' and 'sector' in the model for companies;
- excluding the respondents whose answers contain no variation.

Company control variables

The database of the Chamber of Commerce includes information about company size and sector, according to the Standard Industrial Classification. The following table shows the estimation results for companies if these variables are included in the regression model for merger control. This has also been done for cartel control. The sectors included as dummies in the model represent 81% of the observations. The reference group consists of the other industrial sectors:

- A: Agriculture, forestry and fishing
- B: Mineral mining
- D: Production and distribution of and trade in electricity, natural gas, steam and cooled air
- E: Abstraction and distribution of water; waste and waste water management and treatment
- H: Transport and storage
- I: Board and lodging, provision of meals and beverages
- J: Information and communication
- L: Leasing and trade in property
- P: Education
- R: Culture, sport and recreation
- S: Other services

The coefficients for the factors affecting the anticipatory response to merger control differ minimally from those in the basic model in Table 6.5. From the control variables only the size of the workforce is significant: the larger the number of employees the lower the anticipatory effect.

This step was also carried out for cartels. As the conclusion of the basic model remains unchanged (only the personal fine and reduction of the company fine are significant) and in the case of the control variables only sector 'C_industry' is significant at 5%, this is not shown in a table. The C_industry sign is positive: respondents in this sector show a slightly higher deterrence. The effect is dominated by the personal and company fine.

Including the control variables has no effect on the conclusions of the basic model.

Table 6.23   Ordered logit model: probability that a company will not ultimately notify a merger plan (company survey), including control variables

Variable	Coefficient	Z value	p>|z|
Costs zero	-0.586**	-4.37	0.000
Costs of €5,000	-0.346**	-2.75	0.006
Costs of €30,000	0.408**	3.01	0.003
Lead time of 2 weeks	-0.204*	-1.80	0.072
Lead time of 12 weeks	0.244**	2.13	0.034
Market share 40% to 70%	-0.334**	-2.47	0.014
Remedies available	-0.540**	-5.27	0.000
Number of employees (x 100)	-0.027*	-1.65	0.100
Sector:			
C_industry	-0.446	-1.48	0.139
G_commerce	-0.315	-0.94	0.346
K_financial services	-0.080	-0.25	0.806
F_construction	0.143	0.38	0.704
M_consultancy	-0.054	-0.16	0.871
N_leasing	-0.150	-0.34	0.732
Q_health care	-0.090	-0.26	0.798

Source: SEO Economic Research. The McFadden Pseudo-R2 is equal to 0.023 and the McKelvey & Zavoina Pseudo-R^2 to 0.088 and the number of observations is 1,450. The standard errors have been corrected for clustering per respondent. ** significant at 5%, * significant at 10%.

Respondents with low variation

Are the conclusions influenced by the answers of the respondents who have not varied their scores? Table 6.24 indicates whether the conclusions change if the four basic models are estimated without the respondents with 0 spread. What is striking is that in the merger model for advisers an extension and reduction of the lead time have the same sign. This is not consistent and the effect of lead time does not therefore appear to apply in the modified model. The other conclusions do not change.

Table 6.24   Are the results robust to omitting the respondents who have not varied their scores?

Model	Number of observations	McKelvey & Zavoina -R^2	Conclusion compared with basic model
Companies: concentrations	1,218	0.092	Lead time of 2 weeks not significant; other variables do not deviate much.
Advisers: concentrations	184	0.452	Reduction and extension of lead time both show a positive sign and are significant at 10%, other variables unchanged.
Companies: cartels	576	0.033	Company fine not significant, personal fine as in the basic model.
Advisers: cartels	72	0.215	No change: only company fine significant.

Source: SEO Economic Research.

Literature

Aaronson, R. (1992). *Do Companies Take Any Notice of Competition Policy?* Consumer Policy Review, 2(3), pp.140-145.

Beckenstein, A.R. and Gabel, H.L. (1983). *Antitrust Compliance: Results of a Survey of Legal Opinion.* Antitrust Law Journal, October, pp. 459-516.

Becker, G. (1968). *Crime and Punishment: An Economic Approach,* Journal of Political Economy, 76, pp. 169-217.

Block, M.K. and Feinstein, J.S. (1986). *The Spillover Effect of Antitrust Enforcement.* Review of Economics and Statistics, 68(1). pp. 122-131.

Block, M.K., Nold, F.C. and Sidak, J. (1981). *The Deterrent Effect of Antitrust Enforcement.* Journal of Political Economy, 89 (3), pp. 429-445.

Bosch, J.C. and Eckard, E.W. (1991). *The Profitability of Price Fixing: Evidence from Stock Market Reaction to Federal Indictments.* Review of Economics and Statistics, 73(2), pp. 309-317.

Brenner, S. (2009). *An empirical study of the European corporate leniency program.* International Journal of Industrial Organization, 27, pp. 639–645.

Buccirossi, P. (2008). *Handbook of Antitrust Economics,* Cambridge: MIT Press.

Buccirossi, P., Ciari, L., Duso, T., Spagnolo, G. and Vitale, C. (2009a). *A study on the effectiveness of competition policy.* Laboratoria dit economia, antitrust, regolamentazione.

Buccirossi, P., Ciari, L., Duso, T., Spagnolo, G. and Vitale, C. (2009b). *Deterrence in Competition Law. Governance and the Efficiency of Economic Systems (GESY).* Discussion Paper No. 285.

Cameron, A. C. and P. K. Trivedi (2005). *Microeconometrics, methods and applications.* Cambridge: Cambridge University Press.

Clarke, J.L. and Evenett, S.J. (2003). *The Deterrent Effects of National Anti-Cartel Laws: Evidence from the International Vitamins Cartel.* Antitrust Bulletin, Fall, pp. 689-726.

R.W. Crandall and C. Winston (2003). *Does Antitrust Policy Improve Consumer Welfare? Assessing the Evidence,* Journal of Economic Perspectives, 17(4), pp. 3-26.

Davies, S. and Majumdar, A. (2002). *The development of targets for consumer savings arising from competition policy.* OFT Economic Discussion Paper, 4, OFT386, chapter 8.

Deloitte (2007). *The deterrent effect of competition enforcement by the OFT,* OFT962. [Also described in: Gordon, F. and Squires, D. (2008). *The Deterrent Effect of UK Competition Enforcement.* De Economist, 156(4), pp.411–432.]

Department of Justice (2000). *Antitrust Division Congressional Submission for Fiscal Year 2001.* Washington DC: US Department of Justice.

Eckbo, B.E. (1992). *Mergers and the Value of Antitrust Deterrence.* Journal of Finance, July, 47, pp. 1005-1029.

Feinberg, R.M. (1984). *Strategic and Deterrent Pricing Responses to Antitrust Investigations,* International Journal of Industrial Organizations, 2(1), pp. 75-84.

Feinberg, R.M. (1985). *The Enforcement and Effects of European Competition Policy: Results of a Survey of Legal Opinion,* Journal of Common Market Studies, 23(4), pp. 373-384.

Miller, N. (2009). *Strategic Leniency and Cartel control.* American Economic Review, 99(3). pp. 750-768.

Noll, R. van der, Nooij, M. de and Tieben, B. (2010). *Kwaliteitsregulering levering elektriciteit en de grootverbruiker.* (SEO Report, 2010-09). Amsterdam: SEO Economic Research.

Noll, R. van der and M. Visser (2009). *De NMa als economische detective.* Markt & Mededinging, 12 (5), pp. 156-160.

Parker, C.E. and Nielsen, V.L. (2005). *The ACCC Enforcement and Compliance Survey: Report of Preliminary Findings (December). University of Melbourne Legal Studies Research Paper,* No. 150; ANU Centre for Competition and Consumer Policy Working Paper.

Seldeslachts, J., Clougherty, J. and Barros, P. (2009). *Settle for Now but Block for Tomorrow: The Deterrence Effects of Merger Policy Tools.* Journal of Law and Economics, 52 (August). pp. 607-634.

Stigler, G.J. (1966). *The Economic Effects of the Antitrust Laws.* Journal of Law and Economics, October, 9. pp. 225-58.

Symeonidis, G. (2000). *Are cartel laws bad for business? Evidence from the UK.* University of Essex Discussion Paper, No. 511.

Thompson, J.S. and Kaserman, D.L. (2001). *After The Fall: Stock Price Movements and the Deterrent Effect of Antitrust Enforcement.* Review of Industrial Organization 19(3), pp. 329-334.

Twynstra Gudde (2005). *Onderzoek naar anticipatie op concentratiecontrole* (Research into the anticipation of merger control). Nederlandse Mededingingsautoriteit.

Veall, M. R. & K. F. Zimmermann (1996). *Pseudo-R² measures for some common limited dependent variable models.* Journal of Economic Surveys Vol. 10 (3), p. 241.

Verbeek, M. (2010). *A Guide to Modern Econometrics.* Chichester: John Wiley & Sons.

Appendix A   Sample

Appendix A.1 Introduction

A representativeness analysis is used to examine whether the sample ultimately obtained is a good (i.e. representative) reflection of the total population. This involves comparing characteristics of the sample (in a descriptive and statistical manner) with the characteristics of the population as a whole. This requires background characteristics of both the sample and the rest of the population. A comparison of the sample with the population is possible only in the case of the company survey. The population characteristics of the competition advisers are not known.

The total company database obtained from the Chamber of Commerce (CoC) is treated as the population for the purposes of this analysis.[44] This database allows representativeness to be tested in four ways.

Table B.1   Population variables for the representativeness analysis

Category	CoC variables
Geography: is the geographical spread of the participating companies comparable to that of the total population?	• CoC region • Province • Municipality • Postcode
Sector: are these sectors in the sample represented to the same extent as in the total population?	• Standard Industry Classification code (numerical) • Sector code (A-U)[45]
Company size: is a company in the sample the same size as a company in the total population?	• Size of workforce
Company age: is a company in the sample as 'old' as a company in the total population?[46]	• Date/year of establishment

Source: SEO Economic Research

Depending on the type of variable, *statistical* comparisons can also be made between the sample and the rest of the population:
- sample comparison on the basis of a **nominal** variable: Chi Square (χ^2) test (cross tables);
- sample comparison on the basis of an **ordinal** variable: Mann-Whitney and Kolmogorov-Smirnov test for two independent samples (plus all tests suitable for nominal variables);
- sample comparison on the basis of an **interval/ratio** variable: t-test for two independent samples (plus all tests suitable for nominal and ordinal variables).[47]

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[44]   It should be noted that these companies were selected in advance on the basis of their size: only information on companies with 100 or more employees was requested.

[45]   Variable compiled on the basis of Standard Industry Classification data supplied by the Chamber of Commerce.

[46]   Company age is not known for the entire population. The second Chamber of Commerce database (companies without contact staff) contains no dates of incorporation.

[47]   A statistical comparison can also be made between the sample and the total population in the t-test. In the case of the other statistical tests, the sample is compared with the non-participating companies.

Appendix A.2 Population variables test

Geography

Figure B.1 shows the percentage distribution of companies among the twelve Chamber of Commerce regions. A distinction is made in the figure between the total population (participating plus non-participating companies, blue bars), the gross sample (all participating companies, red bars) and the net sample (participating companies that have completed the survey in full, green bars).

It is evident from this figure that the Noord Nederland, Limburg and Amsterdam Chamber of Commerce regions are relatively underrepresented in the sample, whereas the Brabant, Midden Nederland and Gooi-, Eem- en Flevoland regions are relatively overrepresented.

Figure B.1   Geographical representativeness: CoC region
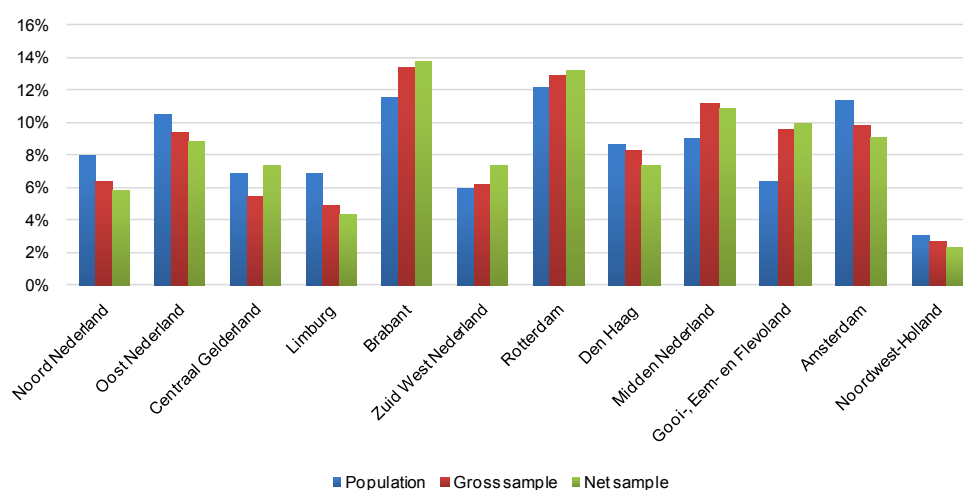
Source: SEO Economic Research

Regional spread (such as the CoC region and province) is denoted as a nominal variable (there is no ranking between regional or provincial numbers). This is why the only way of determining whether the sample is representative by region is by means of cross tables. Table B.2 indicates a significant difference between expected and observed values of survey participants and the rest of the population: the χ^2 test ('Pearson Chi Square') is significant with 95% reliability. The test outcome suggests that a statistically significant correlation exists between participation in the survey and CoC region. Indirectly this is an indication that the sample is possibly not representative by CoC region.

Table B.2   Chi Square Test (cross table) CoC region: sample compared with rest of population

Chi-Square Tests			
	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	25,306[a]	11	,008
Continuity Correction			
Likelihood Ratio	24,513	11	,011
Linear-by-Linear Association	5,544	1	,019
N of Valid Cases	4873		

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 17,22.

Source: SEO Economic Research

Another indication of geographical representativeness is the distribution of participating compa-nies among the provinces. Figure B.2 once again compares the population with the gross and net samples. Provinces that are underrepresented are Groningen, Friesland, Gelderland and Limburg, whereas companies from the provinces of Noord-Brabant and Utrecht occur relatively frequently in the sample.

Figure B.2   Geographical representativeness: province
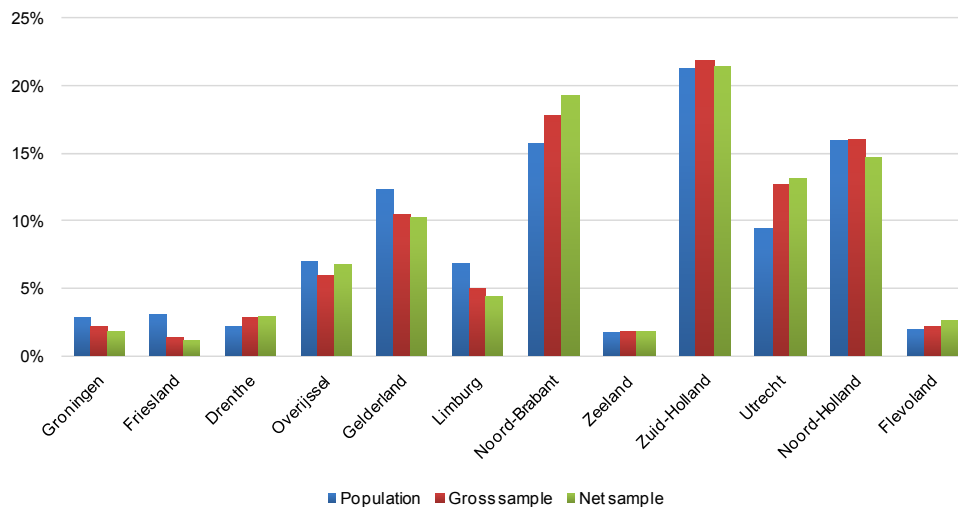
Source: SEO Economic Research

The χ^2 test in Table B.3 is significant (α = .05), which indirectly shows that the sample may not be representative in terms of provinces.

Table B.3   Chi Square test (cross table) province: sample compared with rest of population

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	23,084[a]	11	,017
Continuity Correction			
Likelihood Ratio	24,023	11	,013
Linear-by-Linear Association			
N of Valid Cases	4873		

[a]. 0 cells (,0%) have expected count less than 5. The minimum expected count is 9,42.

Source: SEO Economic Research

Sector

Figure B.3 shows the sectoral spread of population, gross sample (all survey participants) and net sample (participants providing fully completed questionnaires). Noteworthy points are that transport & storage and equipment leasing are both underrepresented and that financial institutions and healthcare are both overrepresented.

Figure B.3   Sectoral distribution of sample compared with population
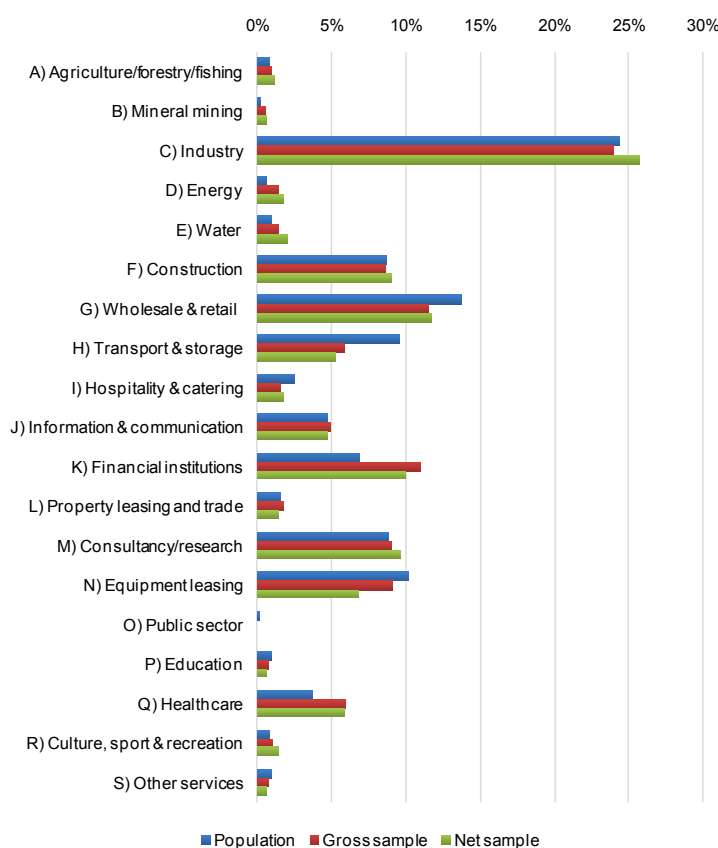
Source: SEO Economic Research

Table B.4 shows a significant χ^2 test (α = .05), from which it is apparent that the sample differs from the rest of the population in the extent to which it is representative of the sector. This may be grounds to assume that the sample is not a correct sectoral representation of the entire population.

Table B.4   Chi Square test (cross table) sector code: sample compared with non-sample

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	50,147[a]	19	,000
Continuity Correction			
Likelihood Ratio	47,105	19	,000
Linear-by-Linear Association			
N of Valid Cases	4873		

a. 8 cells (20,0%) have expected count less than 5. The minimum expected count is ,23.

Source: SEO Economic Research

Company size

Company size is measured by the number of employed people. Table B.5 shows the median and average values of the population and the sample.[48] Companies in the sample are larger than average (326 compared with 278 employees). The average of the total sample (the gross sample) differs significantly from that of the population as a whole (α = .05).

Table B.5   Number of people employed

	Median	Average	Std.dev.	N	Sig. T-test (2-tailed)[49]
Population	160	278.4	443.9	4871	
Gross sample	171	326.4	468.8	567	0.0207*
Net sample	174.5	328.8	473.9	342	0.0570

Source: SEO Economic Research; * = Averages with 95% certainty of difference

Figure B.4 shows the sample distribution of employed persons (WP_TOTAAL on the horizontal axis). The blue line (participating companies) generally tracks the red line (non-participating companies). Logically, the 'tail' of the distribution of the non-participating companies is much larger. This is because there are many more companies in this group (4,304 observations compared with 567 observations in the sample).

---

[48]   Two outliers were removed from the analysis. These both concerned a manifestly incorrect registration of the number of people employed (over 100,000 people employed, in the SME sector). These companies were not in fact part of the sample.

[49]   2-tailed t-test (gross/net) sample compared with population as a whole. Unequal variant presumed.

Figure B.4   Company size: distribution of sample and rest of population
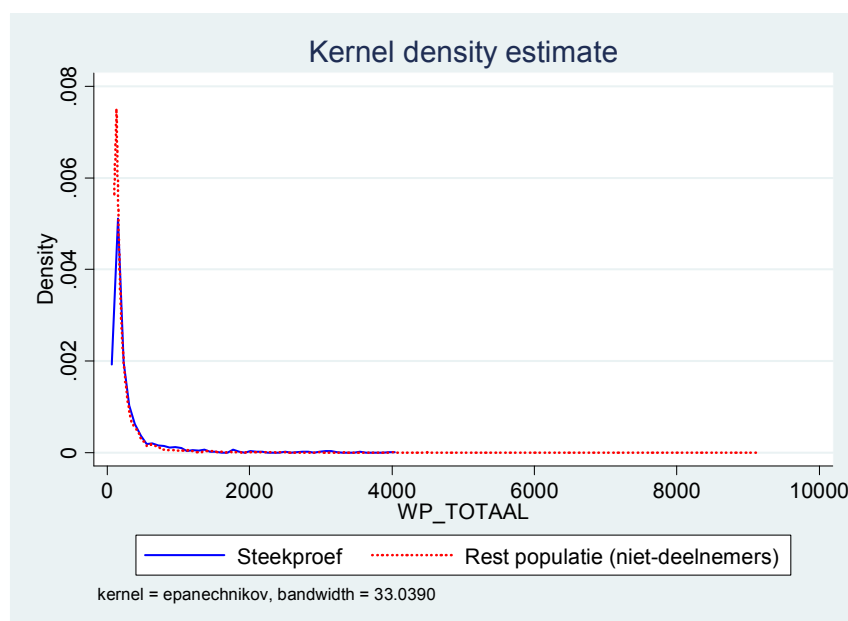
Source: SEO Economic Research. The legend reads *Sample* and *Rest of sample (non-participants)*

The Kolmogorov-Smirnov test for equality of distributions (Table B.6) shows that there is a statistically significant difference between the distribution of participating and non-participating companies ($\alpha = .05$).

Table B.6   Company size: equality of distributions employed persons (2-sample Kolmogorov-Smirnov test)

Test Statistics [a]

		Werkzame personen
Most Extreme Differences	Absolute	,0645
	Positive	,0645
	Negative	-,0028
Kolmogorov-Smirnov Z		1,4433
Asymp. Sig. (2-tailed)		,0310

a. Grouping Variable: In steekproef

Source: SEO Economic Research

Company age

Table B.7 shows the median and average year of incorporation of companies. There is little difference between the average 'age' of the total population (33.2 years' old) and the sample (average: 34.3 years' old). This is confirmed by the deviation tests (last column): the deviations are not significant ($\alpha = .05$).

	Median	Average	Std.dev.	N	Sig. T-test (2-tailed)
Population	1982	1976.8	25.2	2568	
Gross sample	1979.5	1975.7	26.3	428	0.3998
Net sample	1981.5	1976.5	26.1	260	0.8423

Source: SEO Economic Research

Figure B.5 shows the sample distribution of companies. The blue line depicts the participants and the red line depicts the non-participants. Table B.8 suggests that the deviation between the distribution of the sample and that of the other companies is significant.

Figure B.5   Company age: distribution of sample and rest of population (y-axis: year of incorporation)
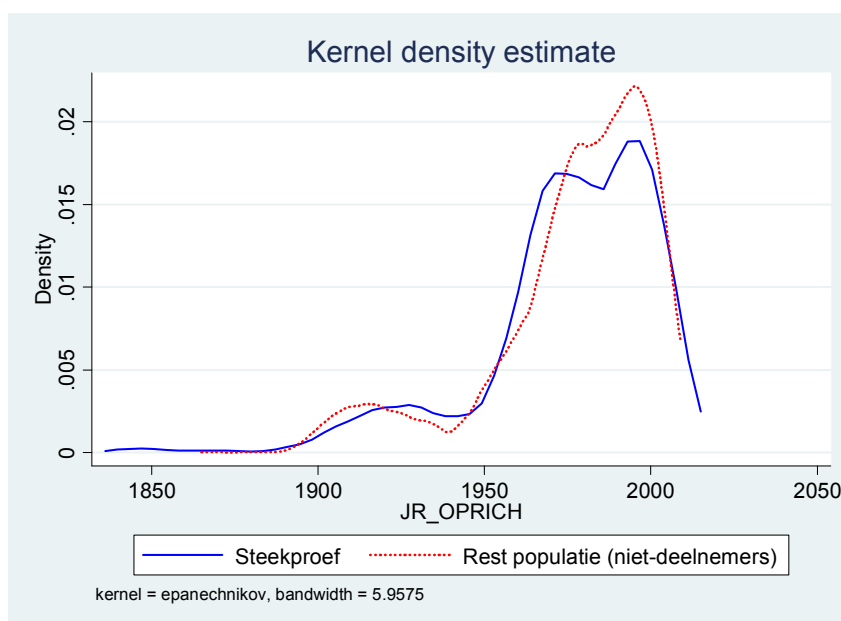
Source: SEO Economic Research. The legend reads *Sample* and *Rest of sample (non-participants)*

Table B.8   Company age: equality of distributions (2-sample Kolmogorov-Smirnov test)

	Test Statistics [a]	
		Oprichting sjaar
Most Extreme Differences	Absolute	,077
	Positive	,016
	Negative	-,077
Kolmogorov-Smirnov Z		1,447
Asymp. Sig. (2-tailed)		,030

[a.] Grouping Variable: ln steekproef

Source: SEO Economic Research

Appendix A.3 Conclusion

In this representativeness analysis the sample has been compared with the total population in respect of four characteristics. The statistical tests carried out are in many cases significant. The cross tables indicate a relation between geography and sector on the one hand and inclusion in or exclusion from the sample on the other. Tests for company size indicate a difference between the average and the distribution of participating and non-participating companies. *Indirectly* these tests suggest that certain regions, sectors and company sizes may possibly be underrepresented or overrepresented.

The descriptive statistics (percentage distribution and graphs) do not, however, give cause for concern about the representativeness of the sample. The regional distribution of participating companies (CoC region and province) differs little from that of the total population. In addition, the sectoral spread of companies in the sample differs little from that of the non-participating companies. Two sectors in the sample appear to be underrepresented (transport & storage and equipment leasing) and two to be overrepresented (financial services institutions and healthcare). This can in fact be explained: it is hardly surprising that companies from the financial services and healthcare sectors are represented to a greater extent than average in the sample, since mergers are relatively common in these sectors and/or are a much discussed theme (particularly in healthcare), nor is it strange that companies in the sample are larger than average since it is reasonable to assume that the larger the company the more NMa competition enforcement plays an important role.

Appendix B   Questionnaires

This appendix contains the questionnaires from the company survey (B.1) and the adviser survey (B.2).

Appendix B.1   Companies

QUESTION 1

Thank you for agreeing to take part in the survey. The subject of the survey is cooperation and mergers between two or more companies. SEO Economic Research has been commissioned by the NMa (the Dutch Competition Authority) to carry out the survey on its behalf. The web survey is being hosted by Bureau Veldkamp.

Your answers will be treated strictly confidentially and processed anonymously. The questions are not about individual cases and your information will not be linked in any way whatever with you or your company. Nor will the survey results in any way reproduce your individual answers. The aim of the survey is to examine how businesses (you in other words) assess the manner in which the NMa applies and enforces competition law and how companies respond. The survey starts with some questions about mergers and then goes on to deal with arrangements and cooperation with other companies.

The survey takes about 20 minutes to complete. If you wish to pause while answering the questionnaire, simply click on the pause button. When you resume answering the questionnaire, you will start from the place where you left off.

QUESTION 10   **MULTIPLE ANSWER QUESTION**
1001L6

What external advisers do you consult about questions concerning NMa competition enforcement?
More than one answer possible.

    1 ❑   accountants
    2 ❑   lawyers
    3 ❑   banks
    4 ❑   consultants
    5 ❑   none
    6 ❑   other, namely:...

QUESTION 20
1007L1

Does anyone in your company have specific responsibility for monitoring compliance with the Competition Act?

    1 ❑   no
    2 ❑   yes
       ↩   *PLACE IN OTHER "other "*

QUESTION 30   **OPEN QUESTION MULTI**
'No answer' ALLOWED
1008L25

In what<?> ways does your company ensure that its staff are aware of the competition rules?

QUESTION 31

We first ask a few questions are about mergers, and then go on to deal with agreements and arrangements with other companies. We use the word mergers to cover all concentrations, in other words acquisitions and joint ventures that carry out all functions of an independent economic unit on a lasting basis (i.e. form a complete business). In the rest of the questionnaire we use the word mergers to cover all possible concentrations.

In answer to some questions you are required to enter a number. If you answer is 'none', please enter a nought. If your answer is that you don't know, please press ENTER.

TAB 5, 20, 25

QUESTION 40	**FORM QUESTION**
	'No answer' ALLOWED

Mergers

How many mergers that are or may be subject to competition enforcement by the NMa has your company considered in the last five years? Explanation: this is about both mergers that have actually been notified to the NMa and mergers that have not been notified (i.e. have been abandoned prematurely). You should not include plans that clearly have to be notified not to the NMa but to the European Commission. If you do not know the number exactly, please give your best estimate.

PLACE IN QUESTION5 Q40
IF [Q40 = 0] PROCEED TO QUESTION 165

QUESTION 50	**MULTIPLE ANSWER QUESTION**
	1036L7

Mergers

What factors has your company had to consider in assessing these proposals?
More than one answer possible.
Regulations governing: ...

1 ❑ external accounting (accountancy)
2 ❑ works council and personnel
3 ❑ financing
4 ❑ tax law
5 ❑ consent of owners
6 ❑ Competition Act / NMa
7 ❑ other, namely: ...

TAB 30, 40, 50, 60, 70, 80, 90

QUESTION 60	**FORM QUESTION**
	SHOW ONLY REPLY CATEGORIES MENTIONED IN Q50

Mergers

Can you indicate how important each of the following factors is to the merger proposals of your company?
For this purpose 1 = very unimportant and 5 = very important.
very unimportant very important

1 2 3 4 5 don't know

TAB 2, 7, 13, 18, 23, 28

QUESTION 70	**FORM QUESTION**

Mergers

Can you conceive of mergers that you would consider desirable in terms of your company's corporate strategy, but that would, in your view, not obtain clearance from the NMa?
How many mergers does this involve? You can give your answer on a scale of 1 to 5.
1 = none and 5 = very many.
none very many

1 2 3 4 5

TAB 5, 20, 25

QUESTION 80	**FORM QUESTION**
	'No answer' ALLOWED

You have indicated that in the past five years you have considered <?> merger proposal(s) that are subject to competition enforcement by the NMa.
How many led to notification to the NMa?

PLACE IN QUESTION9 Q80
TAB 5, 20, 25

QUESTION 90	**FORM QUESTION**
	'No answer' ALLOWED

You have indicated that in the past five years you have considered <?> merger proposal(s) that are subject to competition enforcement by the NMa.
In respect of how many of these proposals have you taken external advice about the NMa and/or competition law?

QUESTION 100   FORM QUESTION

'No answer' ALLOWED

You have indicated that in the past five years you have considered <?> merger proposal(s) that are subject to competition enforcement by the NMa.
In respect of how many of these proposals has someone within your company made an estimate of the costs, lead time or outcome of the NMa notification procedure?

PLACE IN VR5MINVR9 [QUESTION5 - QUESTION9]
PLACE IN TXTVR12 " <?>of them did NOT result in a notification."
IF [VR5MINVR9 = 1] PLACE IN TXTVR12 "<?> of them did NOT result in a notification."

QUESTION 110   FORM QUESTION

'No answer' ALLOWED
IF [VR5MINVR9 > 0]

You have indicated that in the past five years you have considered <?> merger proposal(s) that are subject to the enforcement jurisdiction of the NMa.
<?>
In respect of how many of them were objections on competition grounds the reason for abandoning the proposal?

PLACE IN QUESTION12 Q110

QUESTION 120   FORM QUESTION

'No answer' ALLOWED
IF [Q80 > 0]

You have indicated that <?> merger proposal (s) have led to a notification.
How many of them were modified on competition grounds before notification to the NMa?
Explanation: this concerns modifications to the merger proposal intended to increase the likelihood of obtaining clearance.

PLACE IN QUESTION13 Q120
PLACE IN VR12PLUS13 [Q110 + Q120]
*TAB 5, 20, 25

QUESTION 130   FORM QUESTION

'No answer' ALLOWED
IF [VR12PLUS13 > 0]

You have indicated that you have modified a proposal <?> times and abandoned a proposal <?> times on competition grounds.
In how many of these cases was the modification or abandonment of the merger proposal based on external legal advice?

QUESTION 140

1070L1

Mergers
When you consider merger plans with one or more intended merger partners, do these partners generally have their own external adviser?

    1 ❑   yes, generally they do
    2 ❑   no, generally they do not
    3 ❑   don't know

*TAB 10, 20, 30, 40, 50, 60, 70

QUESTION 150   FORM QUESTION

Mergers
How often do you think that proposed mergers in your sector that are not, in your view, anti-competitive are deterred by Dutch competition enforcement? 1=never and 5=very often.
1 5
never very often don't know

IF [Q150 , 2] PLACE IN OFTEN "seldom"
IF [Q150 , 3] PLACE IN OFTEN "sometimes"
IF [Q150 , 4] PLACE IN OFTEN "often"
IF [Q150 , 5] PLACE IN OFTEN "very often"

QUESTION 155	**OPEN QUESTION MULTI**

IF [Q150 , 4 , 5]
1072L25

Mergers
Why do you consider that Dutch competition enforcement deters <?> mergers that are not anti-competitive?

QUESTION 160	**FORM QUESTION**

'No answer' ALLOWED
IF [Q150 , 2 TO 5 & QUESTION12 > 0]

According to you, cases occur in your sector <?> in which competition enforcement deters mergers that are not, in your view, anti-competitive.
To how many of the merger proposals of your company that were abandoned did this apply? (You stated that the number of abandoned merger proposals was <?>).

QUESTION 165

Propositions about merger control
We will now put a number of propositions to you about merger control.
Please indicate on a scale of 1 to 5 to what extent you agree with each of these propositions. 1= strongly disagree and 5= strongly agree.

*TAB 10, 20, 30, 40, 50, 60, 70
PLACE IN PROPOSITION[1] Q166,1
PLACE IN txt1675 ""

QUESTION 167	**FORM QUESTION**

To what extent do you agree with the following proposition?
There is a high level of compliance by companies with the duty to notify the NMa of mergers above a given turnover threshold.
strongly disagree strongly agree no opinion
1 2 3 4 5

PLACE IN PROPOSITION[1] Q166,2
PLACE IN txt1675 ""

QUESTION 167	**FORM QUESTION**

To what extent do you agree with the following proposition?
The costs of a merger notification (€15,000 in 2009) deter companies from continuing with some merger plans up to notification and cause them to abandon the plans completely.
strongly disagree strongly agree no opinion
1 2 3 4 5

PLACE IN PROPOSITION[1] Q166,3
PLACE IN txt1675 ""

QUESTION 167	**FORM QUESTION**

To what extent do you agree with the following proposition?
If it transpires after the notification phase that a licence is needed, the costs of licence (€30,000 in 2009) play a major role in the company's decision on whether or not to apply for a licence.
strongly disagree strongly agree no opinion
1 2 3 4 5

PLACE IN PROPOSITION[1] Q166,4
PLACE IN txt1675 ""

QUESTION 167	**FORM QUESTION**

To what extent do you agree with the following proposition?
The publicity attendant on any decision by the NMa to block a merger deters companies from continuing with some merger plans up to notification.
strongly disagree strongly agree no opinion
1 2 3 4 5

PLACE IN PROPOSITION[1] Q166,5
PLACE IN txt1675 ""
PLACE IN txt1675 "__a"

QUESTION 167   **FORM QUESTION**

Remedies are modifications to the merger plan that are designed to remove problems under competition law, for example through the divestment of business units.

x

To what extent do you agree with the following proposition?

The possibility of submitting remedies during the notification phase encourages companies to continue with more merger proposals up to notification.

strongly disagree strongly agree no opinion

1 2 3 4 5

QUESTION 170   **FORM QUESTION**
                                                          'No answer' ALLOWED

Cooperation with other companies

We emphasise once again that your answers are confidential and will be treated anonymously.

The second part of the survey deals with agreements and arrangements between two or more companies that generally operate in the same market. This is NOT about mergers. Please do not forget to enter a nought if your answer is 'none'. If you do not know the answer, press on ENTER.

In how many cases in the past five years have you taken account of competition law in contact or consultation with other companies?

Please enter a mark of 0 or higher for each situation.

QUESTION 1701   **OPEN QUESTION MULTI**
                                                           IF [1162L3 > 0]
                                                                1165L25

You have indicated that there are other cases in which you should have taken account of competition law. Can you describe these cases?

*TAB 5, 10, 25

QUESTION 180   **FORM QUESTION**
                                                          'No answer' ALLOWED

Cooperation with other companies

How often has your company modified, abandoned or terminated agreements or consultations with other companies in the past five years in order to prevent NMa intervention? You should only count the cases of which the NMa was unaware.

This concerns both proposals and existing cooperation arrangements.

PLACE IN QUESTION22 Q180
*TAB 5, 10, 25

QUESTION 190   **FORM QUESTION**
                                                          'No answer' ALLOWED
                                                            IF [Q180 > 0]

You have indicated that you have modified or abandoned an agreement or consultation with another company <?> times.

How often was this decision to modify or abandon based on external legal advice?

*TAB 5, 10, 25

QUESTION 200   **FORM QUESTION**
                                                          'No answer' ALLOWED

Cooperation with other companies

How often have you yourself assessed internally whether an agreement or conduct might encounter objections from the NMa?

QUESTION 210
                                                                 1199L1

Cooperation with other companies

Do you think it is clear when the NMa considers agreements and conduct to be prohibited?

    1 ❑   yes
    2 ❑   no

QUESTION 2101   **OPEN QUESTION MULTI**
IF [Q210 , 2]
1200L25

Cooperation with other companies
Can you indicate below why you consider it unclear when the NMa considers agreements and conduct to be prohibited?

TAB 10, 20, 30, 40, 50, 60, 70

QUESTION 220   **FORM QUESTION**
Cooperation with other companies
How often do you think it happens that companies are deterred by Dutch competition enforcement from entering into agreements or cooperative arrangements which are not, in your view, anti-competitive?
1 = never and 5 = very often.
1 5
never very often don't know

IF [Q220 , 2] PLACE IN OFTEN2 "seldom"
IF [Q220 , 3] PLACE IN OFTEN2 "sometimes"
IF [Q220 , 4] PLACE IN OFTEN2 "often"
IF [Q220 , 5] PLACE IN OFTEN2 "very often"

QUESTION 230   **OPEN QUESTION MULTI**
IF [Q220 , 4 , 5]
1226L25

Cooperation with other companies
Why do you consider that companies are deterred by Dutch competition enforcement from entering into agreements or cooperative arrangements which are not, in your view, anti-competitive?

QUESTION 240   **FORM QUESTION**
'No answer' ALLOWED
IF [Q180 > 0 & Q220 , 2 TO 5]

You have indicated that it <?> happens that companies are deterred by Dutch competition enforcement from entering into agreements or cooperative arrangements which are not anti-competitive.
How many of the <?> plans which you have abandoned or modified on account of NMa competition enforcement were not, in your view, anti-competitive?

QUESTION 290
1258L1

Anti-competitive conduct of other companies
Has your company ever suffered economic loss as a consequence of prohibited price fixing agreements by other companies?

    1 ❑   yes
    2 ❑   no
    3 ❑   don't know

QUESTION 300
IF [Q290 , 1]
1259L1

Anti-competitive conduct of other companies
Has your company ever considered taking legal action against other companies which have, in your view, infringed competition law? If so, what was the most important legal action?

    1 ❑   yes, but we took no action
    2 ❑   yes, we took action through the NMa
    3 ❑   yes, we took civil proceedings
    4 ❑   no

QUESTION 310
Propositions about cartel control
We will now put a number of propositions to you about cartel control.
Please indicate on a scale of 1 to 5 to what extent you agree with each of these propositions. 1= strongly disagree and 5= strongly agree.

TAB 10, 20, 30, 40, 50, 60, 70
PLACE IN PROPOSITION[2] Q315,1

QUESTION 317	FORM QUESTION

To what extent do you agree with the following proposition?
NMa enforcement action is an important reason for complying with the cartel prohibition.
strongly disagree strongly agree no opinion
1 2 3 4 5

PLACE IN PROPOSITION[2] Q315,2

QUESTION 317	FORM QUESTION

To what extent do you agree with the following proposition?
The amount of the fines for a company (maximum 10% of the annual turnover) is effective in preventing cartels.
strongly disagree strongly agree no opinion
1 2 3 4 5

PLACE IN PROPOSITION[2] Q315,3

QUESTION 317	FORM QUESTION

To what extent do you agree with the following proposition?
The personal fine (maximum of €450,000) is effective in preventing cartels.
strongly disagree strongly agree no opinion
1 2 3 4 5

PLACE IN PROPOSITION[2] Q315,4

QUESTION 317	FORM QUESTION

To what extent do you agree with the following proposition?
If company directors were liable to imprisonment for cartel offences there would be fewer cartels.
strongly disagree strongly agree no opinion
1 2 3 4 5

PLACE IN PROPOSITION[2] Q315,5

QUESTION 317	FORM QUESTION

To what extent do you agree with the following proposition?
The NMa leniency programme reduces the incidence of cartels.
strongly disagree strongly agree no opinion
1 2 3 4 5

PLACE IN PROPOSITION[2] Q315,6

QUESTION 317	FORM QUESTION

To what extent do you agree with the following proposition?
The adverse publicity as a consequence of being suspected or convicted of a cartel offence reduces the incidence of cartels.
strongly disagree strongly agree no opinion
1 2 3 4 5

PLACE IN PROPOSITION[2] Q315,7

QUESTION 317	FORM QUESTION

To what extent do you agree with the following proposition?
The possibility that civil damages may be awarded to those harmed by a cartel infringement reduces the incidence of cartels.
strongly disagree strongly agree no opinion
1 2 3 4 5

QUESTION 320	OPEN QUESTION MULTI

'No answer' ALLOWED
1350L25

This brings us to the last questions of the survey.
Do you have any suggestions for improving the preventive effect of the merger control measures taken by the NMa? You can give your suggestions here.

QUESTION 325	OPEN QUESTION MULTI

'No answer' ALLOWED
1375L25

Do you have any suggestions for improving the preventive effect of the cartel control measures taken by the NMa? You can give your suggestions here.

QUESTION 330   OPEN QUESTION MULTI
'No answer' ALLOWED
1400L25

Do you still have any questions or comments in respect of this questionnaire? If so, you can enter them here.

QUESTION 340
1425L1

Would you like to receive the final report?
Your e-mail address will be used only for this purpose and will in no way be linked to your answers.
If you still have any questions in respect of this survey, please contact Dr Rob van der Noll (020-5251678; e-mail: r.vandernoll@seo.nl) or Jarst Weda (020-5251669; e-mail: j.weda@seo.nl).
(You can click on the name to send an e-mail).

    1 ❑   no
    2 ❑   yes

QUESTION 350   FORM QUESTION
IF [Q340 , 2] FONT 7

You can enter the e-mail address here to which we should send the final report.

QUESTION 355
IF [Q340 , 2 & # Q350 , 9]
1476L1

You have entered the following e-mail address: <Question 350>
Is this correct?

    1 ❑   yes (end of questionnaire)
    2 ❑   no (correct e-mail address)
       ↬   *BACK 350*

Appendix B.2 Advisers

QUESTION 801

Thank you for agreeing to take part in the survey. The subject of the survey is cooperation and mergers between two or more companies. SEO Economic Research has been commissioned by the NMa (the Dutch Competition Authority) to carry out the survey on its behalf. The web survey is being hosted by Bureau Veldkamp. The survey focuses on the question of how companies and their advisers assess the manner in which the NMa enforces competition law and what role this enforcement plays in their decision-making.

Your answers will be treated strictly confidentially and processed anonymously. The questions are not about individual cases and your information will not be linked in any way whatever with you or your company. The survey results will not in any way reproduce your individual answers. The survey starts with some questions about mergers and then goes on to deal with arrangements and cooperation with other companies.

The survey takes about 20 minutes to complete. If you wish to pause while answering the questionnaire, simply click on the pause button. When you resume answering the questionnaire, you will start from the place where you left off.

QUESTION 802
1002L1

Have you been involved in the past five years in providing advice on competition law, for example advising on mergers or plans for mergers or advising on agreements that are potentially anti-competitive?

    1 ❑   yes
    2 ❑   no, but someone else in this office has been involved in providing such advice
    3 ❑   no, no one in this office has been involved in cases of this kind in the past five years

QUESTION 803

IF [Q802 , 3]

In that case we have no further questions for you. Thank you for your assistance.

IF [Q802 , 3] END OF INTERVIEW, NOT PASSED, BUT WRITE

QUESTION 805

IF [Q802 , 2]

We would kindly request you to pass the survey to your colleague who has been involved in providing advice of this kind in the past five years.
You can do this simply by forwarding the e-mail containing the link to your colleague. He or she can then start the questionnaire anew. Thank you for your assistance.

IF [Q802 , 2] REMOVE FROM Q802 Q802 END OF INTERVIEW, WRITE NON-RESPONSE CODE "29"
PLACE IN TESTH [0]
PLACE IN TESTP [0]
PLACE IN SPOT "V5350"
PLACE IN PATH "file://S:/SENS.UIT/V5350"
PLACE IN PATH "http://mediafm01.tnsnipo.com/V5350"

QUESTION 800   **ALPHA 3905L25**

3905L25

QUESTION 10

We first ask a few questions about mergers, and then go on to deal with agreements and arrangements with other companies. In answer to some questions you are required to enter a number. If you answer is 'none', please enter a nought. If your answer is that you don't know, please press ENTER.

*TAB 5, 15, 25

QUESTION 15   **FORM QUESTION**

'No answer' ALLOWED

Decisions about mergers
With how many merger proposals requiring notification to the NMa have you been involved since 1 January 2005?
Explanation: this is about both mergers that have actually been notified to the NMa and mergers that have not been notified (i.e. have been abandoned prematurely). You should not include plans that clearly have to be notified not to the NMa but to the European Commission. If you do not know the number exactly, please give your best estimate.

PLACE IN QUESTION6 Q15
IF [Q15 = 0] PROCEED TO QUESTION 59
*TAB 5, 15, 25

QUESTION 16   **FORM QUESTION FONT 7**

Occasions arise when two or more law firms advise on the same proposal.
For how many of these <?> proposal(s) was your law firm the lead or sole firm consulted?

*TAB 5, 15, 25

QUESTION 17   **FORM QUESTION**

How many merger proposals had been modified by the parties themselves on competition grounds before you were consulted?

TAB 10, 20, 30, 40, 50, 60, 70
QUESTION 31   **FORM QUESTION**

IF [Q17 , 997]

You have indicated that you cannot specify the exact number.
Does it often happen, in your view, that companies modify plans before you are consulted? You can give
your answer on a scale of 1 to 5. 1=never and 5=very often.
1 5
never very often don't know

TAB 5, 15, 25
QUESTION 22   **FORM QUESTION**

'No answer' ALLOWED
IF [Q15 > 0]

You have indicated that you have been involved in <?> merger proposal(s). How many of these led to a noti-
fication to the NMa?

IF [Q22 = 0] PROCEED TO 49
PLACE IN QUESTION9 Q22
PLACE IN BEING "being"
IF [Q22 = 1] PLACE IN BEING "is"
TAB 5, 15, 25
QUESTION 40   **FORM QUESTION**

'No answer' ALLOWED

You have indicated that you were involved in <?> mergers that were notified <?>.
How many of them were modified before notification to the NMa on account of objections expected by you
under competition law?
Explanation: this concerns modifications made to forestall problems under competition law.

PLACE IN VR6MINVR9 [QUESTION6 - QUESTION9]
PLACE IN HAVE "have"
IF [VR6MINVR9 = 1] PLACE IN HAVE "has"
TAB 5, 15, 25
QUESTION 50   **FORM QUESTION**

'No answer' ALLOWED
IF [VR6MINVR9 > 0]

You have indicated that you were involved in <?> merger proposals that did not lead to a notification <?>.
For how many of them were expected objections under competition law a major reason for abandoning them?

PLACE IN QUESTION13 Q50
TAB 10, 20, 30, 40, 50, 60, 70
QUESTION 60   **FORM QUESTION**

The following questions are about mergers that you would not expect to give rise to problems under competi-
tion law. It is conceivable that these mergers too may be deterred by the competition enforcement.
Companies may find the notification procedure too onerous or be uncertain as to whether they will obtain
clearance from the NMa. The company may in such a case decide against notification. The merger will then
not proceed, even though it would not, in your view, have given rise to any problems under competition law.
Do you think this happens often? Please indicate on a scale of 1 to 5.
1 = never and 5 = very often.
1 5
never very often don't know

IF [Q60 = 2] PLACE IN OFTEN2 "seldom"
IF [Q60 = 3] PLACE IN OFTEN2 "sometimes"
IF [Q60 = 4] PLACE IN OFTEN2 "often"
IF [Q60 = 5] PLACE IN OFTEN2 "very often"

QUESTION 61

IF [Q60 , 3 , 4 , 5]
1022L1

What is the most common reason for deciding against notification?
(Only one answer possible)

     1 ❑   companies are uncertain about the outcome of the assessment by the NMa
     2 ❑   the lead time is too long
     3 ❑   the costs of external advisers are too high
     4 ❑   the fees payable to the NMa are too high
     5 ❑   the procedure is too time-consuming for staff
     6 ❑   the company wishes to avoid publicity
     7 ❑   other, namely:...

*TAB 5, 15, 25

QUESTION 70   **FORM QUESTION**

'No answer' ALLOWED
IF [QUESTION13 > 0]

You have indicated that <?> merger proposal(s) were abandoned before notification wholly or partly on competition grounds.
In how many of the cases would the merger have, in your view, not given rise to problems under competition law?

QUESTION 80   **MULTIPLE ANSWER QUESTION**

1026L7

Can you indicate what NMa decisions or court judgments have influenced your advice to clients about merger proposals?
You may mention a maximum of five decisions or judgments. If possible, please specify the case number.

     1 ❑
     2 ❑
     3 ❑
     4 ❑
     5 ❑
     7 ❑   don't know

QUESTION 81

We will now put a number of propositions to you about merger control.
Please indicate on a scale of 1 to 5 to what extent you agree with each of these propositions.
1= strongly disagree and 5= strongly agree.

*TAB 10, 20, 30, 40, 50, 60, 70
PLACE IN PROPOSITION[1] Q82,1

QUESTION 83   **FORM QUESTION**

To what extent do you agree with the following proposition?
Dutch competition enforcement ensures that anti-competitive mergers do not take place.
strongly disagree strongly agree no opinion
1 2 3 4 5

PLACE IN PROPOSITION[1] Q82,2

QUESTION 83   **FORM QUESTION**

To what extent do you agree with the following proposition?
The fine that can be imposed for non-compliance with the notification duty ensures compliance by companies.
strongly disagree strongly agree no opinion
1 2 3 4 5

PLACE IN PROPOSITION[1] Q82,3

QUESTION 83   **FORM QUESTION**

To what extent do you agree with the following proposition?
The costs of a merger notification (€15,000) deter some companies from continuing with merger plans up to

notification and cause them to abandon the plans completely.
strongly disagree strongly agree no opinion
1 2 3 4 5

PLACE IN PROPOSITION[1] Q82,4

QUESTION 83	**FORM QUESTION**

To what extent do you agree with the following proposition?
In the license phase the costs (€30,000) play a major role in whether or not companies apply for a licence.
strongly disagree strongly agree no opinion
1 2 3 4 5

PLACE IN PROPOSITION[1] Q82,5

QUESTION 83	**FORM QUESTION**

To what extent do you agree with the following proposition?
The media coverage that is expected if a merger is blocked by the NMa deters companies from continuing
with merger plans up to notification.
strongly disagree strongly agree no opinion
1 2 3 4 5

PLACE IN PROPOSITION[1] Q82,6

QUESTION 83	**FORM QUESTION**

To what extent do you agree with the following proposition?
The possibility of agreeing remedies encourages companies to notify mergers to the NMa at an earlier stage.
strongly disagree strongly agree no opinion
1 2 3 4 5

PLACE IN PROPOSITION[1] Q82,7

QUESTION 83	**FORM QUESTION**

To what extent do you agree with the following proposition?
The NMa permits mergers that are not anti-competitive.
strongly disagree strongly agree no opinion
1 2 3 4 5

QUESTION 85

Cooperation with other companies and the cartel prohibition.
These questions concern the number of cases on which you have been asked to advise on section 6 of the
Competition Act (the cartel prohibition). We distinguish between cases in which your client is aware of the
prohibitive nature of an agreement or type of conduct and cases in which your client is not clear about this.
We refer to the former category as 'clearly prohibited conduct' and the latter category as 'conduct and agree-
ments about which there is no clarity'.
In answer to some questions you are required to enter a number. If your answer is 'none', please enter a
nought. If your answer is that you don't know, please press ENTER.
We would once again emphasise that your answers are confidential and will be processed anonymously.

TAB 5, 10, 18

QUESTION 90	**FORM QUESTION**
	'No answer' ALLOWED

Clearly prohibited conduct
In how many cases have you been asked to advise since 1 January 2005 on an existing or proposed agreement
or type of conduct which is or, as the case may be, would have been clearly incompatible with the cartel
prohibition (section 6 of the Competition Act)?

PLACE IN QUESTION26 Q90
IF [Q90 < 1] PROCEED TO QUESTION 155
TAB 40, 50

QUESTION 100	**FORM QUESTION**
	'No answer' ALLOWED

You have indicated that you have been asked to advise in <?> cases(s).
Can you indicate in respect of each of the following events on how many of the <?> occasions the event
concerned was the main reason your client consulted you?
NB: The total cannot exceed <?>.

PLACE IN TEL100 [1044L3 + 1047L3 + 1050L3 + 1053L3 + 1056L3 + 1059L3 + 1062L3 + 1065L3 + 1068L3 + 1071L3]

QUESTION 103

IF [TEL100 > QUESTION26]

The total of the specified events may not exceed the number of occasions on which you have been asked to advise; in your case this is <?> occasion(s).
Please adjust your answer. (PRESS ON [ENTER] or press on the [BACK] key.)

*IF [TEL100 > QUESTION26] *BACK 100*

QUESTION 105	OPEN QUESTION MULTI

'No answer' ALLOWED
IF [1071L3 > 0]
1074L25

You have indicated that in addition to the reasons you have mentioned there were also other reasons why you were asked to advise on conduct that was possibly prohibited.
Can you describe these other reasons here?

*TAB 5, 15, 25

QUESTION 110	FORM QUESTION

'No answer' ALLOWED

The following questions deal with the leniency programme.
You have indicated that you have advised in <?> cases on an existing or proposed agreement or type of conduct which is or, as the case may be, would have been clearly incompatible with the cartel prohibition.
In how many of these cases were you asked to advise on whether or not a leniency request should be made?

PLACE IN QUESTION29 [Q110]
IF [Q110 < 1] PROCEED TO QUESTION 135
*TAB 5, 15, 25

QUESTION 120	FORM QUESTION

'No answer' ALLOWED

In how many of these cases did your client ultimately not submit a leniency request?

IF [Q120 < 1] PROCEED TO QUESTION 135

QUESTION 130

1105L1

In the cases on which you advised, what was the most common reason for not submitting a leniency request?

1 ❑ client did not wish to lose the extra profit from the activity
2 ❑ client did not wish to jeopardise its good relations with other members of the cartel
3 ❑ client did not expect to be fined
4 ❑ client thought the leniency programme was too difficult
5 ❑ possible reputational harm
6 ❑ possible consequences of personal liability
7 ❑ other, namely:...
8 ❑ don't know

QUESTION 135

The next two questions once again relate to all cases on which you have advised about an existing or proposed agreement or type of conduct the nature of which was or, as the case may be, would have been clearly incompatible with the cartel prohibition (section 6 of the Competition Act) since 1 January 2005.

*TAB 5, 15, 25

QUESTION 140	FORM QUESTION

'No answer' ALLOWED

You have indicated that you have advised in <?> case(s) on an existing or proposed agreement or type of conduct which is or, as the case may be, would have been clearly incompatible with the cartel prohibition.
In how many of these cases was the NMa unaware of the situation and did your advice result in the existing or proposed agreement or conduct being changed or terminated?

*TAB 5, 15, 25

QUESTION 150	FORM QUESTION

'No answer' ALLOWED

On how many of the NMa's sanction decisions on infringements of section 6 of the Competition Act have you advised an infringer since 1 January 2005?

QUESTION 155

Conduct and agreements about which there is no clarity

The following four questions are about conduct and agreements (below: competition restrictions) between two or more companies in respect of which it was not apparent in advance to your client whether the restriction was compatible with the cartel prohibition. You can include both proposals and existing restrictions.

*TAB 5, 15, 20

QUESTION 160	**FORM QUESTION**
	'No answer' ALLOWED

On how many competition restrictions between two or more companies have you advised on section 6 of the Competition Act since 1 January 2005?
This concerns plans of which the NMa was unaware and about which it was not clear to the client whether they were compatible with the cartel prohibition.

PLACE IN QUESTION35 Q160
IF [Q160 < 1] PROCEED TO QUESTION 230
*TAB 5, 15, 20

QUESTION 170	**FORM QUESTION**
	'No answer' ALLOWED

You have indicated that you have advised on section 6 of the Competition Act in respect of <?> competition restriction(s).
In how many of these cases was the existing or proposed plan terminated or not implemented on account of your advice on the cartel prohibition?

PLACE IN QUESTION36 Q170
PLACE IN VR35MINVR36 [QUESTION35 - QUESTION36]
PLACE IN BEING2 "be"
IF [VR35MINVR36 = 1] PLACE IN BEING2 "is"
*TAB 5, 15, 25

QUESTION 180	**FORM QUESTION**
	'No answer' ALLOWED
	IF [VR35MINVR36 > 0]

You have indicated that you have advised on section 6 of the Competition Act in respect of <?> competition restriction(s).
<?> of them were not terminated or abandoned following your advice on the cartel prohibition.
In how many of these cases was the existing or proposed plan modified in keeping with your advice on the cartel prohibition?

QUESTION 205

The next two questions once again concern cases in which you advised on competition restrictions in cases where your client was uncertain whether the agreement was compatible with the cartel prohibition.
It is conceivable that a company is deterred by competition enforcement from pursuing a plan which you did not expect to infringe competition law.

*TAB 5, 15, 25

QUESTION 210	**FORM QUESTION**
	'No answer' ALLOWED

In how many cases has an agreement or cooperation which you expected would not infringe the cartel prohibition not materialised as a result of your clients' fears about competition enforcement?
If you do not know the answer exactly, you can give your best estimate.

QUESTION 220	**FORM QUESTION**
	'No answer' ALLOWED

You have indicated that you have advised in <?> cases where it was unclear to your client whether a competition restriction infringed the cartel prohibition.
In how many of these cases did you expect that the NMa would wrongly assess the agreement or conduct as an infringement of the cartel prohibition?
Explanation: this concerns cases in which you expected the NMa to make an incorrect assessment to the detriment of your client.

QUESTION 230   **MULTIPLE ANSWER QUESTION**
1130L7

Can you indicate what NMa decisions or court judgments have influenced your advice to clients concerning cartels and other infringements of section 6 of the Competition Act?
You may mention a maximum of five decisions or judgments. If possible, please specify the case number.

    1 ❑
    2 ❑
    3 ❑
    4 ❑
    5 ❑
    7 ❑   don't know

QUESTION 235

We will now put a number of propositions to you about cartel control.
Please indicate on a scale of 1 to 5 to what extent you agree with each of these propositions.
1= strongly disagree and 5= strongly agree.

*TAB 10, 20, 30, 40, 50, 60, 70
PLACE IN PROPOSITION[2] Q236,1

QUESTION 240   **FORM QUESTION**

To what extent do you agree with the proposition...?
Dutch competition enforcement reduces the incidence of cartels.
strongly disagree strongly agree no opinion
1 2 3 4 5

PLACE IN PROPOSITION[2] Q236,2

QUESTION 240   **FORM QUESTION**

To what extent do you agree with the proposition...?
The amount of the company fines reduces the incidence of cartels.
strongly disagree strongly agree no opinion
1 2 3 4 5

PLACE IN PROPOSITION[2] Q236,3

QUESTION 240   **FORM QUESTION**

To what extent do you agree with the proposition...?
The personal fine which may be imposed on a manager or director reduces the incidence of cartels.
strongly disagree strongly agree no opinion
1 2 3 4 5

PLACE IN PROPOSITION[2] Q236,4

QUESTION 240   **FORM QUESTION**

To what extent do you agree with the proposition...?
The NMa leniency programme reduces the incidence of cartels.
strongly disagree strongly agree no opinion
1 2 3 4 5

PLACE IN PROPOSITION[2] Q236,5

QUESTION 240   **FORM QUESTION**

To what extent do you agree with the proposition...?
The adverse publicity that accompanies a suspicion or conviction reduces the incidence of cartels.
strongly disagree strongly agree no opinion
1 2 3 4 5

PLACE IN PROPOSITION[2] Q236,6

QUESTION 240   **FORM QUESTION**

To what extent do you agree with the proposition...?
Civil proceedings in which injured parties can claim damages reduce the incidence of cartels.
strongly disagree strongly agree no opinion
1 2 3 4 5

PLACE IN PROPOSITION[2] Q236,7

QUESTION 240   **FORM QUESTION**

To what extent do you agree with the proposition...?
The NMa's competition enforcement does not interfere with arrangements that do not infringe the cartel

prohibition.
strongly disagree strongly agree no opinion
1 2 3 4 5

TAB 15, 90, 95

QUESTION 250	**OPEN QUESTION MULTI**

'No answer' ALLOWED
1147L25

This brings us to the last questions of the survey.
Do you have any suggestions for improving the preventive effect of the merger control measures by the NMa?

QUESTION 260	**OPEN QUESTION MULTI**

'No answer' ALLOWED
1172L25

Do you have any suggestions for improving the preventive effect of the NMa's measures to combat anti-competitive agreements?

QUESTION 270	**OPEN QUESTION MULTI**

'No answer' ALLOWED
1197L25

Do you still have any questions or comments about this questionnaire?

PLACE IN MAILADRES1 "r.vandernoll@seo.nl"
PLACE IN MAILADRES2 "j.weda@seo.nl"

QUESTION 275

If you still have any questions in respect of this survey, you may also contact Dr Rob van der Noll (020-5251678; e-mail: r.vandernoll@seo.nl) or Jarst Weda (020-5251669; e-mail: j.weda@seo.nl).
(You can click on the name to send an e-mail).

QUESTION 280

1222L1

Thank you for your assistance.
Would you like to receive the final report?
If so, you can enter your e-mail address here. Your e-mail address will be used only for this purpose and will in no way be linked to your answers.

    1 ❑   no
    2 ❑   yes

QUESTION 290	**FORM QUESTION**

IF [Q280 , 2]

You can enter the e-mail address here to which we should send the survey report.

QUESTION 355

IF [Q280 , 2 & # Q290 , 9]
1275L1

You have given the following e-mail address: <Question 290>
Is this correct?

    1 ❑   yes (end of questionnaire)
    2 ❑   no (correct e-mail address)
    ↰   *BACK 290*