

RISK MODELLING AND ANTITRUST RISK ASSESSMENT IN LIGHT OF UK CARTEL ENFORCEMENT POLICY

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INTRODUCTION

The UK Office of Fair Trading (OFT) confirmed in late March 2013 that seven individuals had been arrested in connection with a criminal investigation into cartel activities in the construction industry.² As a regulator, the OFT is perhaps not the most high-profile law enforcement agency when it comes to enforcement action against individuals rather than against corporate entities. Arrests made by – or on behalf of – the OFT are rare and for that reason alone, they attract a degree of interest among companies active in the same sector and their legal counsel. From an enforcement policy perspective, the fact that the investigation did not target exclusively blue-chip companies but two small family-owned businesses³ is noteworthy. The European Commission, for example, has to date dedicated most of its resources to companies the investigation of which will have a high impact and high visibility.

Since the OFT acted within the scope of the legal powers conferred on it by the Enterprise Act 2002, the arrests do not signify novel developments in the enforcement of EU and UK competition law. However, they are nonetheless significant in a way that extends beyond the fact of the arrests themselves and beyond the construction sector. The OFT's investigation serves as a reminder to companies throughout the UK to keep their risk assessment protocols up-to-date as firstly, the risk of detection of cartels continues to increase, and secondly, the severity of fines and the willingness to impose criminal sanctions continues to increase.

This article will argue that both the risk of detection of cartel activity and its consequences will continue to be significant; these arguments are illustrated by means of a simple risk model.

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² Case CE/9705/12, *Investigation into the supply of products to the construction industry*; cf <http://www.offt.gov.uk/OFTwork/competition-act-and-cartels/criminal-cartels-current/construction-industry>.

³ <http://www.ft.com/cms/s/0/39850206-9254-11e2-a6f4-00144feabdc0.html>.

CREATING THE FRAMEWORK FOR RISK ASSESSMENT

In order to build a useful risk model one must first define the exact type of risk that requires assessment, ie the risk that is in fact being modelled, as well as the methodology employed in modelling that risk.

Defining the exact type of risk

The risk assessment in this note concerns the risk that anticompetitive conduct in connection with a cartel or similar anticompetitive activity is detected. In this regard, the OFT generally employs the umbrella term ‘competition law risk’,⁴ which also covers cartel activity. The Basel Committee on Banking Supervision refers equally broadly to ‘antitrust’ risk, as a subcategory to ‘improper business or market practices’.⁵

Where cartels are detected, this is most commonly the result of a regulatory investigation in which the competition authority acts on its own initiative, or the consequence of a leniency application, ie through the actions of a whistle-blower, where details of the cartel are brought to the attention of the regulatory authority by members of the cartel. What is more, the OFT operates schemes to encourage third parties to provide information about cartels.⁶

Methodology and scope

Risk assessment normally entails two principal exercises; firstly, determining the probability that an event occurs, and secondly, evaluating the potential consequences of that event.

Determining the probability of detection

Quantifying the probability that anticompetitive conduct in one’s company will be detected by a regulator may look challenging at first glance. In reality, such a task is far from impossible as competition authorities such as the European Commission and the OFT are very transparent about their enforcement policies and enforcement priorities.⁷ Moreover, legal proceedings are

⁴ Cf OFT Guidance OFT1341, *How your business can achieve compliance with competition law*, June 2011, at 1.2; available at http://oft.gov.uk/shared_oft/ca-and-cartels/competition-awareness-compliance/oft1341.pdf.

⁵ Consolidated Basel II Framework, *Basel II: International Convergence of Capital Measurement and Capital Standards: A Revised Framework – Comprehensive Version*, Annex 9, p 306; available at <http://www.bis.org/publ/bcbs128.pdf>.

⁶ <http://www.oft.gov.uk/OFTwork/competition-act-and-cartels/cartels/rewards>.

⁷ In terms of the European Commission, see Alexander Italiener, ‘Fighting cartels in Europe and the US: different systems, common goals’, speech to the Annual Conference of the International Bar Association (IBA), Boston, 9 October 2013; available at http://ec.europa.eu/competition/speeches/text/sp2013_09_en.pdf; Alexander Italiener, ‘Recent developments regarding the Commission’s cartel enforcement’, speech to Studienvereinigung Kartellrecht; 14 March 2012, available at <http://ec.europa.eu/competition/speeches/>

publicised as a matter of course, albeit commercially sensitive information may be withheld.⁸ What is more, the sectors and types of companies that were investigated in the past permit some conclusions as to how the enforcement priorities of different regulators are evolving. Finally, and perhaps most significantly, econometric analysis permits conclusions as to the likelihood of cartel activity – and correspondingly, enforcement priorities – based on structural features of the relevant market in which a given company operates.

It follows that the risk of detection of cartel activity is amenable to objective analysis; and a company's risk assessment will need to reflect any significant characteristics and trends regarding enforcement policy which aid in evaluating the scope of that risk.

Evaluating the potential consequences of an event

The article will go into more detail on the consequences of the detection of a cartel further below, but at this stage, it is already worth noting that the potential consequences⁹ from a legal perspective are set in stone and, as a result, the total exposure can be quantified with precision. Furthermore, while an econometric approach to estimating cartel-related financial losses across an entire sector cannot predict the level of fines to be paid by the individual company,¹⁰ risk managers will be able to calculate their own company's financial exposure in the event of a sanction for violations of competition law very precisely.

Scope

In relation to cartel activity on UK soil, the two regulatory authorities that are competent to investigate are the OFT and the European Commission which also has jurisdiction, for example, to conduct unannounced inspections in the UK. This article will therefore take account of the enforcement activities of the central UK and EU competition authorities.

text/sp2012_03_en.pdf; Alexander Italiener, 'Zero tolerance for international cartels', speech to ICN Cartel Workshop 2011, 10–13 October 2011; available at http://ec.europa.eu/competition/speeches/text/sp2011_11_en.pdf. In terms of the OFT, see Ali Nikpay, 'UK cartel enforcement – past, present, future', speech to the Law Society Anti-Trust Section, 11 December 2012; available at http://www.of.gov.uk/shared_of/speeches/2012/1112.pdf; John Fingleton, 'UK Competition Policy: the first decade', Speech at the 40th Anniversary of Cleary Gottlieb Steen & Hamilton LLP London Office, 11 May 2011; available at http://www.of.gov.uk/shared_of/speeches/2011/0911.pdf.

⁸ Incidentally, the redaction of commercially sensitive information does from time to time raise legal certainty questions when it comes to evaluating the benefits of leniency applications. See, for instance, Peter Willis and Victoria Ross, 'EU Leniency Applications: The Timing And Effectiveness of Applications under the 2002 Notice', at p 1, para 4, available at https://www.dundas-wilson.com/publications/dw_cms_7384.pdf.

⁹ The maximum fine possible and the maximum custodial sentence constitute the potential competition risk exposure – the worst case scenario, in this regard.

¹⁰ The fines imposed on cartelists may in part depend on the turnover of a company and are, as such, relative to the size of the individual company.

DEVELOPING A SIMPLE RISK MODEL

Once the risk in question and the methodology for estimating its consequences are defined, a simple risk model can be built up.

The purpose of a risk model is to compare various risks to which a company is exposed and to illustrate methodically what happens when the probability of the risk occurring or its consequences change. In cases where multiple risks require action, the risk model helps the relevant decision makers in a company to determine the order in which different risks are addressed and, depending on the gravity of the risk, the resources to be made available.

For illustrative purposes, this article employs a highly simplified risk model involving a matrix with risk scores calculated on the basis of *Impact* and *Probability*.

To develop the matrix, the probability of detection of the cartel activity is plotted on the Y-axis and the impact or severity of the harm that follows detection is plotted on the X-axis.

Very High					
High					
Moderate					
Low					
Negligible					
Probability	Negligible	Low	Moderate	High	Very High
Impact					

Note of course that for the categories ('negligible', 'low', etc) on the X-axis to have any real-life meaning, they will in practice need to be defined further since the impact of financial losses, for instance, is necessarily relative to the size of the business. A cartel fine of £20m might be insignificant for one company and catastrophic for another. Where a potential impact is catastrophic, to stay with our example, this would fall within the most severe category, ie 'very high'.

Probability and *Impact* are then assigned integers from 1 through 5, corresponding to the labels of 'negligible' impact and probability on the one end of the spectrum to 'very high' impact and probability on the other end.

Very High (5)					
High (4)					
Moderate (3)					
Low (2)					
Negligible (1)					
Probability	Negligible (1)	Low (2)	Moderate (3)	High (4)	Very High (5)
Impact					

The resulting matrix of risk scores is calculated using the product of the probability value and the impact value.

Very High (5)	5	10	15	20	25
High (4)	4	8	12	16	20
Moderate (3)	3	6	9	12	15
Low (2)	2	4	6	8	10
Negligible (1)	1	2	3	4	5
Probability Impact	Negligible (1)	Low (2)	Moderate (3)	High (4)	Very High (5)

A risk tolerance threshold value is then determined to identify any business risk that has become commercially unacceptable and requires the attention of senior management. The sample matrix employs an arbitrary risk tolerance value of 10 for illustrative purposes, with values above 10 signifying unacceptable business risks.

Very High (5)	5	10	15	20	25
High (4)	4	8	12	16	20
Moderate (3)	3	6	9	12	15
Low (2)	2	4	6	8	10
Negligible (1)	1	2	3	4	5
Probability Impact	Negligible (1)	Low (2)	Moderate (3)	High (4)	Very High (5)

Beyond the binary *acceptable vs unacceptable* business risks dichotomy, multiple thresholds would usually be defined, according to which business response is appropriate. That way, a distinction can be drawn between risks which require no action at all, those risks which require monitoring and, finally, risks which are commercially unacceptable and require immediate action.

Practical example

By way of a practical example, say, for instance, that for each probability category a range is defined, starting with probabilities of less than five (ie a probability which is 'negligible'), up to probabilities which are higher than 70% (ie probabilities which according to our analysis are 'very high').

The same analysis is then conducted for the X-axis: assume, for instance, that for the company concerned cartel fines of less than £1m would be considered 'negligible' in their impact on the business while on the other end of the spectrum, fines of £14m or more would qualify as 'very high' in impact.

Sample matrix					
Very High (5): > 70%	5	10	15	20	25
High (4): 30%–70%	4	8	12	16	20
Moderate (3): 15%–30%	3	6	9	12	15
Low (2): 5%–15%	2	4	6	8	10
Negligible (1): < 5%	1	2	3	4	5
Probability	Negligible (1)	Low (2)	Moderate (3)	High (4)	Very High (5)
Impact	< £1m	£1m–£3m	£3m–£6m	£6m–£14m	> £14m

Finally, assume that considering the size of the hypothetical company (an annual turnover of £150m), a fine for violations of competition law would be estimated to be in the region of £10m, and that the likelihood of detection would be 20%.

Using the sample risk model, this scenario would be ‘high’ in impact and of ‘moderate’ probability, with an associated risk score of 12, which in turn exceeds the hypothetical risk tolerance value of 10 and, accordingly, as a commercially unacceptable risk would require remedial action.

Even though the scenario is hypothetical, it is illustrative of how risk scores reflect both the likelihood of a cartel conviction and the severity of the harm to the business. As a consequence, relatively minor changes in the evaluation of probability and impact may have significant ramifications with regard to the question of whether, or how urgently, the underlying risks need to be addressed.

ASSESSING IMPACT: SEVERITY OF FINES AND CRIMINAL SANCTIONS

Rationale and impact of fines

Rationale for imposing fines

The European Commission firmly believes in the deterrent effect of severe fines¹¹ and while the OFT’s policy position is arguably more nuanced, a belief in principle in deterrence is nevertheless evident.¹² Of course, the concept of deterrence presupposes that the addressee of the enforcement policy has knowledge of the policy; a regulator cannot deter, at least not by

¹¹ Cf, for instance, http://ec.europa.eu/competition/cartels/overview/factsheet_fines_en.pdf, November 2011. For a cautious position which also factors in the risk of detection, cf Massimo Motta’s 2007 paper ‘On EU antitrust fines and cartel deterrence’, available at <http://ec.europa.eu/dgs/competition/economist/motta.pdf>.

¹² Cf OFT423, *Guidance as to the appropriate amount of a penalty*, September 2012, available at http://www.of.gov.uk/shared_of/business_leaflets/ca98_guidelines/oft423.pdf, at 2.5.

means of sanctions, companies from engaging in anticompetitive conduct unless the companies in question are aware of the potential sanction.¹³

What is more, OFT publications indicate a belief in a causal link between enforcement activities themselves and the awareness of stakeholders *in the same sector* of the OFT's enforcement activities and cartel sanctions.¹⁴ In other words, if a regulator investigates and fines companies then other companies *in the same sector* become more aware of competition law enforcement overall. For the sake of completeness, the OFT does not assume the same causal relationship between enforcement itself and knowledge of competition enforcement with regard to companies operating in *different* sectors from those investigated by the OFT.

Likely impact

The level of fines that the EU Commission and the OFT may impose in connection with cartel proceedings is currently capped at 10% of a company's worldwide turnover.¹⁵ In practice, the maximum fine is applied; since the introduction of the 2006 Fines Guidelines, 9.2% of all companies fined were fined between 9% and 10% of their worldwide turnover, and 18.4% of companies were fined 5% or more of their worldwide turnover, for infringements of the cartel prohibition alone (ignoring other competition law infringements) (see Table 1).¹⁶

Table 1 – Cartel fines imposed by the EU Commission on companies, expressed as a percentage of their worldwide turnover

Percentage of worldwide turnover	0–1%	1–2%	2–3%	3–4%	4–5%	5–6%	6–7%	7–8%	8–9%	9–10%
Percentage of companies fined	56.4%	11.1%	5.3%	2.2%	4.0%	4.0%	2.2%	3.1%	1.3%	10.2%

Source: European Commission cartel statistics, at 1.11, available at <http://ec.europa.eu/competition/cartels/statistics/statistics.pdf>

¹³ Cf, for instance, OFT Publication OFT1391, *The impact of competition interventions on compliance and deterrence*, Final Report, December 2011, available at http://www.of.gov.uk/shared_of/reports/Evaluating-OFTs-work/oft1391.pdf; see also Figure 1.1, at 1.14, which illustrates that there can be no deterrence without an awareness of the sanctions.

¹⁴ Cf OFT1391, at 1.18: '[T]here is indirect evidence that enforcement actions may have positive spill-over effects in terms of improved knowledge about competition issues and wider use of voluntary compliance measures in companies operating in sectors affected by OFT competition investigations . . . [B]usinesses in sectors with one or more competition interventions . . . are significantly more knowledgeable about various aspects of the UK competition regime'.

¹⁵ Cf Art 23(2) of Council Regulation (EC) No 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Arts 81 and 82 of the Treaty (2003) OJ L 1/1.

¹⁶ For the purposes of the calculation, immunity applicants who would have received that fine are included.

While criminologists might vehemently dispute the claim that the severity of a fine does in fact deter criminal activity,¹⁷ the fining policy of the European Commission is unlikely to become any more lenient in future. Rather, the trend is towards the high end of the spectrum of fines: nine of the ten highest cartel fines ever imposed on a single company since 1969 were imposed in the last seven years (see Table 2).¹⁸ The same holds true with regard to the highest cartel fines ever imposed per case.¹⁹

Table 2 – The ten highest cartel fines ever imposed on a single company (since 1969)

Year	Company	Amount (EUR)
2008	Saint Gobain	880m
2012	Philips	705m
2012	LG Electronics	688m
2013	Deutsche Bank AG	466m
2001	F. Hoffmann-La Roche AG	462m
2013	Société Générale	446m
2007	Siemens AG	397m
2008	Pilkington	357m
2010	Ideal Standard	326m
2009	E.ON	320m
2009	GDF Suez	320m

Source: European Commission cartel statistics, at 1.5, available at <http://ec.europa.eu/competition/cartels/statistics/statistics.pdf>

¹⁷ Andrew Ashworth, *Sentencing and Criminal Justice*, chapter 3.3.2. at p 80: '[A]ll the indications are that it is naïve to assume the kind of hydraulic relationship between [the severity of] sentences and criminal behaviour that some find intuitively appealing'.

¹⁸ European Commission cartel statistics, at 1.6, available at <http://ec.europa.eu/competition/cartels/statistics/statistics.pdf>.

¹⁹ European Commission cartel statistics, at 1.5.

Rationale and impact of criminal sanctions

The potential civil fines to which companies are exposed are supplemented by criminal sanctions, that is to say sanctions (fines or custodial sentences) which are imposed on the individual rather than the corporate entity. As with civil sanctions, in order to be able to predict the direction in which enforcement policy in relation to criminal sanctions will evolve in future, it is necessary to understand their underlying rationale.

Rationale for fines

The economic incentive argument in favour of criminal sanctions is especially apparent in cases where the threat of fines imposed on the company alone does not deter the individual responsible; absent criminal sanctions on the individual, he or she may in fact be incentivised to engage in anticompetitive conduct. In the words of the OFT, ‘very high fines imposed at firm level may be ineffective in preventing a manager from infringing if she/he personally gains more from the infringement than he loses when the company is fined’.²⁰ Accordingly, fines are analysed as a system of economic incentives or disincentives which regulate the behaviour of decision makers in a company – who are hopefully deterred by the fine.

Rationale for custodial sentences

The belief in a deterrent effect of custodial sanctions is fairly universal among regulators; some go so far as treating the proportionate relationship between custodial sentences and deterrence as axiomatic. The US Department of Justice (DOJ) position in this respect is highly illustrative and deserves to be quoted at length:

‘[A] prison sentence uniquely sends the message that society condemns the particular conduct for which a prison sentence is imposed, and the failure to send that message necessarily lessens deterrence. [A] prison sentence must be borne by the convicted individual, whereas a fine could be paid (if only indirectly) by others. [S]anctions on culpable individuals are necessary because the monetary sanctions on corporations are insufficient.’²¹

The DOJ also makes reference to the system of economic incentives and disincentives:

²⁰ OFT1391, op cit n 13, above at 3.30.

²¹ Gregory J Werden, Scott D Hammond, Belinda A Barnett, ‘*Deterrence And Detection Of Cartels: Using All The Tools And Sanctions*’, 1 March 2012, at p 6, available at <http://www.justice.gov/atr/public/speeches/283738.pdf>.

‘[S]anctions on culpable individuals also are essential because they are apt to misperceive the risks and rewards from cartel participation, e.g., by placing excessive weight on the immediate gains from a cartel or being overly optimistic about escaping detection.’²²

Likely impact

In the context of UK competition law, criminal sanctions include custodial sentences on the one hand as well as financial and behavioural penalties on the other hand. The OFT has the power to impose custodial sentences on individuals involved in a cartel of up to five years.²³ Moreover, the OFT may impose unlimited fines and issue director disqualification orders²⁴ of up to 15 years.²⁵ While the director disqualification order is in force, it is a criminal offence for that individual to be a director of a company and to be involved, even indirectly, in the promotion, formation or management of a company.²⁶

In the last five years, the OFT concluded five main criminal investigations.²⁷ There were no criminal convictions in four of them²⁸ but the investigation of the Marine Hose cartel which commenced in December 2007 saw the criminal convictions of three Dunlop executives to custodial sentences of 2.5 years, 2 years and 20 months respectively.²⁹

If the impact of steep fines seems somewhat abstract and remote, consider the tangible and self-evident impact on the lives of the Dunlop company directors who arrived at Southwark Crown Court to be incarcerated for 2.5 years. The custodial sentence makes the director disqualification orders of 7 years and 5 years respectively³⁰ imposed in the same proceedings seem positively trivial by comparison.

Furthermore, losing company directors as a result of criminal convictions is never good publicity. The financial losses suffered through the reputational damage to the company may be

²² Ibid.

²³ Section 190(1)(a) of the Enterprise Act 2002.

²⁴ Cf OFT Guidance, *Director disqualification orders in competition cases*, available at http://www.offt.gov.uk/shared_offt/business_leaflets/enterprise_act/oft510.pdf.

²⁵ Section 9A(9) of the Company Directors Disqualification Act 1986, as amended by s 204(2) of the Enterprise Act 2002.

²⁶ Cf OFT Guidance, ‘*Director disqualification orders in competition cases*’, at section 2.10, available at http://www.offt.gov.uk/shared_offt/business_leaflets/enterprise_act/oft510.pdf.

²⁷ Cf <http://www.offt.gov.uk/OFTwork/competition-act-and-cartels/criminal-cartels-completed>.

²⁸ Cf <http://www.offt.gov.uk/OFTwork/competition-act-and-cartels/criminal-cartels-completed/agricultural-sector> (supply of products for use in the agricultural sector); <http://www.offt.gov.uk/OFTwork/competition-act-and-cartels/criminal-cartels-completed/fuel-surcharges-proceedings> (airline passenger fuel surcharge); <http://www.offt.gov.uk/OFTwork/competition-act-and-cartels/criminal-cartels-completed/commercial-vehicle-criminal> (commercial vehicle manufacturers); and <http://www.offt.gov.uk/OFTwork/competition-act-and-cartels/criminal-cartels-completed/automotive-sector> (automotive sector).

²⁹ Cf <http://www.offt.gov.uk/OFTwork/competition-act-and-cartels/criminal-cartels-completed/marine-hose>.

³⁰ Ibid.

indirect and elude exact quantification; there can be little doubt, however, that the exposure is significant and that management should endeavour to mitigate the risk of criminal convictions.

ASSESSING THE RISK OF DETECTION

The probability of the detection of a cartel in the EU was examined in 2008 by Combe, Monnier and Legal.³¹ While the authors did not comment on the likelihood that a given cartel would be detected throughout its lifetime, their research specifically tackled the probability of detection of a cartel *in a given year*. Combe, Monnier and Legal estimated that probability at 12.9% to 13.2%.³²

The Combe, Monnier and Legal findings were published in March 2008 and it is arguable that the risk of detection has since increased.

First, cartel enforcement remains a priority for the European Commission, and recent activities serve to illustrate the unbroken trend towards highly visible enforcement activities. For example, May and April 2013 saw dawn raids in the sugar sector³³ as well as the oil and bio fuels sector.³⁴ Furthermore, the Commission sent a statement of objections (SO) to Motorola Mobility³⁵ and to suspected participants in a smart card chips cartel³⁶ and investigated MasterCard interbank fees.³⁷ The OFT's enforcement philosophy mirrors that approach; the UK regulator observes that 'high profile OFT enforcement cases result in greater behavioural change than lesser known cases'.³⁸

Secondly, leniency programmes and related destabilising schemes have a growing impact. Combe, Monnier and Legal note that the leniency programmes established in the EU are likely to contribute to an 'increase of the probability of detection, as these programs imply a reduction of investigations costs, they facilitate inquiries and evidence collection, and jeopardize cartel stability'.³⁹ Since the OFT is aware of the effect of the risk of detection on anticompetitive behaviour⁴⁰ the same logic will hold true with regard to the UK's own leniency programme and related destabilising schemes which increase the overall risk of detection.

³¹ BEER paper no 12 (March 2008) by Emmanuel Combe, Constance Monnier, Renaud Legal; Bruges European Economic Research papers; *Cartels: The Probability of Getting Caught in the European Union*; available at <https://www.coleurope.eu/content/studyprogrammes/eco/publications/BEER/BEER12.pdf>.

³² Ibid.

³³ http://europa.eu/rapid/press-release_MEMO-13-443_en.htm.

³⁴ http://europa.eu/rapid/press-release_MEMO-13-435_en.htm.

³⁵ http://europa.eu/rapid/press-release_IP-13-406_en.htm.

³⁶ http://europa.eu/rapid/press-release_IP-13-346_en.htm.

³⁷ http://europa.eu/rapid/press-release_IP-13-314_en.htm.

³⁸ OFT Publication OFT1391, op cit n 13, above.

³⁹ BEER paper no 12, op cit n 31, above, at p 19.

⁴⁰ OFT Publication OFT1391, op n 13, at 1.23 and 1.31; see also 3.10.

Finally, competition authorities can increase the chance of detection by focusing their investigative activities and enforcement priorities on those industries where the structure of the industry is such that it favours cartel activity. Econometric analysis supplies regulators with the tools to set those priorities. To illustrate one of many possible approaches, in 2006, Grout and Sonderegger⁴¹ calculated, for a wide range of sectors, the probability that there would be at least one cartel in that sector. In a second ranking, the authors then cross-referenced the original list with those sectors in which cartels had not yet been discovered. The new list of sectors and probabilities supplies regulators with a highly useful list of sectors in which cartel activity is most likely but as yet undetected – ideal for the purposes of setting enforcement priorities.

CONSEQUENCES FOR RISK ASSESSMENT

Having examined the policy justifications which underpin civil and criminal sanctions imposed on companies and individual directors it appears that the underlying rationale provided in each case is firmly established and unlikely to develop drastically in future. Regulators may on occasion debate the details⁴² but the theoretical bases of the sanctions discussed above are fast becoming immutable.

Furthermore, it is arguable that the fines imposed on companies show an upward trend. It is also notable that fines approaching the 10% turnover limit are a realistic scenario with which to reckon in practice. While custodial sentences still appear to be limited to exceptional cases, criminal investigations tie in neatly with the principle of high-profile, high-impact enforcement activity. Consequently, there is every indication that the OFT will continue to take advantage of this part of its enforcement arsenal in future. What is more, there are indications that the EU will not indefinitely limit itself to administrative fines in future.⁴³

From a risk assessment perspective, the combined effect of civil and criminal fines is potentially catastrophic for any business.

⁴¹ Paul A Grout and Silvia Sonderegger1, 'Structural Approaches to Cartel Detection', 2006 EU Competition Law and Policy Workshop/Proceedings; see, for instance, Table 4 at p 17; available at <http://www.eui.eu/RSCAS/Research/Competition/2006%28pdf%29/200610-COMPed-Grout.pdf>.

⁴² Eg administrative sanctions only (EU) vs criminal sanctions (US and UK). Cf Alexander Italiener, 'Fighting cartels in Europe and the US: different systems, common goals', speech to the Annual Conference of the International Bar Association (IBA), 9 October 2013, para 7 et seq; available at http://ec.europa.eu/competition/speeches/text/sp2013_09_en.pdf.

⁴³ Proposal for a Council Regulation on the establishment of the European Public Prosecutor's Office; available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52013PC0534:en:NOT>; see also http://ec.europa.eu/justice/criminal/judicial-cooperation/public-prosecutor/index_en.htm.

If the arguments put forward in this article are correct, then our hypothetical risk matrix will need to take account of a growing network of interlinking and mutually supporting enforcement tools available to competition authorities.

The risk matrix will also need to reflect two developments. First, on the X-Axis which maps *Impact* there is a tendency towards higher fines and a higher likelihood of custodial sentences, ie a tendency towards higher *Impact*. Second, on the Y-Axis which maps *Probability* a growing risk of detection triggered by continued enforcement activity, leniency programmes and related destabilising schemes is seen – bearing in mind that the risk of detection, even when estimated at 13% in 2006, was already significant to start with. As both *Impact* and *Probability* increase, the resulting risk scores increase proportionately, with significant ramifications for risk assessment purposes. In this context, it is important to bear in mind that our risk model is necessarily simplistic; in a more granular model, even subtle movements in *Probability* and *Impact* might move antitrust risk into a higher risk category or move its priority ahead of risks which are not competition law-related.

FROM RISK ASSESSMENT TO EFFECTIVE RISK MANAGEMENT THROUGH FORWARD-THINKING COMPETITION COMPLIANCE

There are two principal conclusions to be drawn. Risk *management* presupposes accurate risk *assessment*, and compliance programmes must become more sophisticated and forward-looking.

In terms of the first point, every risk management strategy presupposes accurate risk assessment. Risk assessment in the context of competition law enforcement activities can be a challenging process which involves significant potential exposure. Many factors play into the assessment of that risk, but a sound risk assessment is a necessary condition for effective risk management.

In relation to the second point, compliance programmes play a significant part in how companies mitigate the risks associated with anticompetitive conduct. By means of compliance-related education, companies can decrease the risk that employees engage in anticompetitive conduct at all.

However, it is important to be realistic and to accept that the larger a company becomes the more difficult it will be to control the actions of every employee. Compliance programmes must also be forward-looking and include a risk mitigation strategy to deal with worst case scenarios. Forward-looking risk managers will implement protocols to aid potential leniency applications in the event that they are investigated. They will consider how to increase the chance of success of a leniency application given that normally, speed will be of the essence. Successful internal audits will come down to matters such as effective information management (the ability to identify relevant data immediately) and resources management

(using finite internal resources effectively and drawing on the expertise of external specialists who have conducted similar audits in the past).