Common ownership

Excerpt from Chapter II of the XXII. Biennial Report of the Monopolies Commission ("Competition 2018") in accordance with Section 44 Paragraph 1 Sentence 1 of the German Act against Restraints of Competition

The full Report (in German) is accessible at:
http://www.monopolkommission.de

The Monopolies Commission is a permanent, independent expert committee which advises the German government and legislature in the areas of competition policy-making, competition law and regulation. Its legal responsibilities encompass, among others, the preparation of a Main Report analysing the development of competition on a biannual basis. The Monopolies Commission has five Members appointed by the Federal President based on a proposal of the German government. Prof. Achim Wambach, Ph.D., is the chairman of the Monopolies Commission.

Summary

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Every two years, the Monopolies Commission has the task under Sec. 44 Para. 1 first sentence ARC to examine the state and development of concentration among companies in the Federal Republic of Germany. Concentration reporting has been supplemented in this Report by an assessment of the role of common ownership by institutional investors for the competitive pressure of portfolio companies. The possibility is being discussed that indirect corporate links via institutional investors may have anti-competitive effects. The Monopolies Commission has addressed this issue again and still sees a significant potential for problems. The reason for this is that indirect corporate links within a market via joint institutional investors can impede the intensity of competition between competitors by facilitating coordinated behaviour or can make competitors avoid intensive competition unilaterally. However, the Monopolies Commission considers it premature at this moment to take far-reaching measures of (competition) law or regulation. But the Monopolies Commission does welcome the announcement by the European Commission's Directorate-General for Competition to address the issue in more detail. Also, the effort of taking the possible effects of indirect horizontal links into account within the framework of the merger control review of proposed mergers, which is already under way, is to be noted positively.

4 Common ownership

4.1 Introduction

413. In this part of the Report the Monopolies Commission investigates how important institutional investors are for competition, thereby taking up issues addressed in its XXIst Main Report. The debate at international level revolves around whether common shareholdings by institutional investors might be leading to a reduced level of competition. This may be because indirect links between companies in a market on account of common shareholders impede competitive intensity by facilitating coordinated action or because individual competitors may be unilaterally deciding to evade intense competition. Meanwhile, various international competition authorities, such as the European Commission, are already taking account of theories of harm regarding indirect horizontal links in their merger control decisions, and the OECD recently carried out a hearing on the matter.[157] It should not be forgotten that, in the first instance, indirect links between competitors due to non-industry shareholders' shares in them merely represent a market-structural phenomenon which may not necessarily have a negative impact on competition. In the same way as there may be intense competition in highly concentrated markets with only a few competitors, suppliers in a market with common shareholders may also engage in intense competition. Moreover, there is as yet no conclusive evidence that competition is actually reduced as a result. One important issue when assessing whether indirect horizontal links pose a problem is what possible means are available to institutional investors for exerting an influence on portfolio companies, given that institutional investors generally have holdings of significantly less than 10 per cent, and how they apply those means.

414. The current debate among both academics and practitioners was triggered by empirical studies conducted in the United States which for the first time provide empirical evidence of a possible link between the level of common ownership on account of institutional investors and anticompetitive effects. These two pieces of highly respected research gave rise to further empirical studies in this still young field. Another consequence is an ongoing and controversial debate around whether any competition law/legal measures or regulatory steps need to be taken to limit the level of common ownership and thus reduce any concomitant potential risks to competition. A number of different strategies have been proposed in the course of this debate which differ greatly in terms of approach and scope.

415. Section 4.2 below sets out the current level of common ownership on account of minority shareholdings by institutional investors in Germany and Europe using examples. Section 4.3 looks at those channels which institutional investors could potentially use to exert an influence on their portfolio companies, as well as the practical and legal obstacles which limit their means of exerting such an influence. The theories of harm regarding potential anticompetitive effects due to one-sided action (unilateral effects) and coordination are discussed in detail in section4.4. Some simple indicators which are used to quantify the level of common shareholding between companies or in a market on account of common shareholders are described in section 4.5. In addition, theoretically sound indicators are presented which quantify the effects which links between companies due to institutional investors have on market concentration and which, under certain assumptions, allow conclusions to be drawn about anticompetitive effects. Empirical studies on the (potential anticompetitive) effects of indirect horizontal links are presented in section 4.6. Finally, various concepts are discussed in section 4.7 which have been proposed as countermeasures against too high a level of common ownership and the theoretically possible concomitant risks to competition. The analysis concludes with a final evaluation in section 4.8.

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[157] See para. 457 and section 4.7.2, as well as www.oecd.org/competition/common-ownership-and-its-impact-on-competition.htm, retrieved 12 June 2018.

4.2 Institutional investors and common ownership

416. Institutional investors are defined as specialised financial institutions which invest the capital of a large number of asset holders[158] on their behalf, thereby aiming to maximise returns at a reasonable risk. Institutional investors include insurance companies, asset managers, investment and pension funds, banks and sovereign wealth funds. The term can, thus, refer to numerous financial institutions with a variety of different business models, strategies and modus operandi, such as their approach to exercising voting rights attaching to their portfolio companies.[159] When it comes to those (divisions of) institutional investors which specialise in equity investments, active and passive investment strategies must be distinguished. Active investors can choose between value and growth strategies, as well as a combination of the two (e.g. growth at a reasonable price, or GARP), for instance. Passive investors aim to replicate the trend in indices or groups of indices, for instance using exchange-traded funds (ETFs). In 2017, institutional investors held 61.8 per cent of free-floating shares in the DAX, Germany's most important stock market index; private investors held 17.2 per cent and strategic investors 18.4 per cent of these shares. Strategic investors are what are known as "anchor investors" which include families/family-run businesses, foundations and the Federal Republic of Germany's strategic holdings. The ratio between active and passive institutional investors is around 75 per cent to around 25 per cent; the distribution in other European benchmark indices is similar.[160]

417. Generally speaking, in actively-managed portfolios decisions concerning the composition of a portfolio are taken by an investment manager – usually backed by a group of experts – and the aim is to maximise returns as far as possible. The investment strategy is usually geared to achieving better returns than those from a comparable index. Passive strategies aim to replicate the performance of an index (e.g. the DAX 30), resulting in significantly fewer administrative costs since the goal is only to match the index in question's performance in terms of returns.[161] Passively-managed investments have enjoyed remarkable capital growth in recent years. In 2003, for example, total assets invested in passively-managed ETFs worldwide amounted to some USD 204 billion; by 2016 that figure had risen to US 3,422 billion.[162] Total assets managed globally by institutional investors have also increased strongly in recent decades. According to the BVI, the German association of capital management companies and funds, assets managed by Germany's investment sector in Germany alone rose from EUR 129 billion in 1990 to EUR 2,400 billion in 2016.[163] Globally, managed assets increased from USD 37 trillion in 2004 to USD 85 trillion in 2016, and the forecast for 2025 is a further increase to up to USD 145 trillion.[164]

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[158] The term "asset holder" (in the sense of "owner", "client") is used in this chapter to refer to those investing in fund products (compared to "institutional investors", or "asset managers"); see Article 4(1) point (ag) and point (aj) of Directive 2011/61/EU in conjunction with Annex II to Directive 2004/39/EC; Article 4(1) nos 9–11 of Directive 2014/65/EU); see also, in German law, section 1 (19) nos 31–33 of the Investment Code (*Kapitalanlagegesetzbuch*, KAGB).

[159] Çelik, S./Isaksson, M., Institutional Investors as Owners: Who Are They and What Do They Do?, OECD Corporate Governance Working Papers No. 11, OECD Publishing, p. 21.

[160] DIRK/Ipreo, Investoren der Deutschland AG 5.0. Die Aktionärsstruktur des deutschen Leitindex DAX 30, June 2018.

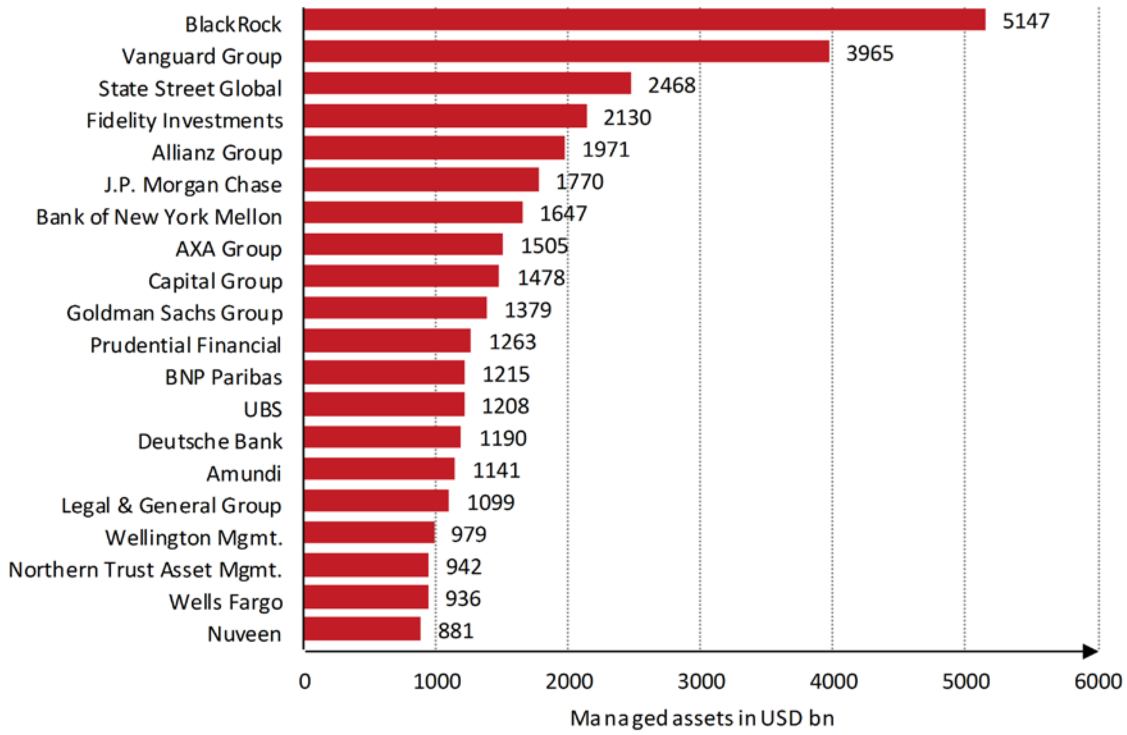
[161] See also Davies, E.P./Steil, B., Institutional Investors, MIT Press, 2001, p. 58 et seqq. as regards the distinction between active and passive investment strategies.

[162] Deutsche Bank, ETF Annual Review & Outlook, 31 January 2017.

[163] BVI, 2017 Yearbook, p. 58. Not including closed-end funds and open mandates.

[164] PWC, Asset & Wealth Management Revolution: Embracing Exponential Change, 2017. Reasons for this recent growth in investment volume include the general institutionalisation of financial management, greater deregulation, the privatisation of old-age provision, a general rise in prosperity and central banks' current low interest-rate policies. See also Davies, E. P./Steil, B., Institutional Investors, MIT Press, 2001.

Figure II.35: Biggest asset management companies



NB: Figures quoted are total globally managed assets. As at: December 2016.

Source: Willis Towers Watson

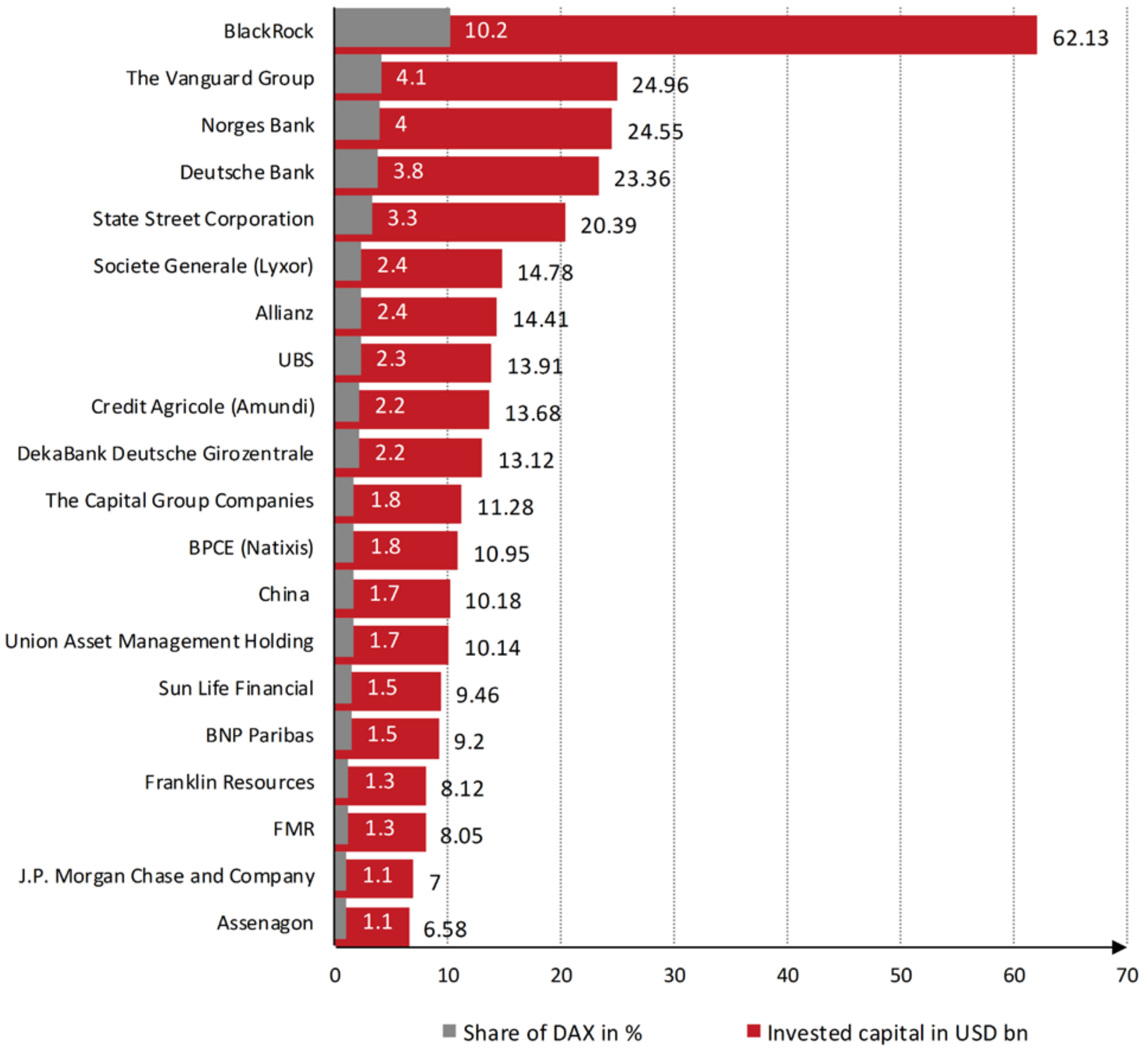
418. Figure II.35 presents the biggest asset management companies based on globally managed assets in 2016. The biggest is BlackRock, followed – quite a way behind – by Vanguard and State Street. Figure II.36 presents the 20 biggest groups of investors in DAX-listed companies. Here, too, the BlackRock Group is the biggest institutional investor by far. The BlackRock Group invests a total of more than USD 62 billion (2017: USD 72.2 billion) in DAX-listed companies. It is thus the most important investor in DAX companies, with 10.7 per cent of identified diversified institutional holdings and 6.6 per cent of total free float in the DAX. On average, the BlackRock Group holds 5.2 per cent of each DAX-listed company's capital stock. Passively-managed investments represent 80 per cent of its portfolio. Norges Bank, Norway's central bank and generally regarded as the world's biggest sovereign wealth fund, is the biggest single investor.[165]

419. To minimise their risks, active institutional investors often adopt diversification strategies. That means that many institutional investors spread their investment volume and, for instance, tend to have small holdings in several companies in a particular sector rather than holding shares in only one company in that sector. This ensures that their returns are not solely dependent on the entrepreneurial success of one single company. By diversifying their holdings, institutional investors often have relatively small stakes in several businesses in one particular sector. That creates an indirect link between portfolio companies on account of their common shareholders' minority interests.[166] In the following, the term "common ownership" is used to refer to shareholders equity holdings in several companies which are linked via a (horizontal) competitive relationship (see Figure II.37). A distinction must be drawn between indirect links between companies (referred to as "common ownership") and unilateral or reciprocal direct links between companies (referred to as "cross-ownership") (see Figure II.37). The extent to which the competitive effects of direct and indirect minority shareholdings are comparable will be discussed below.

165 DIRK/Ipreo, loc. cit., June 2018.

166 A minority interest is generally understood to be ownership of less than half of a company's total shares. However, institutional investors generally do not hold more than 10 per cent of a portfolio company's total shares.

Figure II.1: 20 biggest groups of investors in DAX-listed companies (December 2016)



Source: Deutscher Investor Relations Verband and Ipreo

420. Common ownership is not uncommon, and is a frequently observed phenomenon in Germany and Europe.[167] To get an idea of the extent of common ownership, the Monopolies Commission conducted a renewed empirical analysis based on the Orbis business database supplied by Bureau van Dijk.[168] Those companies in which the biggest institutional investors hold capital shares were selected, regardless of the level of those shares. The world's biggest asset management companies (according to managed assets) were included, as were the biggest investors in the DAX.[169] The results show that in many sectors in Germany and Europe big institutional investors simultaneously hold shares in

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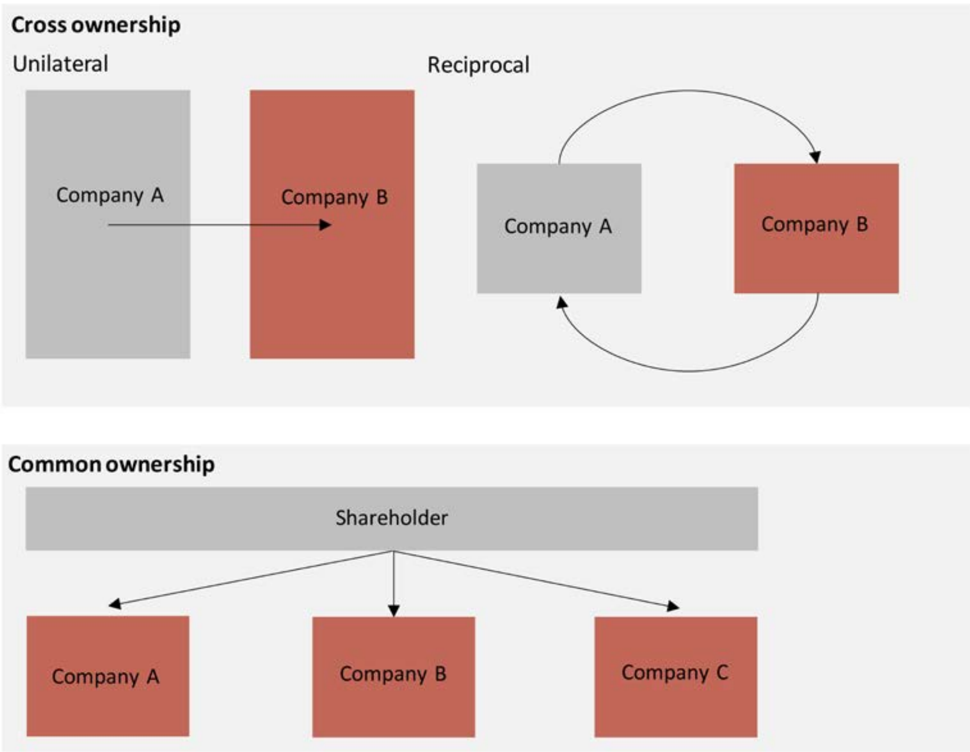
[167] Monopolies Commission, XXIst Main Report, Competition 2016, Baden-Baden 2016.

[168] See section 4 in the Annex to chapter II in the Main Report for a description of this database.

[169] See Figure II.35 and Figure II.36. Account was taken of both direct holdings in parent companies and of holdings in majority-controlled subsidiaries. An evaluation according to business sectors thus shows in how many companies in a particular sector a specific investor holds shares. Consideration must be given to the fact that the classification of sectors applied does not refer to economically distinct markets (see section 3.4.1 in the Main Report). In order nevertheless to assign portfolio companies as adequately as possible to individual sectors despite firms being assigned to individual sectors based on revenue focus, companies on the lowest available level of consolidation were included.

several companies.[170] A glance at individual markets also shows that indirect horizontal links can be quite pronounced. For instance, investors holding shares in one of the five highest-revenue oil companies with a service station network across Germany also hold shares in all the other suppliers included in the survey. They hold a more than negligible proportion of these shares, i.e. at least some 20 per cent of the shares in these five suppliers are held by shareholders with stakes in all the other suppliers. Two of the suppliers even have a stake of around 45 per cent (see Figure II.38 and Table II.11). A similar picture emerges when one looks at Europe's biggest telecommunications providers: six suppliers have institutional investors with holdings of significantly more than 10 per cent of total shares and these at the same time hold shares in all the other suppliers included in the survey. If account is taken of diversified shareholders holding an interest in at least five out of the six suppliers investigated, then their share amounts to around 25 per cent (see Figure II.39 and Table II.12).

Figure II.2: Types of minority shareholdings



Source: Monopolies Commission, based on OECD

421. A different picture emerges in other sectors such as chemicals and car manufacturing: despite there being indirect horizontal links between competitors in these sectors, owners with shares in only one supplier are a prominent feature – especially in Germany. For example, looking at the ownership structures of the highest-revenue privately-owned chemicals companies shows that diversified shareholders hold large interests in most of the suppliers, but there is also one company (Henkel) which is still majority family-owned (see Figure II.40 and Table II.13). Another example of the importance of non-diversified shareholders in Germany is the car industry, where diversified shareholders also play a role but there are significantly fewer horizontal links than in other sectors. Core shareholders (family-run businesses) have large shares in Volkswagen AG and BMW AG; only a small proportion of their shares are held by diversified shareholders (see Figure II.41 and Table II.14).

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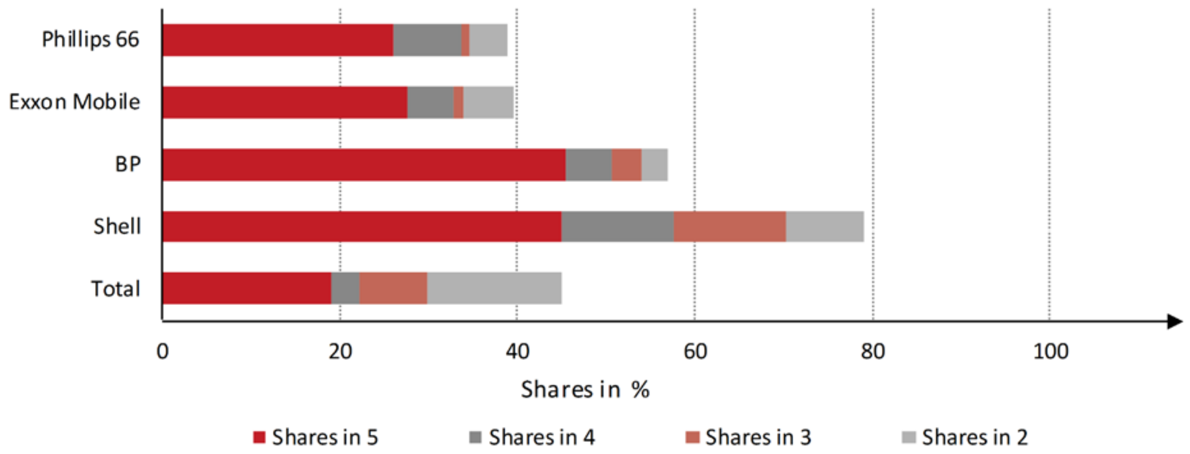
170 Detailed results are presented in Table A.17 and Table A.18 in the Annex to this chapter in the Main Report. It must be borne in mind that this analysis tends to underestimate the extent of common ownership as, firstly, not enough information is sometimes available about shareholders and, secondly, because only the biggest investors were included.

Common ownership of the biggest oil companies

Figure II.3: Diversified investors' shares in oil companies



NB: 26.09 per cent of Phillips 66's shares are held by investors with shares in five out of the five companies surveyed. Selection of the highest-revenue oil companies with a service station network in Germany.

Source: Monopolies Commission, calculations based on the Orbis Europe All Companies database supplied by Bureau van Dijk and the Nasdaq Institutional Holdings database (as at: January 2018)

Table II.1: Common investors in the biggest oil companies

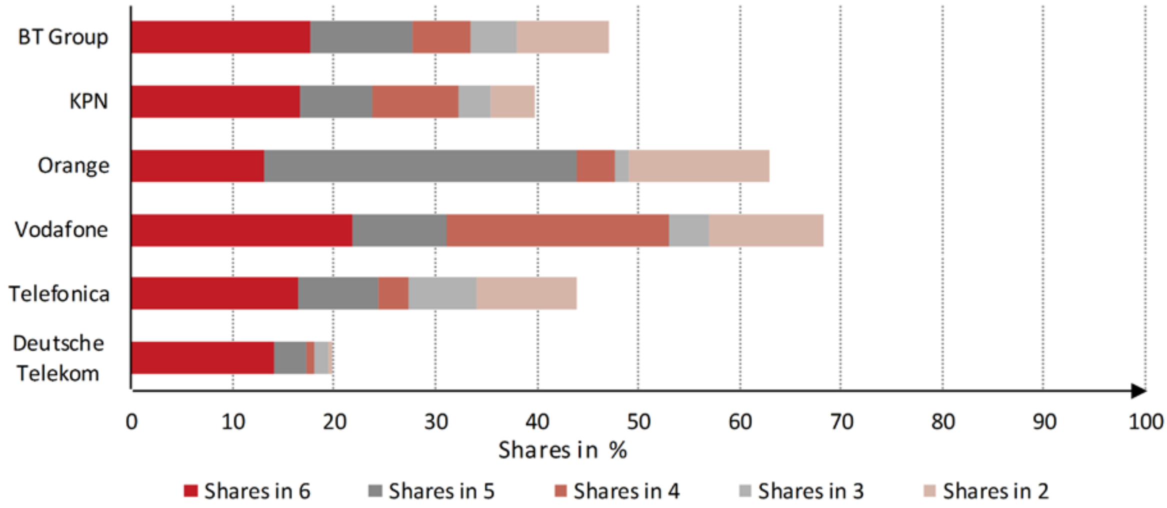
Investor	Total	Shell	BP	Exxon Mobile	Phillips 66
BlackRock	3.74	6.18	5.82	6.07	5.42
Vanguard	2.04	2.72	1.49	7.40	6.28
Bank of New York Mellon	0.45	15.93	0.16	1.25	1.35
State Street	0.86	3.47	1.63	4.93	4.41
Capital Group	2.13	7.43	1.48	0.74	0.48

NB: Shares in per cent. The table only includes the five diversified investors with the largest holdings.

Source: Monopolies Commission, calculations based on the Orbis Europe All Companies database supplied by Bureau van Dijk and the Nasdaq Institutional Holdings database (as at: January 2018).

Common ownership of the biggest telecommunications companies

Figure II.4: Diversified investors' shares in telecommunications companies



NB: 17.71 per cent of the BT Group's shares are held by investors with shares in six out of the six companies surveyed. Selection of Europe's highest-revenue companies and KPN (due to its links with Telefónica Deutschland).

Source: Monopolies Commission, calculations based on the Orbis Europe All Companies database supplied by Bureau van Dijk (as at: January 2018)

Table II.2: Common investors in the biggest telecommunications companies

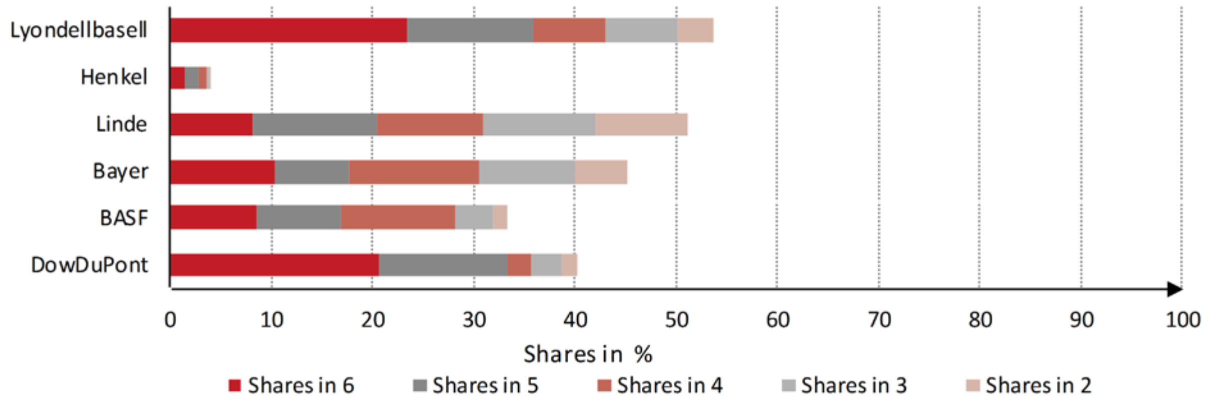
Investor	Deutsche Telekom	Telefónica	Vodafone	Orange	KPN	BT Group
BlackRock	3.29	4.87	6.08	2.54	4.75	5.11
Vanguard	1.69	1.02	2.94	1.80	1.82	2.50
Norway	1.58	1.43	2.32	1.88	2.72	1.61
State Street	1.23	0.98	2.72	0.61	0.36	2.04
Invesco	0.75	0.55	1.23	1.23	0.37	3.13
Capital Group	0.27	3.07	2.93	–	3.01	2.00

NB: Shares in per cent. The table only includes the six diversified investors with the largest holdings.

Source: Monopolies Commission, calculations based on the Orbis Europe All Companies database supplied by Bureau van Dijk (as at: January 2018)

Common ownership of the biggest chemicals companies

Figure II.5: Diversified investors' shares in chemicals companies



NB: 23.52 per cent of LyondellBasell's shares are held by investors with shares in six out of the six companies surveyed. Selection of the highest-revenue privately-owned companies.

Source: Monopolies Commission, calculations based on the Orbis Europe All Companies database supplied by Bureau van Dijk and the Nasdaq Institutional Holdings database (as at: January 2018)

Table II.3: Common investors in the biggest chemicals companies

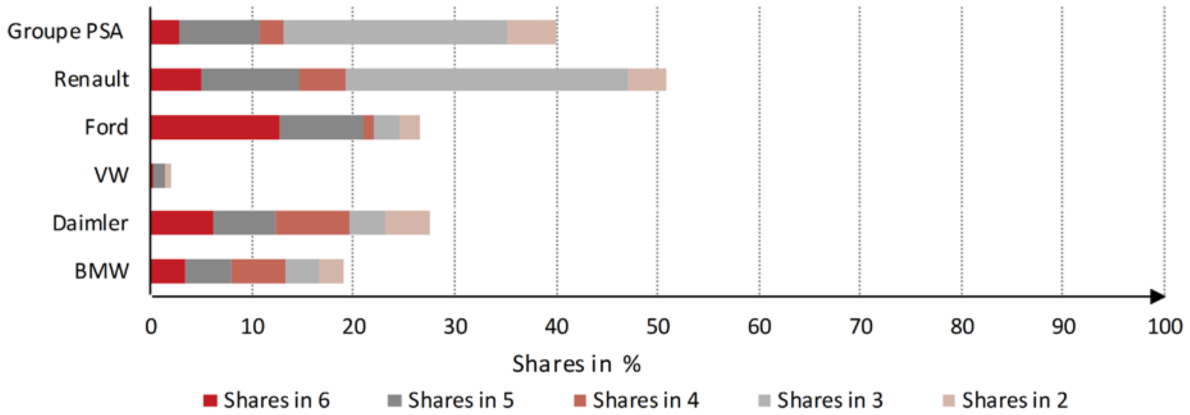
Investor	DowDuPont	BASF	Bayer	Linde	Henkel	LyondellBasell
BlackRock	6.63	4.22	5.12	3.65	0.55	5.64
Vanguard	7.27	2.52	2.53	2.51	0.66	6.23
Fidelity	2.47	0.37	1.10	1.00	0.12	7.85
State Street	4.27	1.44	1.55	1.00	0.11	3.80
Capital Group	6.44	0.91	1.17	2.99	–	5.43
Norway	–	3.02	2.12	5.16	1.23	0.89

NB: Shares in per cent. The table only includes the six diversified investors with the largest holdings.

Source: Monopolies Commission, calculations based on the Orbis Europe All Companies database supplied by Bureau van Dijk and the Nasdaq Institutional Holdings database (as at: January 2018)

Common ownership among the biggest car manufacturers

Figure II.6: Diversified investors' shares in car manufacturers



NB: 2.92 per cent of Groupe PSA's shares are held by investors with shares in six out of the six surveyed companies. Selection of the highest-revenue companies in Europe.

Source: Monopolies Commission, calculations based on the Orbis Europe All Companies database supplied by Bureau van Dijk and the Nasdaq Institutional Holdings database (as at: January 2018)

Table II.4: Common investors in the biggest car manufacturers

Investor	BMW	Daimler	VW	Ford	Renault	Groupe PSA
BlackRock	2.19	3.95	0.15	5.83	3.51	1.67
Vanguard	1.26	2.27	0.14	6.87	1.44	1.25
Capital Group	0.26	0.35	–	0.61	4.93	4.78
Norway	2.63	2.52	1.12	–	2.69	0.64
State Street	0.69	1.35	–	4.01	0.29	0.26
Dimensional Fund Advisors	0.39	0.64	–	1.02	0.66	0.71

NB: Shares in per cent. The table only includes the six diversified investors with the largest holdings.

Source: Monopolies Commission, calculations based on the Orbis Europe All Companies database supplied by Bureau van Dijk and the Nasdaq Institutional Holdings database (as at: January 2018)

4.3 Institutional investors' means of exerting influence

4.3.1 Introduction

422. Good performance is essential for institutional investors. If a company performs relatively well, it enables institutional investors to keep their client base (asset owners) at stable and sustainable levels, to acquire new clients and thus expand their fund volume (investment capital). If a portfolio's total value increases, an investment manager's profits directly increase. Institutional investors benefit from their portfolio companies performing well even if they are only acting as asset managers and are holding shares on their clients' behalf. Although the investment returns on a client portfolio belongs to the respective client, asset managers generally charge a fee for their services based on the total value of each client's portfolio, among other things. Thus, like their clients, institutional investors holding shares on their clients' behalf have an interest in their portfolio companies doing well. In addition, investors acting on another's behalf are obliged by law to safeguard their clients' interests.[171]

[171] See, as regards German law, especially section 92 (1), first sentence, and section 93 of the Investment Code. Accordingly, asset owners are economic (section 92 (1), first sentence, first alternative of the Investment Code) or legal (section 92 (1), first

423. Safeguarding their clients' interests includes exercising those ownership rights which are associated with the respective shares. While many asset owners exercise their voting rights in person, voting rights attaching to institutionally managed assets are mostly transferred to the institutional investors (asset managers). According to current estimates, more than 86 per cent of the top investors in DAX-listed companies vote at shareholder meetings; another 9 per cent cite that they will "probably vote". More than 70 per cent of decisions are based on analyses done by company-internal specialists combined with those done by external consultancies specialising in proxy voting (known as "proxy advisers"). Around 20 per cent of the remaining top investors rely exclusively on in-house decision-making processes, and some 7.4 per cent have delegated their votes to proxy advisers. In some cases, though, asset owners investing through institutional investors exercise their voting rights themselves or appoint other representatives.[172] It should be said that institutional investors generally hold significantly less than 10 per cent of shares in publicly-listed portfolio companies. More specifically, it should be remembered that there may be other asset owners in addition to the institutional investors surveyed in this analysis, and that these owners may have larger holdings in the relevant companies and are pursuing either short- or long-term strategic goals (e.g. not merely investment objectives). They may also be banks exercising their voting rights as part of their portfolio management remit and whose potential influence is therefore hard to estimate when viewed from the outside.

424. For several decades now, big publicly-listed (portfolio) companies active in capital markets have taken to publishing regular reports, even outside of shareholder meetings. They organise what are known as "roadshows" as part of their regular financial reporting and on an ad-hoc basis (at conferences, e.g.) during which one-to-one meetings are held with professional, generally big institutional investors or group appointments are organised with institutional investors. Information sharing is strictly regulated so as to ensure that no individual investor or group of investors is given any information which is not already in the public domain.

425. There may well be means by which institutional investors can exert an influence on the decision-making processes of the managements of publicly-listed companies, including in cases in which an institutional investor wishes to threaten competition. The institutional investors investigated in this Report are all pursuing a sustainable and long-term corporate strategy which increases corporate value (section 4.3.2). The means of exerting an influence and the manner in which institutional investors exert such influence will be investigated in sections 4.3.3 and 4.3.4 below.

4.3.2 Aiming at sustainable corporate governance in investor interests

426. Institutional investments can alleviate problems which arise on account of the separation between ownership and corporate management, and they can also promote sustainable corporate governance and effective capital allocation.[173] Moreover, they can contribute to more responsible corporate management.

427. Those entrusting their assets to the institutional investors included in this report generally pursue diversified investment strategies and have inhomogeneous interests. These non-uniform investment strategies and interests make it more difficult for owners to coordinate their rights and sensibly exercise them with regard to wealth creation and maintenance. Institutional investors pool their asset owners' capital and thereby ensure it is managed in such a way as to increase its value. That is why their investment strategy vis-à-vis portfolio companies is always geared to supporting strategic corporate development in a sustainable and long-term manner and not to making short-term and speculative gains.

428. Sustainable corporate governance is important for active institutional investors as well as for those pursuing mainly passive investment strategies. Passive investors cannot express their disapproval of the management by divesting their shares if they reproduce an index, for instance. A distinction needs to be drawn between passive owners' passive

sentence, second alternative of the Investment Code) co-owners of the special assets in the fund. If the special assets are shares they are therefore also regarded as (economic) shareholders.

[172] DIRK/Ipreo, loc. cit., June 2018.

[173] Çelik, S./Isaksson, M., loc. cit.; OECD, The Role of Institutional Investors in Promoting Good Corporate Governance, Corporate Governance, OECD Publishing, 2011, Paris.

investment strategies and the active exercise of their shareholder rights, as expressed by the former head of the corporate governance department of the world's largest pension fund (TIAA):

> "Having a passive investment strategy has nothing to do with your behavior as an owner."[174]

In a study of the DAX 30's shareholder base, the Deutscher Investor Relations Verband, Germany's professional body for investor relations, found that client assets invested in index funds are very important during voting even if the investment strategy being pursued is primarily a passive one. Accordingly, actively- and passively-managed investments are generally included in German portfolio companies' decision-making processes.[175]

429. Given that they are acting in a professional capacity, institutional investors thus not only exert their influence in the same way as other co-owners (shareholders). They also be monitor a company's long-term success in their asset owners' interests. This monitoring is especially relevant where companies or business units are undervalued or badly managed, where inappropriate corporate strategies are being pursued or a company has an adverse capital structure (debts). In addition, shareholders are also interested in the continuous payment of dividends and, possibly, reining in a management which is inefficient (in respect of the objectives pursued). Corporate social responsibility (CSR) is becoming increasingly important, too. Publicly-listed companies are more and more being called on to focus on environmental protection, governance and social issues, for instance, and to incorporate these into their corporate strategies.

430. Given their focus on strategic corporate development, the institutional investors included in this report also attach great importance to the matter of reputation. A good reputation is important for them so that they can establish and maintain their portfolio companies' trust and confidence in the market. In the past, institutional investors were accused of not doing enough in terms of corporate governance for their portfolio companies.[176] In order to step up commitment to (sustainable) corporate governance (known as "corporate stewardship"), more corporate and investment stewardship departments were therefore established.

4.3.3 Extent of possible influence

431. Despite the fact that they generally only have a small stake in their portfolio companies, institutional investors can nevertheless, as a matter of principle, exert an influence on their strategic corporate development. Both the regulatory framework and institutional investors' own investment and corporate governance principles have a determining influence on the means that institutional investors have of exerting an influence.

432. The means of exerting an influence on account of having a stake in a company fall well below the "decisive influence" threshold as defined in merger control regimes. Figure II.42 presents a possible gradation of available means of exerting an influence and control in analogy with definitions applied in OECD countries' merger control regimes. The institutional investors included in this analysis hold minority interests, generally of significantly less than 10 per cent. This means they have no control over (strategic) corporate decisions because a minority shareholder can always be outvoted by the other shareholders. Besides, no institutional investor representatives have a seat on their portfolio companies' supervisory boards.

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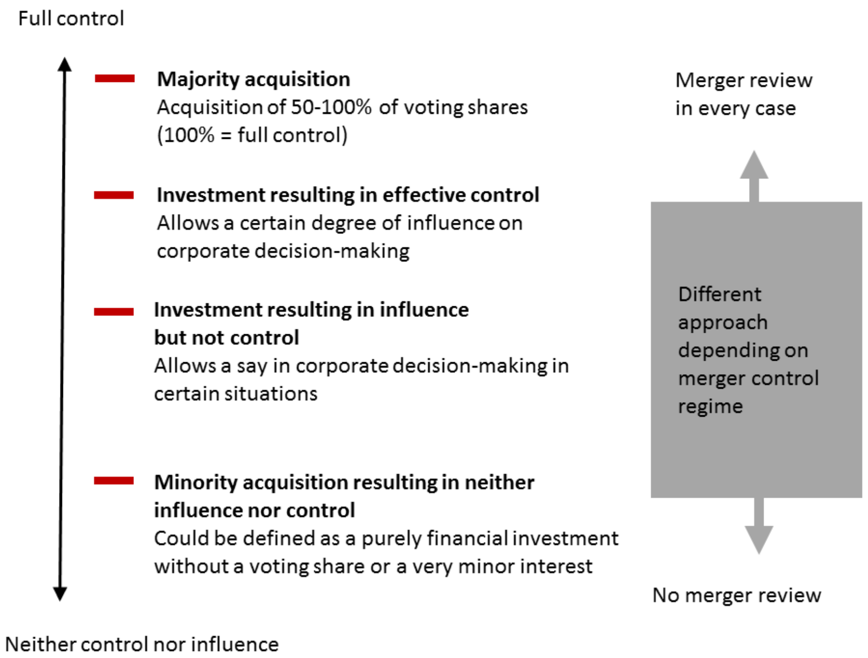
174 Financial Times, Passive investment, active ownership, 6 April 2014, retrieved 17 May 2018. A recent empirical study found that larger index fund holdings have a positive impact on management quality (Mullins, W., The Governance Impact of Index Funds: Evidence from Regression Discontinuity, MIT Working Paper, 7 January 2014).

175 DIRK/Ipreo, Investoren in der Deutschland AG 3.0, May 2016, p. 13.

176 See also Recital 2 of Directive (EU) 2017/828 of the European Parliament and of the Council of 17 May 2017 amending Directive 2007/36/EC as regards the encouragement of long-term shareholder engagement, OJ L 132, 20.05.2017, p. 1.

Figure II.7: Influence and control as captured in merger control



Source: Monopolies Commission, based on OECD

433. In practice, the antitrust authorities take account of the fact that the size/financial clout, reputation and other features of an investor (of whatever kind) can dictate its means of exerting an influence.[177] The European Commission only recently found in its decision on the Dow/DuPont merger, for example, that in that specific case the parties to the merger could be accused of giving major shareholders special treatment since they had privileged access to the management, thus shared their views with it and could therefore influence the management's incentives. Hence, the European Commission felt that its basic assumption was confirmed, namely that minority shareholders may, in an individual case, have more means of exerting an influence than their stake in a company might lead one to assume.

434. The regulatory framework does not prevent institutional investors exerting an influence with a view to sustainable corporate governance in their owners' interests (or "corporate stewardship"). However, when exerting this influence institutional investors must comply with regulatory and other administrative requirements which may limit the amount of the investment from the outset. For example, the funds offered to clients may invest in the financial instruments of individual issuers only up to a certain threshold value so as to spread the risk.[178] However, in most cases no such absolute legal restrictions exist. Instead the influence associated with a participating interest is indirectly limited by rules ensuring that it can only be exerted in a certain manner or for certain ends. Such indirect limitations result, for instance, from the duties of good conduct to avoid conflicts of interest, the prohibition of market abuse and antitrust prohibitions of coordinated action.[179]

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[177] See, e.g., European Commission, Consolidated Jurisdictional Notice under Council Regulation (EC) No. 139/2004 on the control of concentrations between undertakings, corrected version, OJ C 43, 21.02.2009, p. 10, para. 16 et seqq.

[178] See, e.g., sections 196 and 197 of the Investment Code.

[179] See, as regards duties of good conduct under EU law, e.g. Article 24(1) and Article 16(3) subparagraphs (1) and (23) of Directive 2014/65/EU and, under German law, section 26 et seqq. of the Investment Code; as regards market abuse, see Article 8 (Insider Dealing), Article 10 (Unlawful Disclosure of Insider Information) and Article 12 (Market Manipulation) in conjunction with Articles 14 and 15 of Regulation 596/2014, Article 3 et seqq. of Directive 2014/57/EU; as regards antitrust law, see Article 101 of the Treaty on the Functioning of the EU (TFEU) and section 1 of the German Act against Restraints of Competition.

435. Some regulatory requirements can lead to investors foregoing legally permissibly means of exerting an influence. Especially the representatives of big asset management companies generally do not stand for election to the supervisory boards of their portfolio companies on account of their duties of good conduct and the anticipated conflicts of interest.

436. The obligations which investors are under vis-à-vis their own investors or those companies in which they invest their clients' capital, for instance, impose additional limits on investors' influence. Investors are trustees of their clients' assets and act on their behalf when exerting their influence. Some clients exercise their voting rights themselves or appoint an internal team or a third party to vote on their behalf at shareholder meetings.

437. When it comes to the relationship between institutional investors and their portfolio companies, particular attention should be paid to the fact that, under German law, no votes are taken on operative issues at shareholder meetings in which investors can exercise their voting rights, nor do they have any decision-making competence when it comes to appointing members of the board. A shareholder meeting may have other competencies in the case of a stock corporation (*Aktiengesellschaft*, AG) under foreign law. Moreover, in all legal systems with a mature law on stock corporations (e.g. the EU and the United States), investors (in their capacity as shareholders) are also subject to the duty of loyalty to the stock corporation. If investors inflicted damage on their portfolio company this would not be compatible with that role. Further details will be provided below at the appropriate junctures.

438. Besides this, both regulatory requirements and investors' and their portfolio companies' corporate governance principles ensure a high degree of transparency. Many well-known investors publish guidelines on their websites detailing how they exert their influence and exercise their voting rights, for instance.[180]

4.3.4 Ways of exerting an influence within the available means

439. The manner in which institutional investors exert their influence is dictated by their status as financial intermediaries. On the one hand, they exercise shareholder rights in relation to those companies in which they invest and therefore have to exert their influence in the best interests of the companies in question. On the other hand, they are obliged to safeguard the best interests of the asset owners investing their capital. They therefore always have to balance these two interests, both when deciding whether it is necessary to exert an influence in the first place and when choosing how to exert that influence in a specific instance.

4.3.4.1 Exercising voting rights

440. Institutional investors are entitled to exercise those voting rights at shareholder meetings which are attached to the shares they hold. In some cases at least, the voting rights are not exercised by the investor itself. Reference has already been made to the fact that some clients exercise their voting rights themselves, for example. Moreover, especially smaller asset management companies and their clients often choose to outsource these rights to a proxy adviser. As a result, depending on the investor base and company size, proxy advisers can be responsible for an estimated between 10 and 25 per cent of votes cast at shareholder meetings.

441. In line with their goal of promoting strategic corporate development, institutional investors' voting behaviour is geared to safeguarding their asset owners' long-term interests in the best possible manner. They generally vote in line with their own guidelines. When voting at shareholder meetings they are thus not voting directly on those strategies which are relevant to competition and to a company's day-to-day operative business. Owners can influence operative decisions when exercising voting rights only (very) indirectly through their involvement in shareholder resolutions, for example when it comes to discharging members of the board and appointing or discharging members of the supervisory

[180] See, e.g., BlackRock's Investment Stewardship guidelines, reports and position papers, available at https://www.blackrock.com/corporate/about-us/investment-stewardship/voting-guidelines-reports-position-papers#guidelines. Institutional proxy advisers mandated with exercising voting rights also publish voting policies; see, e.g., https://www.issgovernance.com/policy-gateway/voting-policies/ and http://www.glasslewis.com/guidelines/.

board, or through capital procurement measures.[181] They can, however, generally vote directly on a company's external (= inorganic) growth strategies, for example regarding mergers and acquisitions (M&A) involving competitors.

442. According to industry representatives, if an investor has doubts about how a portfolio company is addressing corporate governance issues, then that investor can take measures to communicate those concerns to the management and supervisory board. As described in the above, big institutional investors are regularly invited to one-to-one or group meetings. Such meetings are strictly regulated, especially with a view to insider trading. If, despite meeting with the respective corporate representatives, an investor still believes that the company's strategy is not in its asset owners' best interests, then the investor can vote in line with its voting mandate in such a manner as to give expression to its concerns and communicate any expectations as regards a change of course.

443. Although individual institutional investors generally only hold a very small proportion of overall voting rights, their influence can, for various reasons, be greater than their capital and voting shares lead one to assume when these are regarded in isolation. Especially where the majority of a publicly-listed company's shares are dispersed, institutional investors can, in certain circumstances and despite their small holdings, actually be the biggest individual investor. Attendance at votes plays a key role in this. Thus, attendance at the shareholder meetings of DAX 30-listed companies in 2015 was less than 55 per cent, meaning that, on average, it was possible to achieve a simple majority by gaining only around 28 per cent of the votes cast.[182]

444. A shareholder's means of prevailing over other shareholders in a vote is of particular interest when various strategic objectives are being pursued. If several shareholders holding minority interests are pursuing the same objectives, then it may, in certain circumstances, make sense to look at their aggregate shares – even if they have not coordinated their actions. This captures the total voting power (in relation to total votes cast) which is used to achieve the relevant objective.

445. Consideration needs to be given to another limiting factor when shareholders exercise their voting rights at a stock corporation's annual general meeting, because under German and European law shareholders are subject to a fiduciary duty to the stock corporation. If a shareholder intentionally uses his or her influence to damage a portfolio company, then he or she is obliged to pay compensation to the company and other shareholders.[183] For the purposes of this Report it will be assumed that institutional investors seek to avoid engaging in such behaviour, not least because it would run counter to their objective of promoting a company's long-term and sustainable strategic development in their asset owners' recognised best interests.

446. There are also regulatory requirements which must be complied with when exercising voting rights. In particular, investors must take precautions to avoid being accused of acting in concert. Such acting in concert leads to the mutual allocation of voting rights, with the consequence that these allocated voting rights must be reported and, in the event of this resulting in the acquisition of a controlling interest, it may be necessary to publish a takeover bid.

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[181] See, e.g., section 119 of the Stock Corporation Act as regards German law. In the United Kingdom, resolutions can also be taken at shareholder meetings regarding the pay of the directors of quoted companies; see sections 226B and 439 et seqq. of the UK Companies Act 2006 (2006 c. 46).

[182] Schutzgemeinschaft der Kapitalanleger e. V., SdK-Präsenzstatistik, as at 30 September 2015, https://sdk.org/assets/Statistiken/HV-Praesenzen/praesenz-dax15.pdf, retrieved 12 June 2018.

[183] See section 117 (1) of the Stock Corporation Act: "Anyone who intentionally compels, by exploiting his influence on the company, a member of the management board or of the supervisory board, an officer of the company vested with full commercial power of attorney (*Prokurist*), or an authorised agent to act to the detriment of the company or its stockholders shall be under the obligation to provide compensation to the company for the damage it has suffered as a result." Section 243 (2) of the Stock Corporation Act refines the fiduciary duty such that a resolution adopted at a general assembly is contestable if "a stockholder, by exercising his voting right, sought to obtain special benefits for himself or for a third party to the detriment of the company or of the other shareholders and that the resolution is suited to serve this purpose."

4.3.4.2 Exerting an influence by other means

447. Given their engagement in their portfolio companies' corporate strategic development, institutional investors also have other means of exerting their influence which are highly relevant. In particular, this applies when shareholdings cannot simply be sold if an investor is dissatisfied, as when passive investment strategies are being pursued.

448. In such cases investors, can take advantage of the bilateral group and one-to-one meetings with the management (board) to which reference has already been made in the above. As already explained, these meetings are regulated. In particular, discussion of detailed issues is not permitted at group meetings. Apart from that, investors can also notify the management of their own positions by issuing public statements (e.g. public letters, in the press). It is unusual, by contrast, for them to hold discussions with the supervisory board of a stock corporation under German law, unless the matter concerns executive compensation, for instance.

449. In their discussions with corporate managements, investors tend to focus on issues around a company's long-term strategy.[184] They often make recommendations concerning remuneration policy to ensure that remuneration systems are competitive, thereby promoting sustainable corporate governance. They also address issues such as the supervisory board members' qualifications, the time they spend fulfilling their duties, and environmental, social or governance issues. In some cases they are even required by law to exert this influence to safeguard their asset owners' interests.

450. The term "shareholder engagement" is now used to refer to the exerting of influence beyond the exercise of voting rights to promote a company's strategic development. It generally involves investors/asset owners communicating directly with the management (and, possibly, supervisory board members) about corporate governance issues outside of shareholder meetings. Such conversations either take place on a regular or on an ad-hoc basis. Shareholders also use these conversations to communicate their opinions in the run-up to a vote.[185] A survey of the 143 biggest institutional investors at any rate shows that informal meetings between the institutional investors' representatives on the one hand and the managers and supervisory board members of their portfolio companies on the other as part of shareholder engagement must be accorded great importance.[186] BlackRock, one of the few institutional investors to have published any statements concerning its activities, stated the following as regards shareholder engagement over and above exercising voting rights:

> *"We believe that shareholders should largely support management and that when it is necessary to challenge management and boards, the most effective means for communicating concerns is through direct engagement. We engaged with roughly 1,600 companies around the world in 2017. When we engage successfully and companies adjust their approach, most observers are never aware of that engagement. […] We typically only vote against management when direct engagement has failed. At BlackRock, engagement encompasses a range of activities from brief conversations to a series of one-on-one meetings with companies. […] Our preferred approach is to encourage companies to change their practices where we feel it is needed, rather than to divest their shares […]."*[187]

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[184] This is likely to essentially be the same as determining business policy as defined under competition law; see, in this regard, the European Commission, Consolidated Jurisdictional Notice under Council Regulation (EC) No. 139/2004 on the control of concentrations between undertakings, corrected version, OJ C 43, 21.02.2009, p. 10, paras 57, 62, 66–67, 69 et seqq. Accordingly, "strategic decisions on business policy" and associated rights "typically include decisions on issues such as the budget, the business plan, major investments or the appointment of senior management."

[185] See a statement made by Amra Balic, who is responsible for corporate dialogue and voting rights in regard to BlackRock's European shareholdings: "If we have to go so far as to speak at a general assembly to assert our interests, then that's a sign that we've failed to properly engage with that company" (interview in Wirtschaftswoche "Wir können nicht einfach verkaufen und weglaufen", 8 April 2016, p. 83).

[186] McCahery, J. A./Sautner, Z./Starks, L. T., Behind the Scenes: The Corporate Governance Preferences of Institutional Investors, Journal of Finance, 2016, 71(6), p. 2905–2932.

[187] BlackRock, Proxy Voting and Shareholder Engagement FAQ, https://www.blackrock.com/corporate/literature/fact-sheet/blk-responsible-investment-faq-global.pdf, retrieved 21 May 2018.

451. The management of a portfolio company generally takes account of the interests and views of big institutional investors even if they have small capital and voting shares. According to investors, companies have an interest in finding out how their investors rate the company's corporate governance, performance and long-term financial goals. Investors say that this information helps the company understand its shareholders' various points of view on governance issues and gives it the opportunity to explain and justify its chosen strategy in its disclosures.

452. Consequently, when considering the interests of big institutional investors, their relevance for the company's future funding needs may also play a role and may send a strong signal vis-à-vis other investors in the event of divestment.[188]

453. Formal limitations are also imposed in regard to an investor's influence over and above the exercise of voting rights. Both the shareholders and members of the board and supervisory board of a stock corporation are by law obliged to remain loyal to their company. In addition to other duties under their contract of employment, when managing their company's business, board members are obliged under the German Stock Corporation Act to accountability and to exercise the due care of a prudent manager, and they must therefore take their entrepreneurial decisions in their company's best interests.[189]

4.3.4.3 Divesting shares

454. Regardless of whether a shareholder with a large equity interest is an institutional or another type of investor, the management of a company will accord great weight to that shareholder's interest if there is a chance that the shareholder will divest shares. Competitors may interpret the possibility or announcement of such divestment as a signal and this may have a disciplinary effect on the portfolio company's management.[190] Reasons include the anticipated loss of a company's share value and, thus, the risk of an increase in funding costs if the company's rating drops as a result. The announcement which BlackRock's CEO made to its portfolio companies, namely that BlackRock can choose to divest shares (within the means its investment strategy affords) if it has doubts about a company's strategic direction or growth prospects, may be regarded as just such a signal.[191]

4.3.5 Summary and assessment

455. In sum, despite their relatively small holdings, institutional investors do in principle have means of exerting a certain degree of influence on their portfolio companies' decision-making. Shareholders' active participation in discussions about a company's sustainable and strategic development is to be welcomed with a view to the portfolio companies' corporate governance and safeguarding of asset owners' interests. Within the frame of their shareholder engagement institutional investors can exercise their voting rights as well as engage with the management (and, rarely, with the supervisory board). Institutional investors with active and passive investment strategies are thus important, those with passive investment strategies especially so on account of the limited means of selling, reducing or even threatening to sell or reduce their holdings.

456. The means with which institutional investors can exert an influence and in particular the way in which they exercise their voting rights are geared to promoting a company's strategic development and not to controlling its operative business.[192] Institutional investors can at most exert an indirect influence on operative business by, for instance, voting

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[188] See section 4.3.4.3.

[189] Section 93 (1) of the Stock Corporation Act.

[190] See Hirschman, A., Exit, Voice and Loyalty: Responses to Decline in Firms, Organizations, and States, Cambridge, MA, Harvard University Press, 1971.

[191] "BlackRock can choose to sell the securities of a company if we are doubtful about its strategic direction or long-term growth" (https://www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter, retrieved 17 May 2018).

[192] See European Commission, Consolidated Jurisdictional Notice under Council Regulation (EC) No. 139/2004 on the control of concentrations between undertakings, corrected version, OJ C 43, 21.02.2009, p. 10, para. 67 ("day-to-day running").

to discharge members of the board or to appoint or discharge the supervisory board or by taking a stance on issues around executive compensation.

4.4 Theories of harm regarding issues relevant to competition

457. Indirect links between competitors due to non-industry shareholders' shares are, first and foremost, a market-structural phenomenon which does not necessarily have any negative impacts on competition. In the same way as highly concentrated markets with only a few suppliers can be characterised by intense competition, suppliers in a market with common shareholders may be engaged in intense competition. As is the case with regard to high market concentration, a current matter for debate is whether common ownership could also make it easier or even be the reason for market actors to impede effective competition.[193] Competition authorities at international level (e.g. the European Commission) have already taken account of theories of harm regarding common ownership when taking decisions on mergers.[194]

458. The ways and means in which indirect links between competitors on account of minority holdings by diversified shareholders might impede effective competition which are currently being discussed in the literature are summarised in the following. They include, first, conceptual considerations which need to be assessed while taking account of real market conditions and, in particular, the means which institutional investors have of influencing their portfolio companies as discussed in the previous section. When categorising the theories of harm under discussion, the usual distinction will be drawn between impacts due to one-sided corporate conduct (unilateral effects) and those resulting from coordination.[195]

4.4.1 Unilateral effects

459. The term "unilateral effects" is generally used to refer to impacts on market outcome on account of one company's unilateral decision-making. An example is when a supplier merges with a competitor and is then able to raise its prices without a drop in demand having a negative impact on profitability. The supplier would not have the same scope of action if there were sufficient competition, as customers would then buy from one of its competitors if prices went up. Beyond price changes, reduced competition can also lead to adaptations being made to parameters such as product quality, diversity and innovative activity. The key feature of unilateral effects is that they result from a company taking unilateral decisions, meaning that no coordinated action is required.

460. The debate on the possible effects of common ownership has so far focused on unilateral effects. This may have been aided by the fact that the most prominent empirical research into this issue uses a modified Herfindahl-Hirschman Index (MHHI) to measure the level of common ownership due to diversified shareholders; the HHI was originally developed to investigate unilateral effects on account of direct minority shareholdings by competitors.[196] As well as raising the basic question of whether the theory of harm regarding unilateral effects in connection with direct minority shareholdings by competitors can be transferred to common ownership structures,[197] the use of the MHHI has led to a debate on theories of harm regarding common ownership, a debate which has so far not gone far enough, though. In

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[193] For a summary and a discussion of individual theories of harm, see also OECD, Common Ownership by Institutional Investors and its Impact on Competition, Background Note by the Secretariat, DAF/COMP(2017)10, 29 November 2017.

[194] In its decision on the Dow/DuPont merger, the European Commission held that "concentration measures, such as market shares or the Herfindahl-Hirschman index ('HHI'), are likely to underestimate the level of concentration of the market structure and, thus, the market power of the Parties" and that "common shareholding in the agrochemical industry is to be taken as an element of context in the appreciation of any significant impediment to effective competition that is raised in this Decision" (European Commission, loc. cit., p. 4).

[195] European Commission, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, OJ C 031, 05.02.2004, http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52004XC0205(02)&from=EN; Guidelines on horizontal mergers, OJ C 265, 18.10.2008, p. 6.

[196] See section 4.5.

[197] Rock, E. B./Rubinfeld, D. L., Defusing the Antitrust Threat to Institutional Investor Involvement in Corporate Governance, Law & Economics Research Paper Series, Working Paper No. 17-05, 2017.

particular, insufficient attention has been paid to whether common ownership facilitates competitors' cooperative action, which will be discussed in section 4.4.2 below.[198]

461. Under theoretical models, unilateral effects are possible where there is common ownership in a market. When a company is linked directly with a competitor via an equity investment, it obtains a share of that competitor's profits. If the company's objective is to maximise its own profits, it will take account of the effects of its own actions on its competitor's profits and, possibly, act less competitively.[199] Companies not only consider the impacts of their own action on their competitors when they are directly linked with one another via equity stakes – this may also be the case when they have the same shareholders and their actions are shareholder-oriented, i.e. they not only consider their own operative profits in their decision-making, but also their shareholders' returns. If a company's shareholder value strategy involves maximising shareholder returns, then – as is the case with direct participations – it may take account of that strategy's impact on competitors when taking entrepreneurial decisions, since its shareholders will also get a share of those profits.[200] The company would, for instance, have additional scope for action if, in the case of there being no horizontal links, raising prices had negative consequences for it due to a drop in demand but that loss would be overcompensated in the case of indirect horizontal links on account of the additional gains made by its competitors. Instead, the company could refrain from reducing prices within price competition.[201]

462. Assuming that diversified investors are interested in their portfolio companies engaging in less competitive behaviour may possibly fall short. Diversified investors' interest in total market outcome is a direct result of their holding an equity share in several competitors in that market. However, in the majority of cases, it is likely that institutional investors' interest in returns is presented in a simplified manner and diversified investors are generally interested in players in the respective market engaging in competitive behaviour regardless of the shareholder structure. In addition, many additionally hold shares in upstream or downstream markets. If an owner is interested in overall returns in a market whose products are intermediates for a downstream market along the value chain, then less competition at the upstream production level can have a detrimental impact on the owner's overall returns. One reason may be that, for example, higher intermediary prices reduce profit margins at the downstream value-added stage if these cannot be passed on to the end consumer. Less intense competition in a portfolio market could in the long term also lead to a lack of innovation and thus to lower profit margins in the long term.

463. When analysing how unilateral effects manifest themselves, account must be taken of the fact that, as the law currently stands, both shareholders and members of the management and supervisory board are obliged to act in a company's best interests.[202] Should a company's management engage in less competitive behaviour, this could represent a breach of its statutory fiduciary duty. For a management to be considered to be in breach of its fiduciary duties it must be acting against the best interests of its own company, though. If, however, an aggressive competitive strategy (price competition), for example, were not being pursued so as to avoid a medium- to long-term drop in profit margins (the overall market's and thus also one's own), that would not necessarily be contrary to the company's best interests. Such a strategy would be plausible if individual portfolio companies had reason to believe that their

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[198] Patel, M. S., Common Ownership, Institutional Investors, and Antitrust, Antitrust Law Journal (forthcoming); available as an SSRN Working Paper, 2 January 2018.

[199] Reynolds, R./Snapp, B., The Competitive Effects of Partial Equity Interests and Joint Ventures, International Journal of Industrial Organization 4(2), 1986, p. 141–153; Flath, D., When Is It Rational for Firms to Acquire Silent Interests In Rivals?, International Journal of Industrial Organization 9, 1991, p. 573–583; Salop, S./O'Brian, D., Competitive Effects of Partial Ownership: Financial Interest and Corporate Control, Antitrust Law Journal, 67, 2000, p. 559–614; see also Monopolies Commission, XXIst Main Report, loc. cit., chapter III.

[200] Please refer to the Annex to this chapter for a formal description of a company's target function in the case of common ownership.

[201] Theoretical models have suggested a positive link between the level of shareholders' diversification across a market's suppliers and the market price for products in that market; see Azar, J., A New Look at Oligopoly: Implicit Collusion Through Portfolio Diversification, Ph.D. Thesis, Princeton University, 2012.

[202] See section 4.3.

competitors were likewise pursuing a more long-term strategy, which presupposes a certain degree of explicit or tacit coordination.

4.4.2 Coordination

464. If suppliers in a market successfully coordinate their activities and thereby achieve a market outcome above the competitive level, this is referred to as effects which impede effective competition through coordinated action, or collusion. A classic example is price fixing, where competitors agree on a price which none is allowed to undercut to give one company an advantage over another, creating additional demand and increasing profits. Such agreements increase the gains made by all the players in a market at their customers' expense. Collusive behaviour can take the form of a) explicitly coordinated parallel action and b) tacit, or implicit, collusion. In the case of tacit collusion, firms do not coordinate their actions by explicitly engaging with one another or sharing information. Instead, they may, for example, achieve or maintain prices above the competitive level through tacit parallel behaviour.[203] Both forms of collusion are relevant in the context of common ownership and competition.

465. Coordination has so far tended to be a neglected aspect in the debate around the competitive effects of common ownership. It must be remembered that there are indeed incentives for competitors to coordinate their action and that these are not only the result of ownership links. Links between companies might nevertheless make it easier for them to coordinate their actions. Specific theoretical models on the link between collusion and minority shareholdings by competitors have so far only been constructed for direct holdings. In the following the Monopolies Commission examines whether the existing theoretical models can be transferred to competitors linked through indirect shareholdings. An assessment will also be conducted, especially against the backdrop of statutory rules of conduct.

466. Two reasons are discussed in the economic literature as to why direct financial minority shareholdings by competitors might foster coordinated action. It is, first, assumed that direct links between companies can increase transparency in a market. Even minority holdings may theoretically give a shareholder access to information to which its competitors do not have access.[204] However, this channel ought to be of very limited relevance within the EU because each communication of price-relevant information to shareholders is subject to insider-trading rules. Moreover, direct financial minority shareholdings could theoretically change companies' incentives because they could decide to either collude or unilaterally impede effective competition. When taking such a decision, companies could, at least among other things, take account of the expected profits to be made on account of the collusion as well as of the total gains from deviation and the expected profits without collusion (competitive gains). Direct minority shareholdings by competitors can change the incentives to collude because collusion impacts both gains from deviation and competitive profits.[205] While transferring these considerations to common ownership cases makes it appear possible that market transparency might increase as a result, it is doubtful whether indirect links would change the incentive to collude. Both these aspects will be explained and discussed in more detail in the following.

4.4.2.1 Better market transparency

467. It is possible that when market insights and assessments are passed on to institutional investors, market transparency may be increased in such a way that institutional investors are placed at an advantage over other shareholders (e.g. small investors). According to various authors, this makes coordinated action easier even without investors needing to exert an active influence on their portfolio companies.

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[203] Ivaldi, M. et al., The Economics of Tacit Collusion, Final Report for DG Competition, European Commission, IDEI Toulouse, 2003; see also European Commission, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, OJ C 31, 05.02.2004, p. 5, para. 39 et seqq.; Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings, OJ C 265, 18.10.2008, p. 6, paras 79 et seqq. and 119 et seqq.

[204] OECD, Antitrust Issues Involving Minority Shareholding and Interlocking Directorates, Competition Policy Roundtables, 2008. Available at: https://www.oecd.org/competition/mergers/41774055.pdf, p. 30 (in relation to company-internal planning).

[205] Malueg, D., Collusive Behavior and Partial Ownership of Rivals, International Journal of Industrial Organization 10(1), 1992, p. 27–34; Gilo, D./Moshe, Y./Spiegel, Y., Partial Cross Ownership and Tacit Collusion, The RAND Journal of Economics 37, 2006, p. 81–99.

4.4.2.2 Unilateral effects and coordination

468. More attention is paid in the theoretical literature to companies' incentives to potentially engage in collusion than to general market transparency. In theory, direct cross-shareholdings always give rise to two contradictory effects in terms of competitors' incentives to coordinate their activities: On the one hand, such shareholder structures can foster collusion because a company which deviates from the collusive agreement takes some of the negative impacts of its conduct on its competitors into consideration, thereby reducing its expected gains from deviation. On the other hand, as explained in section 4.4.1 above, one possible unilateral effect of cross-shareholdings may be that competition decreases anyway. That also means that the expected (competitive) returns without collusion increase, which in turn leads to a reduction in a supplier's expected loss on account of deviating from the coordinated strategy.[206]

469. When transferring the theoretical findings on direct minority shareholdings to cases where there are indirect horizontal links, then it is important when assessing the probability of coordination whether unilateral effects are to be expected as well. If unilateral effects were to be expected on account of indirect horizontal links, the probability of coordination would have to be estimated to be lower, since the expected gains from collusion or rather the difference between the gains without coordination and gains with coordination would drop.[207] As explained in section 4.4.1, unilateral effects on account of indirect horizontal links which restrict competition are only conceivable where less intense competition is in the best interests of the company (as defined by stock corporation law), otherwise those involved would be breaching their statutory fiduciary duties. In addition, it is probable that a company's forgoing intense competition in favour of long-term profit maximisation, for example, and thus in favour of the company's long-term best interests at least requires tacit coordination.[208]

4.4.2.3 Relevance of means of exerting influence

470. Even if suppliers in a market are not linked in any way via equity investments, there may well be incentives for them to coordinate their activities. This applies regardless of whether such coordination would be permissible under competition law or whether it would breach Article 101(1) of the Treaty on the Functioning of the EU (TFEU) or section 1 of the German Act against Restraints of Competition.

471. If, in the case of common ownership, one also takes account of the suppliers' owner structure, then not only portfolio companies but both diversified and non-diversified shareholders may benefit from coordinating their activities. If common ownership by institutional investors were to facilitate coordination between competitors in such cases on account of greater market transparency (see 4.4.2.1), then it would not be necessary for diversified investors to have any means of influencing their portfolio companies' decision-making in order to promote coordination, since there would be no obstacles to these investors colluding and the collusion would not run counter to the individual suppliers' best interests.

472. In addition to increasing market transparency, common ownership might help suppliers to decide unilaterally not to engage in intense competition. This would in particular be conceivable where competitors regarded their indirect links as a sign that they should (tacitly) coordinate their actions. If, for instance, the management of a portfolio company wishes to refrain from engaging in aggressive competition, this would be all the easier if it could assume that its competitors are likewise not pursuing aggressive competitive strategies. When attempting to gauge its competitors' behaviour, consideration could possibly be given to this if the same shareholders were promoting the same long-term strategies with regard to all the competitors. Were one supplier thus to come to the conclusion that its competitors tended not to engage in aggressive competition, then common ownership could facilitate tacit collusion. However, it appears doubtful whether institutional investors' means of exerting an influence on their portfolio companies suffice to

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[206] Olczak, M., Unilateral versus Coordinated Effects: Comparing the Impact on Consumer Welfare of Alternative Merger Outcomes, ESRC Centre for Competition Policy Working Paper 10-3, 2009; Reynolds, R./Snapp, B., loc. cit.; Salop, S./O'Brien, D., loc. cit.

[207] Situations are also conceivable in the case of direct cross-shareholding in which the shareholder structures may impede collusion (Malueg, D., loc. cit.).

[208] See para. 463.

make the required changes in behaviour – in this example long-term profit orientation – appear realistic or causal,[209] since it is only then that a diversified owner structure could be a signal to engage in tacit collusion.

473. It should be pointed out at this juncture that where there are several diversified investors in a market it may be of relevance whether an investor's concrete equity interest enables it to influence a company's decision-making or whether the total shares which diversified investors hold in a company offer a means of exerting an influence. Moreover, even non-diversified owners holding shares in only one of the competitors in a market could be interested in coordinated action if they are concerned with long-term profit maximisation.

4.4.3 Summary and assessment

474. Common ownership may make it easier for competitors to engage in anticompetitive conduct. Specific theories of harm can look at both unilateral and coordinated effects. Given the general nature of market structures, market-specific circumstances and ownership structures, it does not appear feasible to give weight to the actual relevance of individual theories of harm across markets.

475. Companies could use the additional scope created on account of common ownership to generate unilateral effects and thus ensure that there is less intense competition in a market. However, unilateral competitive effects on account of common ownership only appear conceivable if less intense competition would be in the companies' best interests; otherwise, those involved would be breaching their statutory fiduciary duties. In addition, it appears probable that, for instance, a company which is not engaging in intensive competition in order to focus on long-term profit maximisation and thus on its long-term best interests at least requires tacit collusion. Further, diversified investors do not appear to have a clear incentive to exert an influence because, in addition to the market in question, they may have a financial interest in upstream or downstream markets.

476. Common ownership could also restrict competition on account of it being easier for market players to coordinate their actions. This could be due, in particular, to a possible increase in general market transparency, which provides players with additional communication pathways, or because indirect links send a signal and can help foster collusion. It must be borne in mind that all the involved firms could benefit in the short to long term from coordinating their actions and that both their diversified and non-diversified shareholders would benefit. Since the incentives to coordinate action might exist independently of whether shareholders are diversified or not, it can be assumed that coordinated effects will in particular be easier to achieve. That is why coordinated effects ought – if at all – to have a role to play in markets in which the conditions are already right for companies to coordinate their actions.

4.5 Measuring common ownership and its competitive effects

477. Common ownership exists when two or more companies are linked on account of sharing one or more shareholders (see Figure II.37). Using this intuitive definition it is relatively easy to determine whether or not there is common ownership in a particular market. Measuring how strong the links are between two or more companies on account of their common shareholders and what the level of common ownership is in the market is no trivial matter, though. A number of different measures have been proposed in the economic literature for quantifying the level of common ownership. In addition to these simple indicators, more complex indicators have been derived from economic theory. They quantify the impact of common ownership on market concentration and – under additional assumptions – allow conclusions to be drawn regarding the associated incentives for portfolio companies to restrict competition. A good understanding of these indicators of the level of common ownership is important when it comes to interpreting empirical studies and assessing the proposed measures for mitigating potential competitive risks. Some important indicators will therefore be explained in more detail in the following.

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209 See section 4.3.

4.5.1 Simple indicators of level of common ownership

478. Simple indicators of the level of common ownership from a company's perspective include (i) the number of competitors with which the company is linked via common shareholders, (ii) the average number of competitors in which a company's own shareholders also have shares, and (iii) the sum of the participating interests which diversified shareholders hold in the company.[210] The links between two companies on account of common shareholders can be determined by calculating the degree of overlap. Degree of overlap is measured by the amount of investment (which is measured or weighted differently depending on the indicator being used) made by one or more shareholders which own shares in both companies.[211] Both indicators which quantify the level of common ownership from a company's point of view and the degree of overlap can be aggregated to describe the average level of common ownership among several companies or an entire market.

479. These measures are all suited to illustrate how the level of common ownership develops over time.[212] Likewise, the relevance of indirect horizontal links between different companies in a sector or across sectors can be assessed in relation to one another and then compared. As well as being purely descriptive, such measures are also used in econometric models which investigate the link between market indicators and the level of common ownership.[213] Nevertheless, when taken in isolation (i.e. without comparative values), they provide only a limited amount of information. They are neither based on sound theoretical models nor do they necessarily establish a direct link with the (potentially anticompetitive) impact of common ownership on portfolio companies' diverse incentives. They cannot be used to make any robust statements about the competitive effects of diversified shareholders' minority interests.

4.5.2 Measures derived from economic theory

480. As well as simple measures of level of common ownership, there are others which derive from economic theory. The best-known and most widespread of these is the modified Herfindahl-Hirschman Index (MHHI).[214] While the classic HHI determines market concentration based on the number of companies participating in a market and market shares held,[215] the MHHI can record additional effects resulting from horizontal shareholdings. The MHHI was originally developed for direct horizontal shareholdings (cross-ownership), but the underlying logic can be transferred to common ownership as well.

481. The basic assumption is that companies do not maximise their own profits but their shareholders' weighted returns.[216] Where a shareholder simultaneously holds interests in competing companies, its portfolio companies consider the impact of their entrepreneurial decisions on the profits of those competitors with which they are linked on account of common shareholders, since these, in turn, influence their shareholders' returns. That is why it is assumed

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210 He, J./Huang, J., Product Market Competition in a World of Cross-Ownership: Evidence from Institutional Blockholdings, The Review of Financial Studies 30(8), 2017, p. 2674–2718.

211 The links between two companies A and B due to shares held by M diversified owners can, e.g., be calculated on the basis of average shares held, i.e. $\emptyset\_Overlap = \sum_{i=1}^{M} \frac{a_{i,A}+a_{i,B}}{2}$, where $a_{i,A}$ and $a_{i,B}$ denote the shares held by shareholder i in company A and company B. Alternatively, the overlap can also be determined using the lower share which a shareholder has in A and B, i.e. $min\_Overlap = \sum_{i=1}^{M} \min\{a_{i,A}, a_{i,B}\}$ or using investments weighted by the relative size of the portfolio company, i.e. $w\_Overlap = \sum_{i=1}^{M}(a_{i,A} * \frac{v_A}{v_A+v_B} + a_{i,B} * \frac{v_B}{v_A+v_B})$, where v_a and v_b denote the market values of A and B; Gilje, E./Gormley, T./Levit, D., The Rise of Common Ownership, SSRN Working Paper, 19 April 2018, p. 7–8.

212 Examples in the German chemical and car industries are provided in Seldeslachts, J./Newham, M./Banal-Estanol, A., Veränderungen bei gemeinsamen Eigentümerstrukturen deutscher Unternehmen, DIW-Wochenbericht 30/2017, p. 619.

213 He, J./Huang, J., loc. cit.; Freeman, K., The Effects of Common Ownership on Customer-Supplier Relationships, Kelley School of Business Research Paper No. 16-84, 17 August 2017, and Gilje, E./Gormley, T./Levit, D., loc. cit.

214 Bresnahan, T./Salop, S., Quantifying the competitive effects of production joint ventures, International Journal of Industrial Organization 4(2), 1986, p. 155–175. The modification presented here is based on Salop, S./O'Brien, D., loc. cit.

215 In a market with N companies, the HHI is defined as follows: $HHI = \sum_{j=1}^{N} s_j^2$, where s_j denotes company j's market share.

216 For a formal presentation of the profit function underlying the MHHI, its derivation and numerical examples, see the Annex to this section.

that companies will act less competitively and actual market concentration is therefore higher than if only market shares were being taken into account.

482. The following formula describes the MHHI in a market with N competing companies and M shareholders:

$$MHHI = \sum_{j=1}^{N} \sum_{k=1}^{N} \frac{\sum_{i=1}^{M} \gamma_{ij}\beta_{ik}}{\sum_{i=1}^{M} \gamma_{ij}\beta_{ij}} s_j s_k$$

483. s_j denotes company j's market share. β_{ij} is share shareholder i holds in company j. γ_{ij} denotes the relative influence[217] which investor i can exert on corporate decisions taken by company j.[218] Alternatively, it can be interpreted as the weight which the company gives to the financial interests of investor i in its decision-making. The incentive term $\sum_{i=1}^{M} \gamma_{ij}\beta_{ik} / \sum_{i=1}^{M} \gamma_{ij}\beta_{ij}$ denotes the influence exerted on company j by investors which also hold shares in competitor k.[219]

484. One important feature of the MHHI is that it can be expressed as the sum of the traditional HHI and the MHHI delta[220] (which measures the level of concentration on account of common ownership):

$$MHHI = \underbrace{\sum_{j=1}^{N} s_j^2}_{HHI} + \underbrace{\sum_{j=1}^{N} \sum_{\substack{k=1 \\ k \neq j}}^{N} \frac{\sum_{i=1}^{M} \gamma_{ij}\beta_{ik}}{\sum_{i=1}^{M} \gamma_{ij}\beta_{ij}} s_j s_k}_{MHHI-Delta}$$

485. Where there is no common ownership, the MHHI delta equals 0 and the MHHI equals the HHI. The same applies where there are diversified shareholders but their portfolio companies do not orient their actions to their competitors' profits and hence to their shareholders' returns, for example because the shareholders cannot exert any influence. In these cases the portfolio companies continue to maximise their own returns. Common ownership then poses no risk to competition.

486. However, where diversified investors exert a certain degree of influence on their portfolio companies, the MHHI delta is positive and the MHHI is thus higher than the HHI. As a general principle, the MHHI delta increases the greater the ties between horizontally linked companies and the greater the diversified investors' influence on corporate decision-making. Under the additional assumptions that the companies compete in quantities (Cournot competition) and that they manufacture a homogeneous product, the MHHI will be proportionate to industry-wide margins.[221] The higher the MHHI, the lower the companies' chosen output which is associated with higher prices and lower consumer welfare.

487. Despite the fact that the MHHI can indicate the level of common ownership and possible competitive risks, a number of methodological criticisms can be levelled against this measure. Unlike the HHI, whose values range between 0 (full competition) and 1 or 10,000[222] (monopoly), the MHHI has no defined value range. Although the MHHI's lower bound is 0 and it is never less than the HHI, it can, in certain cases, achieve values of more than 1 or 10,000, and, in extreme cases, even tends towards infinity.[223] Extreme values can be avoided by not taking account of minor

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[217] Also referred to as "control weight", though the term is more broadly defined than "control" as applied in competition law ("decisive influence").

[218] See also para. 489 as regards the different approaches to determining control weights.

[219] See also para. 1229 et seqq. in the Annex to this section.

[220] The MHHI delta should not be confused with the HHI delta, which quantifies the increase in market concentration measured using the HHI in the case of a merger.

[221] See also para. 1231 in the Annex to this section in the main report as regards the link between industry-wide margins and the MHHI.

[222] Where the HHI is calculated using absolute numbers based on share of the market (i.e. a monopolist's market share is 1), then $HHI = 1^2 = 1$ in the case of a monopoly. If, by contrast, the HHI is calculated using percentages, then $HHI = 100^2 = 10{,}000$.

[223] Values above 10,000 can, e.g., occur when there are both diversified institutional investors and a number of small, non-diversified shareholders who exert no influence on corporate decision-making; see the examples in Lambert, T./Sykuta, M., The Case for

shareholdings below a certain threshold. Nevertheless, interpreting the MHHI is just as difficult as determining the critical values which indicate when a market is to be regarded as concentrated. The restrictive theoretical assumptions which are made (and which generally do not correspond to the actual situation on real markets) must also be regarded critically. It is not clear to what extent the MHHI permits sufficiently valid conclusions to be drawn if one or more of the assumptions on which it is based do not correspond to reality.[224] Further, the MHHI only maps those effects of market concentration which are due to unilateral actions. It does not take account of coordination, although this may potentially be facilitated on account of common ownership.[225] The actual level of market concentration and possible risks to competition may be systematically underestimated in such cases.

488. The MHHI has been generalised in the literature in order to be able to depict a broader range of situations, for example as regard ownership structures and means of exerting an influence. A measure which is often referred to as the generalised HHI (GHHI) can take account of both cross-ownership and common ownership and of the combined influence which an investor can exert, on account of holding direct and indirect interests,[226] on corporate decision-making.[227]

489. In addition, the fact that more data are required to calculate the MHHI (compared to the HHI) represents a practical challenge.[228] Information on both the portfolio companies' market shares and the participating interests of all shareholders need to be available, and control weights need to be determined. Although participating interests and market shares are objectively measurable figures, it can prove difficult in practice to identify all the shareholders and determine their holdings. One standard method is to only take account of bigger investors holding shares above a critical threshold. Other difficulties arise when it comes to determining the control weights. These are non-observable values which have to be based on non-verifiable assumptions. It is easiest to apply a proportional control assumption, i.e. to assume that the relative influence is equal to an investor's financial participation or voting shares. Alternatively, the influence can be assumed to be proportionate to the biggest investor's holdings[229] or how relevant the respective investor's vote is in achieving the voting majority.[230] The question of whether and how shareholders exert an influence on their portfolio companies and how these thus take account of deviating and contrary interests has not yet been clarified and is still a contentious issue. That is why no concluding assessment can be made as to which scenario best maps reality.[231]

Doing Nothing about Institutional Investors' Common Ownership of Small Stakes in Competing Firms, University of Missouri School of Law Legal Studies Research Paper No. 2018-21, 4 May 2018, fn. 49, and Gramlich, J./Grundl, S., Estimating the Competitive Effects of Common Ownership, Finance and Economics Discussion Series 29/2017, Divisions of Research & Statistics and Monetary Affairs Federal Reserve Board, Washington, p. 11. The extreme values ensue because the actual market shares on which the calculation is based deviate greatly from those which should actually result from the investors' influence.

224 See explicitly, as regards the link between price level and MHHI in the case of deviating assumptions, also O'Brien, D., Price-Concentration Analysis: Ending the Myth, and Moving Forward, SSRN Working Paper, 24 July 2017, and more generally regarding the link between prices and measures of concentration in quantity competition Whinston, M., Antitrust Policy Toward Horizontal Mergers, in: Armstrong, M./Porter, R. (eds): Handbook of Industrial Organization, 3, 2007, p. 2369–2440.

225 See section 4.4.2.

226 A shareholder holds an indirect interest in a company j if it holds shares in a company k which in turn holds shares in company j.

227 Brito, D. et al., Unilateral Effects Screens for Partial Horizontal Acquisitions: The Generalized HHI and GUPPI, International Journal of Industrial Organization 59, July 2018, p. 127–189, and Azar, J./Raina, S./Schmalz, M., Ultimate Ownership and Bank Competition, SSRN Working Paper, 23 July 2016.

228 For ease of reading, reference will only be made to the MHHI in the following. The difficulties referred to apply in equal measure to the GHHI.

229 Azar, J./Schmalz, M./Tecu, I., Anticompetitive Effects of Common Ownership, Journal of Finance (forthcoming), calculate different MHHIs based on the biggest ten, five or three investors and only the biggest investor. The paper is available as an SSRN Working Paper, 13 May 2018.

230 So-called power indices, such as the Shapley-Shubik Index or the Banzhaf Index, serve as weights. Systematic presentations of the indices and examples can be found, e.g., in Brito, D. et al., Unilateral Screens for Partial Horizontal Acquisitions: The Generalized HHI and GUPPI, loc. cit., and in Campos, J./Vega, G., Concentration Measurement under Cross-Ownership: The Case of the Spanish Electricity Sector, Journal of Industry, Competition and Trade 3(4), 2003, p. 313–335.

231 See also section 4.3 as regards the means which investors have of influencing their portfolio companies.

490. The MHHI can be used to not only look at market concentration from a static perspective but also to quantify changes in concentration due to changes in ownership structure. It can, for instance, be used to show how market concentration changes when an investor increases its minority holding in one or more portfolio companies or adds one or more companies to its portfolio. The same applies to mergers between investors. Since in the above cases only the owner structure and the associated control weights change, this only leads to a change in the MHHI delta. By contrast, the portfolio companies' market shares do not change, nor, therefore, does the HHI. Changes in the MHHI can also be used to describe the impacts of mergers among portfolio companies. An increase in the HHI then reflects an increase in level of concentration on account of the reduced number of competitors. The change in the MHHI delta, in turn, shows how the changes in indirect horizontal shareholdings due to the merger impact market concentration. If only the HHI is used to assess the latter case, then not only the initial market concentration level is underestimated, but possibly also the increase in concentration due to the merger.

491. The effects of changes in market or owner structure on price-setting behaviour can be expressed by means of the Pricing Pressure Index (PPI)[232] or the generalised Gross Upward Pricing Pressure Index (GGUPPI).[233] Unlike the MHHI, these indices assume that the companies compete in prices (Bertrand competition) and manufacture differentiated products. The indicators approximate the price effect due to changes in the investors' participating interests or mergers, taking account of horizontal shareholdings.[234] A separate PPI or GGUPPI value is calculated for each company which is directly affected by the change in market structure; the value estimates each company's scope to set prices based on the simplifying assumption that all the other companies will not adjust their prices. As well as the difficulties associated with determining the control weights (which also apply to the PPI and GGUPPI[235]), considerably more data are required than when calculating the MHHI. Instead of data on market shares, information is needed on prices as well as on the substitution patterns between the companies and the respective marginal costs of production. The latter two measures in particular are often not observable and have to be estimated using complex and costly methods.

4.6 Empirical evidence of anticompetitive effects

492. Although economic theory long been aware of the potential anticompetitive effects of horizontal links[236] and institutional investors' investment volumes are constantly increasing, for a long time no empirical research existed on this phenomenon. Two recent empirical studies[237] which provide evidence of anticompetitive effects not only gave rise to a controversial debate around the competitive risks due to institutional investors and possible regulatory measures,[238] they also provided the impetus for further empirical research into this issue. The insights gained in the as yet young empirical literature on the link between competitive intensity and ties due to institutional investors will be summarised in the following. A distinction must be drawn between those studies which (i) investigate the link between institutional investors' diversified investment strategies and the market outcome (often price) in a particular sector and those which (ii) analyse the link between the level of common ownership and a number of market indicators across numerous sectors.

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232 The PPI was developed by Salop, S./O'Brien, D., loc. cit.

233 The GGUPPI was developed by Brito, D. et al., loc. cit. It is a generalised form of the original GUPPI developed by Salop, S./Moresi, S., Updating the Merger Guidelines: Comments, Georgetown Law Journal, 9 November 2009.

234 The PPI and GGUPPI apply the same approach. However, they differ in that the GGUPPI relates the price effect due to changes in the market or ownership structure to the price level, while the PPI relates it to the marginal costs of production.

235 See para. 489 above.

236 See section 4.4 above as regard theories of harm.

237 Azar, J./Schmalz, M./Tecu, I., Anticompetitive Effects of Common Ownership, loc. cit., and Azar, J./Raina, S./Schmalz, M., loc. cit.

238 See section 4.7 as regards the regulatory measures proposed in the course of the debate.

4.6.1 Market-specific studies

493. The much acclaimed paper by Azar, Schmalz and Tecu investigates the anticompetitive effects of institutional investors' participating interests in the US airline industry.[239] The authors use route-specific data on airlines' ticket prices and market shares. The MHHI serves as an indicator of horizontal shareholdings on each route. The results of a panel regression analysis show that – all else being equal – there is a statistically significant increase in price level when the level of common ownership rises. The authors test the robustness of their findings using a number of different model specifications, various variants of the MHHI and alternative measures of common ownership. In addition, they use the takeover of Barclays Global Investors by its competitor BlackRock in 2009 to conduct what is known as a differences in differences analysis. Under this analysis, the development in those markets in which the horizontal links increase on account of the takeover is compared with control markets which were not affected by the takeover. The results of this analysis confirm the findings of the panel regression analysis. Following the Barclays Global Investors takeover, there was a statistically significant price increase on the affected routes in which the MHHI rose on account of the takeover compared to those routes which were not affected. Depending on the model or model specification applied, actual prices were between 3 and 12 per higher than in a hypothetical market in which there were no horizontal links due to institutional investors. The authors also find a negative link between the number of tickets sold and the MHHI delta. This can be seen as a sign that the price effects were not driven by increased demand but by the linkages between the airlines on account of their sharing the same investors.

494. A methodologically comparable study by Azar, Raina and Schmalz analyses the effect of horizonal linkages on interest rates and fees for banking deposit services in the United States.[240] In contrast to the airline industry, there are both cross-ownership and common ownership structures in this sector as many banks hold shares in their direct competitors. The GHHI, which maps both types of linkages, was used as an indicator of the level of cross- and common ownership.[241] The results suggest that there is a statistically significant rise in fees for banking deposit services when the level of cross- and common ownership increases. Savings interest rates drop at the same time, though. As in the study on the airline industry, various specifications and models suggest that these results are robust.

495. These two studies were criticised in a number of papers.[242] The criticisms raised can roughly be assigned to three categories. First, it is argued that oligopoly theory does not create a clear link between measures of concentration and market indicators such as price and sales volume if the restrictive assumptions on which the MHHI is based do not apply.[243] Thus, the models do not permit any conclusions to be drawn as to whether or not a higher level of linkage leads to anticompetitive effects. Second, the papers were criticised for their econometric approach. The empirical findings were distorted, so the criticism goes, because the authors had not fully identified the endogeneity[244] of the MHHI and of the GHHI and the chosen econometric methods used as a remedy were inadequate.[245] The third point of critique calls into question how missing data and company insolvencies in the observation period were treated, since

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239 Azar, J./Schmalz, M./Tecu, I., Anticompetitive Effects of Common Ownership, loc. cit.

240 Azar, J./Raina, S./Schmalz, M., loc. cit.

241 See para. 488 above regarding the GHHI.

242 Some of these critical papers were part-funded by the Investment Company Institute (ICI), the largest association globally representing the interests of investors, see O'Brien, D./Waehrer, K., The Competitive Effects of Common Ownership: We know less than we think, Antitrust Law Journal 81(3), 2017, p. 729, and Kennedy, P. et al., The Competitive Effects of Common Ownership: Economic Foundations and Empirical Evidence, SSRN Working Paper, 24 July 2017, p. 1.

243 See para. 487 above and O'Brien, D., Price-Concentration Analysis: Ending the Myth, and Moving Forward, loc. cit.; O'Brien, The Competitive Effects of Common Ownership: Ten Points on the Current State of Play, background paper presented at the 128th meeting of the OECD's Competition Committee, 5 and 6 December 2017, p. 6–7, and Patel, M., loc. cit., p. 24 et seqq.

244 The term "endogeneity" is used in econometrics to refer to a situation in which the explanatory variable (in this case the MHHI or the HHI and MHHI delta) correlates with the error term, meaning that the estimated causal effect of the explanatory variable on the explained variable (in this case ticket prices and fees for banking deposit services) is biased.

245 O'Brien, D., Price-Concentration Analysis: Ending the Myth, and Moving Forward, loc. cit.; O'Brien, The Competitive Effects of Common Ownership: Ten Points on the Current State of Play, loc. cit., p. 6–7; O'Brien, D./Waehrer, K., loc. cit., and Gramlich, J./Grundl, J., loc. cit., p. 6.

they could potentially distort the results.[246] In their revised version of the airline study the authors included additional specifications which indicate that their findings were robust.[247]

496. The authors of three of these critical papers conducted their own empirical studies. Kennedy et al. use a comparable data set on the airline industry, but they produced fundamentally different results.[248] Although, in a first step, the authors replicate the findings of the study they criticise, they then reject these findings for the aforementioned reasons (see para. 495). By contrast, an alternative specification used in the panel regression model which uses incentive terms[249] as an indicator of horizontal linkages instead of the MHHI even shows a statistically significant negative link between prices and the level of common ownership. Moreover, the authors use what is referred to as a "structural model", which explicitly models supply and demand for airline tickets. The results do not indicate that common ownership has any statistically significant impact on ticket prices. Nevertheless, methodological concerns were voiced about both these econometric analyses, and doubts were raised about how their findings were to be interpreted.[250] The study by Dennis, Gerardi and Schenone also, in a first step, uses a comparable data set and produced very similar findings as Azar, Schmalz and Tecu did in their original paper.[251] In a further analysis, the authors generate a data set in which a potential source of error has been corrected and they propose using alternative tools for solving the endogeneity problem. The results do not indicate any statistically significant link between the level of common ownership and average ticket prices. Both the methodology and the results, or rather their interpretation, have been criticised.[252] Gramlich and Grundl use a different data set on the banking sector in the United States.[253] Instead of the MHHI they use incentive terms.[254] Their preliminary results[255] indicate that common ownership has procompetitive or anticompetitive effects depending on the specification applied and they do not permit any clear conclusions to be drawn regarding the competitive effects of common ownership. The validity of these results has been questioned, too.[256]

497. Newham, Seldeslachts and Banal-Estanol investigate the effects of common ownership on market entries in the pharmaceutical industry.[257] To that end they analyse decisions taken by generics manufacturers to sell a generic drug on the US market after a competitor's patent expires. The results suggest that a generics manufacturer is less likely to enter a market if it is linked with the producer of the original preparation through common shareholdings. The authors feel

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[246] Dennis, P./Gerardi, K./Schenone, C., Common Ownership Does Not Have Anticompetitive Effects in the Airline Industry, SSRN Working Paper, 5 February 2018.

[247] Azar, J./Schmalz, M./Tecu, I., Reply to: "Common Ownership Does Not Have Anticompetitive Effects in the Airline Industry", SSRN Working Paper, 24 April 2018, and Elhauge, E., New Evidence, Proofs, and Legal Theories on Horizontal Shareholding, SSRN Working Paper, 4 January 2018.

[248] Kennedy, P. et al., loc. cit.

[249] As regards incentive terms, which form part of the MHHI, see para. 483 above and para. 1229 et seqq. in the Annex. Using incentive terms has the advantage that the endogeneity problem associated with the MHHI does not arise, or is less pronounced, see Kennedy, P. et al., loc. cit., p. 14–15. However, it only records the anticompetitive incentives arising due to the linkages on account of common investors but not whether the companies are large market players with the correspondingly strong influence on market outcome or whether they are small companies; see Elhauge, E., The Growing Problem of Horizontal Shareholding, Antitrust Chronicle 3(1), 2017, p. 8–9.

[250] Azar, J./Schmalz, M./Tecu, I., The Competitive Effects of Common Ownership: Economic Foundations and Empirical Evidence: Reply, SSRN Working Paper, 28 September 2017, and Elhauge, E., New Evidence, Proofs, and Legal Theories on Horizontal Shareholding, loc. cit., p. 19 et seqq.

[251] Dennis, P./Gerardi, K./Schenone, C., Common ownership does not have anticompetitive effects in the airline industry, loc. cit.

[252] Elhauge, E., New Evidence, Proofs, and Legal Theories on Horizontal Shareholding, loc. cit., p. 21–22.

[253] Gramlich, J./Grundl, S., loc. cit.

[254] See fn. 249 above.

[255] The authors refer to their results as "preliminary" as there are irregularities in the data, see Gramlich, J./Grundl, S, loc. cit., p. 1.

[256] Elhauge, E., New Evidence, Proofs, and Legal Theories on Horizontal Shareholding, loc. cit., p. 22.

[257] Newham, M./ Seldeslachts, J./Banal-Estanol, A., Common Ownership and Market Entry: Evidence from the Pharmaceutical Industry, DIW Discussion Paper No. 1738, May 2018.

there is a risk that this limits the intensity of price competition, which might lead to higher prices for pharmaceuticals and, consequently, higher costs for the health system. Xie and Gerakos also find evidence of the fact that the probability of what is referred to as "pay for delay" agreements being concluded increases the higher the level of common ownership.[258] Here, the generics manufacturer does not enter the market, or delays its market entry, and is compensated by the manufacturer of the original preparation for doing so because it then faces less competition. The authors rate the share price gains for the manufacturer of original preparations at the time of the "pay for delay" agreement as an indicator of the fact that buying off competition in this way has an anticompetitive effect.[259]

4.6.2 Cross-market studies

498. Azar uses a panel regression analysis to investigate the link between the diversification of institutional investors and corporate profitability in the United States.[260] This analysis is based on data on around 7,300 companies in 210 industries over a period of 42 quarters. The results suggest that anticompetitive effects exist and show that a higher level of common ownership on account of diversified investors in an industry leads to statistically significantly higher margins.

499. Another cross-sector study by He and Huang analyses how level of common ownership impacts a number of corporate indicators[261] using quarterly data on companies listed in the United States for the period 1980 to 2014. The study shows that companies with common ownership links had higher market share growth over the observation period and profitability increased simultaneously. In contrast to the first study, these findings tend to suggest that common ownership leads to efficiency gains and that they are not (primarily) due to anticompetitive behaviour. The authors also show that the frequency of cooperation (e.g. joint ventures and strategic partnerships), the probability of takeovers and innovative activity increases the greater the level of common ownership. A positive link between innovative activity and minority shareholdings by diversified investors is confirmed in other empirical studies, too.[262] However, there is also evidence to suggest that companies' investments drop the greater the level of common ownership.[263]

4.6.3 Concluding assessment of empirical studies

500. To sum up, there are as yet not enough empirical studies which have investigated the competitive effects of common ownership. Some of the findings of those studies which are available are contradictory. In particular, the methodology used in the market-specific studies is controversial. This applies to both those which indicate the existence of anticompetitive effects and those which contest such a link. Moreover, the studies are limited to three selected markets in the United States, and there are therefore limits to their transferability to other markets due to the prevailing conditions on those markets. The fact that so far no unequivocal empirical proof of the anticompetitive effects of common ownership has yet been put forward does not, however, permit one to conclude that such a link does not exist. Nor has it yet been proven that the anticompetitive effects proposed by economic theory do not in fact play out in reality. Studies on innovative activities can be regarded as suggesting that shareholdings by diversified investors may have increased efficiency effects. At the same time they provide additional indications that diversified investors may be able to exert an influence on corporate decision-making, which could, as a result, also lead to a restriction of competitive intensity among portfolio companies.

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[258] Xie, J./Gerakos, J., Institutional cross-holdings and generic entry in the pharmaceutical industry, Working Paper, 10 May 2018.

[259] See, as regards the "pay for delay" problem, also Monopolies Commission, XXIst Main Report, loc. cit., para. 1031 et seqq. and para. 797 et seqq. of this Report.

[260] Azar, J., A new look at oligopoly: Implicit collusion through portfolio diversification, Dissertation, Princeton, May 2012, Chapter 6.

[261] He, J./Huang, J., loc. cit.

[262] Anton, M. et al., Innovation: The Bright Side of Common Ownership?, SSRN Working Paper, 10 March 2017; Geng, H./Hau, H./Lai, S., Patent Success, Patent Holdup, and the Structure of Property Rights, Working Paper, 21 January 2018; Kostovetsky, L./Manconi, A., Common Institutional Ownership and Diffusion of Innovation, SSRN Working Paper, 15 May 2018.

[263] Gutiérrez, G./Philippon, T., Investmentless Growth: An Empirical Investigation, Brookings Papers on Economic Activity, Autumn 2017, p. 89–169, and Gutiérrez, G./Philippon, T., Governance, short-termism, and investment, Working Paper, March 2017.

4.7 Measures against potential competitive risks

501. The aforementioned empirical studies into the airline and banking markets launched a controversial debate around (i) whether there is any need to act and (ii) what possible measures could be taken to limit common ownership, or rather its potentially anticompetitive effects. This debate was almost exclusively conducted by academics and practitioners in the United States. Their proposals are thus strongly oriented to US (competition) law. Due to systematic differences between US law on the one hand and German and EU law on the other, the individual proposals need not be presented here in detail. The underlying regulatory concepts will, however, be discussed below.

502. A further issue which should be discussed in this context concerns how account is to be taken of the minority shareholdings of diversified investors in merger control where the parties to the merger and/or other competitors are linked by common investors. This issue has hardly been taken up in the course of the general debate, although it was addressed by the European Commission in the Dow/DuPont case (section 4.7.2).

4.7.1 Proposals for limiting common ownership

503. The proposals for limiting common ownership, or rather anticompetitive effects potentially resulting thereof, presented in the following can be divided into three categories: (i) the review under merger control rules of minority shareholdings by institutional investors, (ii) regulatory approaches to limiting common ownership, and (iii) tighter corporate governance rules for institutional investors.

504. Nevertheless, an assessment of these proposals which focuses solely on their competitive effects would fall short, since some of the measures have far-reaching consequences for institutional investors' portfolio diversification, may massively limit their ownership rights and/or change their corporate governance role. This in particular applies because limiting the level of common ownership (which may be desirable from the competition policy perspective) may conflict with portfolio diversification by institutional investors (which is desirable from the financial market perspective) and a more active corporate governance role on their part.[264] The importance of institutional investors in regard to market-based corporate financing, for example, should not be ignored in this context.

505. When assessing these concepts it is useful to evaluate the associated costs. A distinction must be drawn between administrative costs and what are known as error costs. Administrative costs are directly incurred as a result of the (competition) authorities implementing a regulation. They include costs incurred by the market players (in this case investors and their portfolio companies) affected by a regulation. These costs can arise in the course of a prior review of whether specific behaviour is lawful, or they may be due to legal uncertainty or abiding by the rules.

506. Error costs arise when implementing a regulation leads to undesirable effects. Errors can be divided into two categories: Where a rule prevents welfare-enhancing behaviour, this is referred to as a first-order, or Type I, error. If a rule does not prevent certain behaviour although it gives rise to effects which are detrimental to welfare, this is referred to as a second-order, or Type II, error. Ideally, a measure should avoid giving rise to both types of error. However, since there is a basic conflict between competitive goals and a financial market perspective, it may be necessary to weigh up the pros and cons of each. A restrictive rule which strongly limits common ownership cuts the risk of effects which reduce competition. At the same time, though, there is an increased risk that diversification, which is desirable from the financial market perspective, will also be reduced. In the opposite case (of a much more moderate rule), strong diversification and an active corporate governance role are still possible, but behaviour which is potentially harmful to competition may possibly also not be effectively reduced.

507. No limitations are currently imposed on common ownership on account of diversified investors' minority holdings. As a result, there is a potentially higher risk of second-order errors arising, since there are no means of preventing potentially anticompetitive effects due to common ownership. At the same time, first-order errors are ruled out since neither portfolio diversification nor corporate governance engagement are limited beyond other existing statutory provisions. Nor are any administrative costs incurred.

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[264] Azar, J./Schmalz, M./Tecu, I., Why Common Ownership Creates Antitrust Risks, CPI Antitrust Chronicle, June 2017, p. 7– 8.

4.7.1.1 Review under merger control rules of minority shareholdings by diversified investors

508. One conceivable means of mitigating potential competitive risks would be to subject non-controlling minority shares held by diversified investors to merger control. Since reviewing all minority interests would give rise to a large number of cases and disproportionately high administrative costs for all those concerned, both thresholds for merger control and safe harbour rules have been proposed in the literature. A safe harbour rule defines a minimum value below which the participating interests of diversified shareholders are not regarded as harmful to competition. Only if the threshold or safe harbour value were reached or exceeded due to a change in shareholder structure would a specific review of the anticipated (competitive) effects be conducted (before or subsequent to the acquisition of the shareholding). If the review were to show that a reduction in the intensity of competition was likely, the shareholding would have to be prohibited or could be permitted subject to conditions.

509. Regardless of the type of threshold or safe harbour rule applied, low threshold values are linked to high administrative costs since (at least in the case of an ex-ante review) many cases would be flagged up and would have to be examined. This need not necessarily give rise to first-order errors on account of excessively limiting minority shareholdings which are not critical from a competition perspective, as a decision on whether the acquisition is permissible would not be taken until the subsequent review was carried out. However, if the threshold were set too high, this would reduce the number of cases needing to be reviewed as well as the administrative costs, but at the same time it would increase the risk of second-order errors on account of potentially harmful shareholdings being permitted without there being any means of their being vetted.

510. Before making more detailed statements concerning error and implementation costs, consideration needs to be given to the specific form of the relevant regulation. Threshold values based on the MHHI and the MHHI delta have been proposed, for instance.[265] The advantage of these is that the decision to launch a merger control review would be based on a measure derived from theory. Although no direct competitive effect can be derived from the MHHI, the measure ought, nevertheless, to be a fairly relevant indicator and useful when it comes to distinguishing between unproblematic and potentially problematic cases. A number of difficulties nevertheless arise when it comes to determining the MHHI.[266] First, the market would need to be defined. Since, in reality, market players are often multi-product firms, all the relevant markets would have to be defined in order to be able to determine the market-specific MHHIs. Finally, sufficient information about shareholder structures not only of the directly affected companies but of all companies in the market would need to be available. This would impose a significant burden on the competent authority. Further, it would increase investors’ legal uncertainty, since on account of a lack of information, different methods of calculating the MHHI and diverging market definitions it would be very hard for them to estimate whether a specific acquisition of minority shareholdings would have to be vetted.[267]

511. Moreover, the question arises of what threshold value is to be set. Elhauge suggests that an official review should be conducted once a minority interest leads to an MHHI value of more than 2,500 and at the same time to an MHHI delta of more than 200.[268] These values are based on the US Merger Guidelines concerning the traditional HHI.[269] Nevertheless, the proposal differs systematically from the method actually set down in the Merger Guidelines, which specify that the HHI has to increase by 200 points on account of an acquisition. The MHHI delta, by contrast, does not measure the additional impact on market concentration but rather the effect which the totality of minority shareholdings in a market has on market concentration. This could lead to marginal changes already triggering a large

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[265] Elhauge, E., Essay – Horizontal Shareholding, loc. cit., p. 1301 et seqq.

[266] See para. 489 above.

[267] Posner, E./Scott Morton, F./Weyl, G., A Proposal to Limit the Anticompetitive Power of Institutional Investors, Antitrust Law Journal (forthcoming). Available as an SSRN Working Paper, 22 March 2017, p. 9.

[268] Elhauge, E., Essay – Horizontal Shareholding, loc. cit., p. 1303.

[269] According to the US Merger Guidelines, a market with an HHI above 2,500 is classified as highly concentrated, and mergers resulting in highly concentrated markets which involve an increase in the HHI of more than 200 points will be presumed to be likely to enhance market power; see U.S. Department of Justice and the Federal Trade Commission, Horizontal Merger Guidelines, 19 August 2010, p. 18.

number of reviews if the MHHI and the MHHI delta are already above 2,500 and 200, respectively, possibly with the knock-on effect of considerable administrative costs. O'Brien and Waehrer believe that a safe harbour rule based on the MHHI would be feasible.[270] According to the authors, it would, however, presuppose that the authorities had reliable information on the control weights needed to calculate the MHHI. They do not propose any specific threshold values.

512. Rock and Rubinfeld propose an alternative safe harbour rule for minority shareholdings below 15 per cent if the shareholder is not represented on the supervisory board and its corporate governance engagement does not go beyond what is normal.[271] This rule makes it easy to establish whether a minority holding is below the threshold or whether a review of possible anticompetitive effects is necessary. One advantage is that it is necessary neither to first define the market nor to obtain detailed information on the market shares and shareholder structures of the company in question and its competitors. There is thus greater predictability for investors and portfolio companies and minimal costs are incurred when the competent authority examines whether a review is necessary.

513. Although the "15 per cent rule" avoids some of the challenges associated with the previous approach, it does have some fundamental problems. First, 15 per cent appears to be quite a high threshold, given that institutional investors often have significantly smaller shareholdings. There is thus a risk that too many cases which raise competition concerns will not flagged be up (second-order error). It becomes apparent that the authors' proposal is driven less by the fear that horizontal shareholdings give rise to anticompetitive effects than the concern that if the threshold were too low this could lead to significant legal uncertainty on the part of investors.[272]

514. The conceptual problems associated with this approach are more significant than the difficulty in deciding on the threshold value, however. As is clear from what has been said in the above, the problem is not the actual share which minority investors hold but rather the ties which exist between players in a market and institutional investors' interests. For instance, small shareholdings could already have strong effects on competition if investors are broadly diversified in the market and hold equal shares in their portfolio companies. This in particular applies where individual investors hold shares which are significantly below the threshold value but they are pursuing similar interests.[273] The 15 per cent rule would not flag up such cases despite the potential risks. On the other hand, it may be possible that a not insignificant increase in a minority interest may have procompetitive effects if it leads to the investor paying greater attention to the company in question's profits and its competitors' profits become less relevant in terms of total returns. In such cases, administrative costs would at least arise on account of a review being launched although no anticompetitive effects are to be expected from the outset.

515. All the approaches described in the above merely determine whether a minority shareholding is to be reviewed under merger control rules. They do not address the matter of how the review is to be conducted and what criteria are to be applied to a substantive decision. Nothing can, thus, be said, over and above what has already been stated in the above, regarding the administrative cost of the review or the costs arising from possible erroneous decisions.

4.7.1.2 Regulatory measures to limit common ownership

516. Regulatory measures have been proposed as alternatives to thresholds and safe harbour rules in merger control. They impose a fixed upper limit on minority shareholdings by diversified investors. This not only restricts the increase in level of common ownership, but could also break open existing investment structures and force institutional investors to make major changes to their business models.

517. Put simply, under Posner, Scott Morton and Weyl's proposal, no diversified investors would be allowed to hold more than 1 per cent of the market share in an oligopolistic market. They propose that this rule should not apply to

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[270] O'Brien, D./Waehrer, K., loc. cit., p. 34.

[271] Rock, E./Rubinfeld, D., Antitrust for Institutional Investors, loc. cit., p. 42 et seqq.

[272] Ibid., p. 1, and Patel, M., loc. cit., p. 3.

[273] OECD, Common Ownership by Institutional Investors and its Impact on Competition, background paper presented at the 128th Meeting of the OECD's Competition Committee, 5 and 6 December 2017, p. 34.

investors pursing only a passive investment strategy who exert no influence on their portfolio companies.[274] An investor would be regarded as "passive" if it does not communicate with the management or supervisory board, engages in what is known as "mirror voting" (voting proportionately to the votes cast by other shareholders), and its investment strategy is publicly known and complies with non-discretionary rules.

518. At first glance, and regardless of the percentage threshold applied, it appears that such a rule would give rise to lower administrative costs than reviewing minority holdings under merger control rules would. There would be no need for time-consuming and costly individual reviews, and there would be greater legal certainty because the rules are simple to apply. Nevertheless, one would have to determine which markets are to be classified as an oligopoly. To prevent legal uncertainty arising in this regard, the authors suggest that the competent authority publishes an annually updated list of all oligopolistic industries.[275] This would no doubt be both quite time-consuming and expensive.[276] The authors themselves propose an HHI of at least 2,500 as the main criterion for defining an oligopoly. Other market-specific factors could be included.[277] Nonetheless, there would still be legal uncertainty in that a minority shareholding which previously did not fall under the 1 per cent rule might need to be challenged at a later point in time, for example due to a change in market structure (on account of changing market shares or market exits, for instance) or a sector being reclassified as an oligopoly.

519. With regard to the percentage threshold, the trade-off described in para. 505 between a regulation which is too restrictive and one which is too soft applies here, too. Posner, Scott Morton and Weyl themselves state that a 1 per cent rule may not be restrictive enough;[278] others believe that 1 per cent is far too low a threshold.[279] The fact that a rule which applies a simple measure cannot adequately map the complex link between the level of common ownership and potential competitive risks has also been criticised. Accordingly, unproblematic minority shareholdings could on the one hand be prevented and holdings linked to considerable competitive risks would potentially not be reviewed on the other.[280]

520. Before assessing the impacts of such a regulatory measure, a distinction needs to be drawn between three different scenarios.[281] In the first scenario, investors would meet the rule if they give up their diversification within a market and hold more shares in only one portfolio company. The consequence of this would be that diversified investors would have to systematically restructure their portfolios. Whether and to what extent the resulting reduction in diversification would have an impact is still a contentious issue, and cannot be assessed conclusively. The authors who made the proposal argue that there are still sufficient options to diversify investments given the number of different branches of industry.[282] Others, by contrast, consider that limiting portfolio diversification in a market would to be problematic.[283] Moreover, it is still not clear whether the capital market would be able to cushion the necessary changes in shareholder structures – as assumed by the authors – or whether there would be considerable upheavals in the financial markets.

521. In the second scenario, diversified investors would have to reduce their shareholdings to 1 per cent of total shares in the market. This would still permit diversification within a sector. However, big investors would either have to strongly

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[274] Posner, E./Scott Morton, F./Weyl, G., loc. cit., p. 33 et seqq.

[275] Ibid., p. 34.

[276] Lambert, T./Sykuta, M., loc. cit., p. 44 et seqq.

[277] Posner, E./Scott Morton, F./Weyl, G., loc. cit., p. 25.

[278] Ibid., p. 46.

[279] Rock, E./Rubinfeld, D., Antitrust for Institutional Investors, loc. cit., p. 36–37.

[280] See Elhauge, E., The Growing Problem of Horizontal Shareholding, loc. cit., p. 14.

[281] See also Rock, E./Rubinfeld, D., Antitrust for Institutional Investors, loc. cit., p. 36 et seqq.

[282] Posner, E./Scott Morton, F./Weyl, G., loc. cit., p. 35–36.

[283] Lambert, T./Sykuta, M., loc. cit., p. 47 et seqq.

reduce their investment volumes or to shift them to individual, independent investment companies, which might also lead to undesirable financial market effects.

522. Thirdly, diversified investors could keep their investment volumes and engage in only passive investment strategies. The effects of this strategy are presented in section 4.7.1.3 below.

523. It is hard to gauge which of these scenarios would likely arise if the above-mentioned regulatory measure were to be introduced. The authors themselves assume that the third option would be less practicable since it would not be compatible with the business models of many institutional investors (given that they pursue both passive and active investment strategies). They therefore believe it is more realistic to assume that big investors would restructure their shareholdings, leading to less diversification in individual markets.[284] Other authors believe that it is more likely that limiting horizontal shareholdings would not lead to changes in shareholder structures, but that investors would refrain from exerting influence on corporate governance.[285]

4.7.1.3 Tighter corporate governance rules

524. Other proposals suggest limiting the possibilities which diversified institutional investors have of influencing their portfolio companies by tightening corporate governance rules.[286] This could be achieved either by means of stricter rules on communication and direct contact between institutional investors and portfolio companies or by prohibiting such communication and contact altogether. Alternatively, institutional investors could be prevented from exercising their voting rights, or a "mirror voting" rule (see above) could be introduced. Along with the obligatory tightening of corporate governance rules for all diversified institutional investors, a voluntary waiver of corporate governance engagement might be a possible solution to avoid other restrictions (see paras 517 and 522).[287]

525. Limiting communication and voting rights could reduce the risk that institutional investors will use their influence on portfolio companies to promote potentially anticompetitive behaviour. Even if such influence were not exerted or were not possible, tighter corporate governance rules could lead to more intense competition. The two measures indirectly strengthen the influence of activist non-diversified investors which are more interested in an individual company's performance, and could thus lead to more competitive corporate conduct.[288] Nevertheless, there are arguments which speak against these proposals. First, investors do not necessarily need to have a means of actively exerting an influence on a company for anticompetitive effects to occur.[289] Risk for competition might thus still exist despite stricter corporate governance rules might. Furthermore, such rules run counter to efforts to get institutional investors to assume more corporate governance responsibility.[290]

526. Alternative proposals which focus on the corporate governance aspect suggest limiting the role of proxy advisers.[291] Proxy advisers pool the voting rights of various investors and also make voting recommendations. If different institutional investors are pursuing similar objectives, consulting proxy advisers increases the risk of parallel behaviour without the need for investors to coordinate their actions. Unlike the scenario in which corporate governance rules applicable to institutional investors are tightened, a restriction applicable to proxy advisers would not necessarily run counter to active corporate governance objectives. One matter of debate is whether proxy advisers help investors take

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[284] Posner, E./Scott Morton, F./Weyl, G., loc. cit., p. 44–45.

[285] Rock, E./Rubinfeld, D., Antitrust for Institutional Investors, loc. cit., p. 38.

[286] Posner, E./Scott Morton, F./Weyl, G., loc. cit., p. 44–45.

[287] See the proposal in section 4.7.1.2, in particular paras 516 and 522.

[288] See also Shapiro Lund, D., Nonvoting Shares and Efficient Corporate Governance, The Journal of Corporation Law (forthcoming), available as an SSRN Working Paper, 28 April 2018.

[289] See section 4.4 above.

[290] See section 4.3 above.

[291] See OECD, Common Ownership by Institutional Investors and its Impact on Competition, loc. cit., p. 36.

on their responsibilities as shareholders or whether they in fact lead to shareholders themselves becoming even less active.

4.7.2 Taking account of horizontal shareholdings in merger cases

527. What all the above proposals have in common is that they offset possible competitive risks by limiting the extent of institutional investors' equity interests in a certain sector or their means of exerting an influence within that sector. The debate has largely ignored how to rate the role of institutional investors when companies in a market which is characterised by a high level of common ownership wish to merge. The European Commission first addressed this problem in its decision on the merger between Dow and DuPont, two US chemicals groups.[292] The Commission's analysis focused on what impact the merger would have on innovative activity in the chemical sector.[293] Theoretical considerations regarding common ownership and empirical evidence of a significant level of common shareholdings in the agrochemicals market were also included. The European Commission documents its method and findings in regard to common ownership in general and the specific merger under review in a separate annex to its decision.[294]

528. In its decision the European Commission reflects on some basic considerations concerning the effects of common ownership on competition. To that end it analyses the relevant theoretical and empirical literature and comes to the conclusion that there are potential competitive risks inherent to common ownership.[295] In the European Commission's opinion, the anticompetitive effects on competitors' pricing behaviour, the aspect most frequently discussed in the literature, can be transferred to innovative activity. According to the European Commission, it is thus likely that innovation competition is less intense because competitors are linked on account of significant shareholdings by common shareholders. Further, the Commission feels there is strong evidence to suggest that big institutional investors (especially those pursuing passive investment strategies) have more privileged access to their portfolio companies' managements and that they actively communicate their long-term investment goals to their portfolio companies even if they only have minority shareholdings.

529. In order to be able to analyse the concrete shareholder structures in the agrochemicals market, the European Commission called in information on the institutional shareholders of the parties to the merger (Dow and DuPont) and of their competitors (BASF, Bayer, Monsanto and Syngenta). Based on different measures of participating interests and the level of common ownership, the Commission came to the conclusion that the links between the competitors are strong, given their common shareholders, and that some investors hold significant shares in all six of the companies.[296] Thus, 17 institutional investors together hold some 21 per cent of BASF, Bayer and Syngenta shares. Their joint share in Monsanto, Dow and DuPont is even estimated to be between 29 and 36 per cent.[297] Because a significant share of interests is being held by atomistic shareholders which own less than 0.01 per cent of total shares, the European Commission estimates that the institutional investors and their means of exerting an influence are much more relevant than the size of their holdings would lead one to expect.[298]

530. It is on account of these ties that the European Commission assumes that market shares and measures of concentration such as the traditional HHI underestimate market concentration and the companies' market power.[299] That is why it discusses the modified HHI (MHHI) as an alternative measure of concentration. Although the Commission states that it is possible to apply different methods to determine the control weights needed to calculate the MHHI, it

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[292] EU Commission, Decision of 27 March 2017, M.7932 – Dow/DuPont.

[293] See also section 3.2.2 in chapter III.

[294] Ibid., Annex 5.

[295] Ibid., Annex 5, para. 40 et seqq.

[296] Ibid., Annex 5, para. 8 et seqq. The disaggregated data on individual investors' shareholdings and their names were redacted in the published version of the decision.

[297] Ibid., Annex 5, para. 80.

[298] Ibid., para. 2340, and Annex 5, para. 32.

[299] Ibid., Annex 5, para. 61 et seqq.

bases its own calculation only on the assumption that influence is proportionate to shares held. The European Commission's approach was criticised by the parties to the merger because the scenario on which it is based is not evidence-based and is quite controversial.[300] Ultimately, the European Commission did not incorporate the level of concentration determined on the basis of the MHHI in its decision-making, although it did explicitly state in its decision that the traditional HHI values disclosed underestimate the level of concentration in the market.[301]

531. The European Commission comes to the conclusion that the agrochemical industry is characterised by a significant level of common shareholding and that, consequently, effective innovation competition is likely to be impeded as a result.[302] The market shares used in the assessment and the traditional HHI are likely to underestimate the actual level of market concentration and thus the market power of the parties, it states.[303] Therefore, in the European Commission's opinion, common shareholding should be taken as an element of context in the appreciation of any significant impediment to effective competition.[304]

4.7.3 Concluding assessment of proposals

532. Ideas have already been put forward for mitigating the potential competitive risks from common ownership – albeit in the context of US competition law. They each take different approaches and differ in regard to their scope and level of interference. What also becomes clear is that they give rise to (in some cases considerable) administrative costs and risks due to first- and second-order errors. Moreover, it emerges that the conflict between limiting the level of common ownership (which is possibly desired from the competition policy perspective) and a high degree of diversification (which is desirable from the financial market perspective) poses a considerable obstacle when it comes to designing appropriate (regulatory) measures. Based on our current level of knowledge it is not yet possible to assess whether such measures are in fact necessary.

533. These ideas illustrate important basic principles and indicate what possible measures may look like in practice. However, they do not yet appear mature enough and are of limited workability. If any measures were to be taken, they would have to be further refined and adapted to actual market conditions and other applicable legal provisions. A greater balance would have to be struck between the competition policy and the financial market perspective than is the case in the aforementioned proposals, since they each overemphasise one of the two perspectives.

534. The situation is different when it comes to the review of merger proposals between companies active in markets which are characterised by a high level of common ownership. If a review is conducted possible effects of common ownership should be considered. The European Commission for the first time took account of these aspects in its decision on the Dow/DuPont merger.

4.8 Summary and conclusions

535. Institutional investors generally hold significantly less than 10 per cent of the shares in their portfolio companies. Despite these relatively small holdings, the Monopolies Commission assumes that institutional investors may possibly have the means of influencing certain of their portfolio companies' decisions. As well as exercising their voting rights at shareholder meetings, they can also exert their influence by engaging with these companies. Nevertheless, these means of exerting an influence should not be confused with what is referred to as a "decisive influence" in the context of merger control. In addition, the regulatory framework imposes strict limits on such influence. In their engagement with corporate managements, institutional investors generally focus on sustainable corporate governance and the companies' strategic positioning, capital structure and CSR issues.

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[300] EU Commission, Decision of 27 March 2017, M.7932 – Dow/DuPont, para. 76 et seqq.

[301] Ibid., Annex 5, para. 4.

[302] Ibid., Annex 5, para. 56 et seqq.

[303] Ibid., Annex 5, para. 4.

[304] Ibid., Annex 5, paras 4 and 81.

536. Common ownership (i.e. indirect links between competitors due to non-industry shareholders' participations) is first and foremost merely a market-structural phenomenon. It need not necessarily have any negative impacts on a market. There are, however, different economic theories of harm on how common ownership can facilitate or enable behaviour which restricts competition. Indirect links between competitors create different channels through which common shareholders can impede effective competition. Here, a distinction needs to be drawn between effects due to one-sided behaviour (unilateral effects) and those which could arise on account of coordination.

537. Different indicators can be used to quantify the level of common shareholdings between companies in a market. Simple indicators can map the change in the level of common ownership over time or compare different markets. However, they are of limited value when taken in isolation. Other indicators derived from theory aim to map the level of market concentration due to common ownership. The most widespread and well-known of these is the modified Herfindahl-Hirschman Index (MHHI). Under certain other assumptions, a theoretical link can be established between the MHHI and sector-wide margins. The MHHI can be used to observe market concentration not only from a static perspective, since it can also illustrate changes in the level of concentration due to changes in market and shareholder structures. However, it may be difficult to calculate these measures and it is not clear to what extent they present robust findings if the actual situation in a market deviates from the underlying theoretical assumptions.

538. A number of empirical studies have investigated the link between level of common ownership and anticompetitive effects. One study showing anti-competitive effects in the airline industry in the United States gained particular prominence. The findings supposedly demonstrate that ticket prices are up to 12 per cent higher than what would be expected in a hypothetical market with no common shareholdings. A methodologically comparable research paper on the banking sector also suggests that competitive intensity decreases when the level of common ownership increases. Also, there are indications that it is less likely for a manufacturer of generic drugs to enter the US pharmaceuticals market the stronger the links are between the manufacturer of the generic drug and the manufacturer of the original preparation on account of common shareholdings. The findings of the first two of these studies were criticised for the assumptions which were made about the links between the indicator of market concentration used (the MHHI) and the price level, as well as due to the econometric method applied. Some of the authors of these critical studies conducted their own empirical studies using comparable data on the US airline and banking markets. However, they find no evidence for any anticompetitive effects. These studies were, however, in turn criticised for their methodology and interpretation of the empirical findings. But even if the criticism levelled against the empirical evidence for the anticompetitive effects of common ownership were to be corroborated, this would not permit the conclusion to be drawn that the anticompetitive effects suggested by economic theory do not exist in reality. Cross-sectoral studies also do not reach any clear conclusions regarding competitive effects.

539. The aforementioned studies launched a debate around whether there is any need for action and, if so, what kinds of measures should be taken. The proposals put forward can be roughly divided into three categories: (i) a review under merger control rules of minority shareholdings by institutional investors, (ii) possible regulatory measures, and (iii) tighter corporate governance rules. Different thresholds and safe harbour rules are being discussed as measures for reducing the administrative costs of reviews under merger control rules. This discussion makes it clear that there is a basic conflict between limiting indirect shareholdings (which is possibly desired from the competition policy perspective) and not limiting possible investment strategies, for instance strong portfolio diversification (which may be desirable from the ownership and financial market perspective). Some regulatory measures have also been put forward which would impose an upper limit on the holdings of diversified investors in oligopolistic markets. Some of these measures could have far-reaching impacts as regards big institutional investors' business models and may possibly have considerable negative consequences for financial markets. Both the authorities and market players would incur considerable costs as a result. Finally, it has been proposed that institutional investors' corporate governance engagement should be restricted to prevent investors encouraging their portfolio companies to engage in conduct which reduces competitive. However, this proposal conflicts with efforts to get institutional investors to assume more of their shareholder responsibilities. What all of these proposals have in common is that they do not appear to sufficiently weigh up existing structures and limitations against one another.

540. The Monopolies Commission believes that although there is a risk potential, it would at this point in time be premature to take either competition law or regulatory measures. Before doing so, the academic community needs to deliver further insights and empirical evidence needs to be gathered of the link between common ownership and anticompetitive effects. In Europe in particular these links have not yet been systematically investigated. That is why the Monopolies Commission welcomes the announcement of the Directorate-General for Competition of the European Commission to address this issue in more detail.

541. The situation as regards a review under merger control rules of planned mergers between companies active in markets which are characterised by a high level of common ownership presents a different picture. Here, consideration needs to be given to the possible effects due to indirect links between competitors. When reaching its decision on the proposed merger between Dow and DuPont the European Commission for the first time took account of relevant considerations. The Monopolies Commissions welcomes the fact that the European Commission plans to take account of common shareholdings in its future decision-making as well. It would like to encourage the Federal Cartel Office (*Bundeskartellamt*) to likewise give consideration to common shareholdings of institutional investors in relevant cases.