Common Ownership
–
A European and German Competition Law Perspective

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–
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Table of Contents

List of Abbreviations .... *xi*

Part 1 – Introduction **1**

Part 2 – Economic Analysis **5**

A. The Common Ownership Phenomenon **5**

I. Definition and Terminology **5**

II. Causes of Common Ownership **6**

1. Institutional Investment 7

2. Passive and Active Investment 8

a) Active Investment 8

b) Passive Investment 8

c) Recent Trends 9

(1) Diversification 9

(2) The Growth of Passive Investment 10

(3) Concentration of Passive Funds 10

(4) Cross-Ownership Among Institutional Investors 11

(5) Preliminary Results 11

III. The Extent of Common Ownership **12**

1. United States 13

2. Europe 15

3. Germany 16

4. Preliminary Results 19

B. Theoretical and Empirical Analysis **22**

I. Measuring Common Ownership **22**

1. Overview 22

2. MHHI 22

a) The Herfindahl-Hirschman Index 22

b) The Modification for Partial Ownership 25

c) The Application of the MHHI for Common Ownership 27

3. Price Pressure Indices 28

4. Profit Weights 29

5. Interconnectedness Between Firms 30

II. Empirical Studies 31

1. Effects on Competition 31

a) The Airline Study 31

(1) Overview 31

(2) Methodology 32

(a) Data 32

(b) Application of the MHHI 32

(c) Market Definition 33

(d) Corporate Control 34

(e) Aggregation of Ownership 35

(f) The Proportional Control Assumption 36

(3) Results 36

(4) Related Studies 37

(a) The Competitive Effects of Common Ownership – Economic Foundations and Empirical Findings 38

(b) Common Ownership Does Not Have Anticompetitive Effects in the Airline Industry 39

(c) Common Ownership and Product Market Competition: Evidence from the U.S. Airline Industry 39

(5) Preliminary Results 39

b) The Banking Study 40

(1) The Initial Study 40

(2) The Effect of Common Ownership on Profits: Evidence from the U.S. Banking Industry 41

c) Other Studies 42

(1) Common Ownership in the Ready-to-Eat Cereal Industry 42

(2) Effects of Common Ownership in the Seed Sector 42

(3) Common Shareholding in Europe – Beverage Industry 43
(4) Product Market Competition in a World of Cross-Ownership: Evidence from Institutional Blockholdings 43
(5) Common Ownership and Competition in Product Markets 44
(6) Testing the Theory of Common Stock Ownership 45
2. Effects on Compensation 45
3. Other Effects of Common Ownership 48
a) Innovation 48
b) Voluntary Disclosure 49
c) Merger Activity 49
d) Market Entry 50
e) Firm Financial Policy 50
f) Vertical Effects 50
4. Preliminary Results 51
C. The Causal Mechanisms 54
I. Overview 54
II. The Incentives of Common Owners 55
1. Incentives of Direct Owners 55
2. Incentives of Active Funds 56
3. Incentives of Passive Funds 57
4. Preliminary Results 60
III. The Potential Mechanisms 60
1. Active Mechanisms 60
a) Incentive to Influence Companies 60
b) Channels of Influence 62
(1) Voice 63
(2) Voting 65
(3) Exit 67
(4) Exchange of Information 68
c) Limitations 68

(1) Fiduciary Duty of Management Towards Their Shareholders....................69
(2) Fiduciary Duty of Institutional Investors Towards Their Clients 72
(3) Insider Trading Rules..72
(4) Influence of Non-Common Owners..72
d) Preliminary Results 73
2. Passive Mechanisms 74
a) Two Variations of Passive Mechanisms 74
b) Lack of Incentives to Compete 75
c) Internalising Anti-Competitive Objectives 76
(1) Identifying the Incentives 76
(2) Compensation 78
(3) Threat of Voting 79
(4) Blocking Activist Investors 79
(5) Other Supporting Mechanisms 79
d) Preliminary Results 80
3. Comparative Review of the Mechanisms 80
D. Conclusion – Economic Analysis 87
Part 3 – Legal Analysis... 89
A. Competition Law – Current Legal Situation 89
I. Antitrust Regulation 89
1. Prohibition of Cartels 89
a) Overview...89
b) Coordination Between Competitors..90
(1) Framework for the Analysis 90
(a) The Potential Scenarios...90
(b) The Assumptions...90
(2) Direct Influence..91
(a) Possible Channels of Influence..91
(b) Agreement...91
(c) Restriction of Competition..92

(3) Information Exchange 93
(a) The Ability to Exchange Information 93
(b) Legal Constraints 94
(c) The Legality of Information Exchange Under Article 101 TFEU 94
(d) A-B-C-Information Exchange 95
c) Coordination Between Investors 96
d) Acquisition of Shares 97
e) Practicability 99
2. Prohibition of Abusive Practices 100
a) Acquisition of Shares 100
b) Excessive Pricing 101
c) Practicability 102
3. Preliminary Results 103
II. Merger Control Regulation 104
1. Merger Scenarios 104
2. Merger Between Competitors 105
a) Overview 105
b) SIEC Test 106
(1) Unilateral Effects 106
(a) Overview 106
(b) The Economic Theory of Minority Shareholdings 107
(c) Extension to Common Ownership 109
(d) Common Ownership as an "Element of Context" 111
(e) A Special Case: The Maverick 113
(f) Preliminary Results 114
(2) Coordinated Effects 115
(a) Overview 115
(b) Legal Basis 116
(i) The Airtours Criteria 116
(ii) The Case Law 118

(aa) Airtours 118
(bb) Sony BMG/Impala 120
(cc) European Commission Case Law....120
(c) Application to Common Ownership....121
(i) Overview....121
(ii) Airtours Criteria....121
(aa) Ability to Coordinate 121
(bb) Deterrence Mechanisms....124
(cc) Stability Against Competition by Outsiders 125
(iii) Additional Criteria 126
(aa) Incentives to Coordinate....126
(bb) Lessened Incentive to Deviate from the Collusive Outcome 126
(d) Preliminary Results....127
(3) Unilateral vs. Coordinated Effects Analysis....128
c) Efficiency Defence 131
(1) General Principles 131
(2) Potential Efficiencies....132
(a) Overview 132
(b) Corporate Governance 132
(c) Benefits for Investors and Financial Markets 133
(d) Innovation....134
(e) Preliminary Results....135
3. Merger Between Common Owners....136
4. Acquisition of Shares....139
a) Overview....139
b) Formal Requirements....140
(1) Control....140
(a) Legal Basis....140
(b) Sole Control....140
(c) Joint Control 142

(d) Preliminary Results 145
(2) Material Competitive Influence 145
(a) Overview 145
(b) The Relevant Link 146
(c) Material Influence 146
(d) Influence on Competitive Behaviour 148
(e) Joint Material Competitive Influence 150
(f) Preliminary Results 150
c) Substantive Analysis 150
(1) Overview 150
(2) Classification 151
(3) Significance 151
(4) Efficiencies 152
d) Preliminary Results 152
B. Potential Solutions 154
I. Overview 154
II. Competition Law 154
1. Antitrust 154
2. Merger Control 156
a) Overview 156
b) Solutions Under Current Law 157
(1) Extensive Interpretation of Joint Control 157
(2) Extensive Interpretation of Material Competitive Influence 158
(3) Stricter Enforcement in Merger Cases 159
(4) Merger Between Common Owners 161
(5) MHHI as a Threshold 162
c) Extending Merger Control 165
3. Summary of Proposals 169
III. Non-Competition Law 169
1. Shareholder Structure 169

a) Limit on the Level of Shareholdings 169
b) Safe Harbour 173
2. Corporate Governance 174
a) Limiting Engagement 174
(1) Passivity Under the *Posner et al.* Proposal 174
(2) Limiting Engagement in General 177
b) Transferring Influence to Individual Shareholders 178
c) Preliminary Results 179
3. Transparency Obligations 180
a) Common Ownership Levels 180
b) Corporate Governance Activities 180
4. Summary of Proposals 181
C. Conclusion – Legal Analysis 183
Part 4 – Conclusion 186

List of References 192

List of Abbreviations

AEA	American Economic Association
AGM	annual general meeting
AktG	Aktiengesetz
BGI	Barclays Global Investors
CEO	chief executive officer
CFI	Court of First Instance
CPI	Competition Policy International
DAX	Deutscher Aktienindex
DIRK	Deutscher Investor Relations Verband
DIW	Deutsches Institut für Wirtschaftsforschung
DOJ	Department of Justice
ECJ	European Court of Justice
ed.	editor
eds.	editors
e.g.	exempli gratia; for example
ESG	environmental, social, governance
et al.	et alia; and others
ETF	exchange traded fund
EU	European Union
EUMR	European Merger Regulation
f./ff.	and following
FTC	Federal Trade Commission
GHHI	generalized Herfindahl-Hirschman Index
GUPPI	Gross Upward Pricing Pressure Index
GWB	Gesetz gegen Wettbewerbsbeschränkungen
HHI	Herfindahl-Hirschman Index

i.e.	id est; in other words
lit.	litera
MIT	Massachusetts Institute of Technology
MHHI	modified Herfindahl-Hirschman Index
NBER	National Bureau of Economic Research
No.	number
Nos.	numbers
OECD	Organization for Economic Cooperation and Development
p.	page
para.	paragraph
paras.	paragraphs
pp.	pages
PPI	Price Pressure Index
R&D	research and development
RPE	relative performance evaluation
RPM	resale price maintenance
S&P 500	Standard and Poor’s 500
SEC	Securities and Exchange Commission
SIEC	significant impediment to effective competition
TFEU	Treaty on the Functioning of the European Union
UK	United Kingdom
UPP	Upward Pricing Pressure
U.S.	United States
VBER	Vertical Block Exemption Regulation
Vol.	volume

Part 1 – Introduction

Changes in corporate ownership have led to a situation in many markets where some investors are among the largest shareholders of several competing firms. This situation, typically referred to as "common ownership", raises the question of whether the incentives for firms to compete are reduced, potentially leading to less competitive behaviour by these firms under these conditions. If so, this may have implications for the application of current competition law or might even justify an extension of existing legislation.

The general underlying economic theory of anti-competitive harm is that firms could have reduced incentives to compete with each other when their ownership overlaps substantially.[1] This theory assumes that firms take into account the interests of their shareholders.[2] Any increase in the market share of one firm comes at the expense of the other commonly owned firms and reduces the profits of the entire portfolio for the common owner.[3] Consequently, common ownership could lead to reduced incentives to compete vigorously.[4] A variation of this common ownership hypothesis is that concentrated common owners lack an interest in inducing aggressive competition.[5] Accordingly, firms would have less active incentives to compete with each other. It is therefore necessary to determine whether this theory is grounded in economic theory and whether empirical research supports these findings.

From a theoretical perspective, the effects of common ownership can be derived from the economic analysis of direct minority shareholdings between competitors, also called cross-ownership. Like these direct minority shareholdings, common ownership is presumably anti-competitive, at least in the case of controlling shareholdings, because the common owner can direct the economic activities of both firms. The main question is under which circumstances common ownership is likely to be anti-competitive in the case of non-controlling shareholdings.[6] One difference between direct minority shareholdings and common ownership is that in the former case, the minority shareholders have not only a financial but also a strategic interest in the firms as competitors. In the case of common ownership, the interest is primarily financial, as the common owner is typically not active in the market but is a financial investor. Nevertheless, when investors have common ownership positions in more than one competitor, they may generally have a financial interest in less fierce competition between the commonly owned companies as this may maximise their portfolio value.

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[1] *Elhauge*, Ohio State Law Journal 2021, 1, 2.
[2] *Patel*, Antitrust Law Journal 2018, 279, 289.
[3] *Azar/Schmalz*, Journal of European Competition Law & Practice 2017, 329, 329.
[4] *Schwalbe*, Journal of European Competition Law & Practice 2018, 596, 598.
[5] *Romano,* Yale Journal on Regulation 2021, 363, 365.
[6] *Rock/Rubinfeld*, Antitrust Law Journal 2018, 221, 268.

While the concept of common ownership and its potential implications may have been present in some of the economic literature, it is a new subject for legal scholars. For instance, while there has been a theoretical economic contribution developing "*a model in which firms, acting in the interest of their diversified shareholders, tend to act collusively when their shareholders have diversified portfolios*"[7], common ownership has not been considered as a relevant concern for competition law. This has changed dramatically following recent empirical studies which have found a statistical relationship between common ownership and higher product prices.[8] Since these initial studies, there has been a steady stream of empirical research focusing on the relationship between the level of common ownership and a wide range of different issues, such as innovation or the likelihood of market entry.

The evidence of potential anti-competitive effects has led to ongoing debate about this new phenomenon also in the legal literature. It has even been proclaimed that an "*economic blockbuster has recently been exposed*"[9]. Several government bodies have acknowledged the potential competition risks of common ownership. For example, the Council of Economic Advisers to the White House has acknowledged that common ownership is a potential competition problem.[10] The German Monopolkommission sees a "*significant potential for problems*"[11]. It has been argued that share acquisitions in markets with existing high levels of common ownership violate U.S. antitrust law and are illegal.[12] The potential anti-competitive threat has also led to a proposal to regulate the incidence of common ownership.[13] However, these initial contributions have also provoked critical reactions, either questioning the validity of the common ownership hypothesis, both theoretically and empirically, or criticising some of the proposed regulatory measures as overly restrictive.[14] Overall, there is a widespread debate about the potential negative effects of high levels of common ownership.

Building on this recent discussion, the key question that will be addressed is how common ownership can and should be treated under current European and German competition law, and whether additional regulation is recommended.

To this end, Part 2 begins with the economic analysis of common ownership. For the application of the law, it is necessary to first understand the factual elements as well as the

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[7] *Rotemberg*, Financial Transaction Costs and Industrial Performance, MIT Working Paper, 1984, p. 1.
[8] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513*; Azar/Raina/Schmalz*, Financial Management 2022, 227.
[9] *Elhauge*, Harvard Law Review 2016, 1267, 1267.
[10] *Council of Economic Advisers*, Benefits of Competition and Indicators of Market Power, Council of Economic Advisers Issue Brief, April 2016, p. 13 f.
[11] *Monopolkommission*, Wettbewerb 2018, Hauptgutachten No. 22, 2018, p. 91.
[12] *Elhauge*, Harvard Law Review 2016, 1267, 1302 f.
[13] *Posner/Scott Morton/Weyl*, Antitrust Law Journal 2017, 669.
[14] *Rock/Rubinfeld*, Antitrust Law Journal 2018, 221; *O'Brien/Waehrer*, Antitrust Law Journal 2017, 729.

economic theory and the empirical research underlying common ownership. These form the basis for the legal implications of common ownership. The economic analysis begins with the examination of the definition of common ownership and related terminology in Chapter 2.A.I. Background on the underlying circumstances and causes of common ownership as it exists today is provided in Chapter 2.A.II. Several recent trends, such as the rise of passive investment strategies, have led to a situation of high levels of common ownership in many markets. In Chapter 2.A.III., these current levels of common ownership and differences between various markets and regions will be illustrated.

In Chapter 2.B.I., it will be shown how common ownership can be measured and which economic theories establish the potential for competitive harm. In order to assess common ownership links under competition law, it is necessary to have an economic basis on which to judge the extent of common ownership and its potential harm. Thereafter, it will be examined in Chapter 2.B.II. how various effects of common ownership have been investigated empirically and, in particular, what the current empirical literature can tell us about the anti-competitive effects of common ownership. Any legal regulation must take into account the likelihood of real market outcomes and also consider the magnitude of these effects.

Chapter 2.C. focuses on the potential causal mechanism that may lead from a high common ownership concentration to reduced competition in individual markets. The identification of the potential mechanism is important for the application of the law and the development of possible regulations as these may either focus on specific conduct or address the problem at a structural level. In Chapter 2.C.I., the incentives of common owners will be examined. While Chapter 2.C.II.1. concentrates on the potential mechanisms that common owners can actively employ to reduce competition between their portfolio firms, Chapter 2.C.II.2. illustrates how common ownership can passively lead to a less competitive outcome. Lastly, the two types of mechanisms will be compared and evaluated in Chapter 2.C.II.3.

Building on the economic analysis made in Part 2, Part 3 examines how common ownership links can and should be treated in competition law or in relation to other regulations, e.g., regarding corporate governance. In Chapter 3.A., it will be examined which legal instruments currently exist in competition law to mitigate the anti-competitive effects of common ownership. This analysis will cover both antitrust law and merger control, as both of these instruments can potentially be used to address common ownership. With regard to antitrust law, it will be examined whether Articles 101 and 102 TFEU can be applied either directly to the acquisition of shares by common owners or to specific conduct of firms or common owners. Then, several merger scenarios are assessed where merger control could potentially be applied to reduce the anti-competitive effects of common ownership. These include a regular merger between

competitors, a merger between common owners, and the acquisition of shares by common owners.

In Chapter 3.B., potential solutions to reduce the anti-competitive effects of common ownership will be evaluated. On the one hand, measures in competition law could be applied either by increasing the enforcement of the existing legal framework or by extending its scope. The effectiveness and feasibility of these different approaches will be assessed in Chapter 3.B.I. On the other hand, potential regulatory measures falling outside the realm of traditional competition law will be presented and discussed in Chapter 3.B.II. These include limiting the level of shareholdings by common owners, restricting certain corporate governance channels as well as implementing transparency obligations.

This thesis concludes with recommendations on how to address the anti-competitive potential of common ownership and presents areas for future research.

Part 2 – Economic Analysis

A. The Common Ownership Phenomenon

I. Definition and Terminology

In order to analyse potential effects and the legal implications of common ownership, it is helpful to define the term. Common ownership has been defined in several similar ways. *Patel* describes it broadly as a situation in which a single or multiple shareholders of a firm simultaneously hold equity interests in one or more of the firm's rivals.[15] Common ownership has also been termed "horizontal shareholding" by *Elhauge,* who defines it as a situation where "*a common set of investors own significant shares in corporations that are horizontal competitors in a product market*".[16] *Scott Morton* and *Hovenkamp* broadly follow these definitions, adding that the product market has to be concentrated.[17] The German Monopolkommission speaks of an "indirect horizontal link".[18] The OECD uses the definition that a third party "*holds minority equity shares in several competing companies at the same time*"[19]. The U.S. antitrust agencies have defined common ownership as the "*the simultaneous ownership of stock in competing companies by a single investor, where none of the stock holdings is large enough to give the owner control of any of those companies*"[20].

As can be seen, the definition of common ownership is not the subject of much debate. A broad definition is useful because it is possible to identify different levels of common ownership. The main task is not to identify common ownership in general. This definition can be very broad. In a next step, the important problem is to measure the extent or the level of common ownership in particular markets. Hence, common ownership as such could simply be described as the occurrence of shareholder overlap between companies.[21] In contrast, common ownership concentration is "*the extent to which influential shareholders in one firm also hold ownership stakes in firms that are affected by the firm they have influence over, and vice versa*"[22]. The general definition is mainly important for describing the research topic. Level and harmfulness are issues that require further analysis and do not define common ownership as such. Measuring common ownership concentration in a meaningful way is a difficult and controversial issue that deserves detailed analysis. Common ownership can theoretically occur

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[15] *Patel*, Antitrust Law Journal 2018, 279, 279.
[16] *Elhauge*, Harvard Law Review 2016, 1267, 1267.
[17] *Scott Morton/Hovenkamp*, The Yale Law Journal 2018, 2026, 2027.
[18] *Monopolkommission*, Wettbewerb 2018, Hauptgutachten No. 22, 2018, paras. 419, 477 („indirekte Horizontalverflechtung").
[19] *OECD*, Common Ownership by Institutional Investors and its Impact on Competition – Background Note by the Secretariat, 2017, para. 18.
[20] *OECD*, Hearing on Common Ownership by Institutional Investors and its Impact on Competition – Note by the United States, 2017, para. 1.
[21] *Schmalz*, Annual Review of Financial Economics 2018, 413, 425.
[22] *Schmalz*, Annual Review of Financial Economics 2018, 413, 425.

when there are many small investors who are highly diversified. Yet, it is mainly problematic when it is substantial, i.e., when the common owners are large and diversified.[23]

For the sake of clarity, the direct partial ownership of a firm in a competitor will be referred to as cross-ownership whereas the financial interest of a third party in more than one competitor is referred to as common ownership. Both ownership patterns can occur vertically between suppliers and customers or horizontally between competitors. While it is possible that negative competitive effects may arise from ownership between vertically related firms, this work will only focus on the effects on competitors. Both vertical common ownership and minority shareholdings between vertically related firms will not be discussed.

The term "common ownership" will be used interchangeably with other synonyms such as overlapping financial investor ownership, horizontal shareholding, indirect structural links or indirect horizontal links. They all describe the same phenomenon. Common ownership now seems to be the dominant terminology to describe the issue. A more precise term might be "horizontal common ownership" since common ownership can also exist between vertically related companies. From an antitrust point of view, common ownership between competitors is the most relevant, as already indicated by some terms like "horizontal shareholding". If no distinction is made, the term "common ownership" will only refer to horizontal common ownership.

In summary, common ownership describes the simultaneous ownership of shares in more than one company. Horizontal common ownership refers to the ownership of shares in firms that are product market competitors. Horizontal common ownership concentration describes the level of both the number of shareholdings, the size of these shareholdings and the degree of overlap between them.

II. Causes of Common Ownership

Ownership patterns show that the increase in common ownership is linked to a simultaneous rise in institutional investment.[24] Whereas in 1970, 80% of shares in the U.S. were held by individual investors, today around 80% are held by institutional investors.[25] In theory, institutional investors are not necessary to create common ownership links. Any investor can potentially own significant stakes in two competing firms and, thus, be a common owner. However, it is more common for an institutional investor to hold large stakes in different firms for two main reasons.

[23] *Rock/Rubinfeld*, Antitrust Law Journal 2018, 221, 222.
[24] *OECD*, Common Ownership by Institutional Investors and its Impact on Competition – Background Note by the Secretariat, 2017, para. 23.
[25] *Jahnke*, Business and Politics 2019, 327, 332 f.

First, there are now some institutional investors who hold large stakes in most publicly traded firms.[26] *Second*, these investors diversify their risk, which increases the potential for common ownership links.[27] In contrast, individual shareholders tend to either have small holdings compared to institutional investors, or they are strategic shareholders with a large investment in only one firm or a small number of firms. As will be shown, non-institutional investors are rarely substantial common owners. The following features and recent investment trends are at the root of the increase in common ownership.

1. Institutional Investment

The term "institutional investor" is very broad and covers many different entities. Institutional investors can be defined as all investors, who invest money for others.[28] They are specialised financial institutions that invest capital from a large number of clients on their behalf,[29] and can include firms that manage mutual funds, index funds, asset managers or other financial firms.[30] Institutional investors are intermediaries who collect money and invest it on behalf of their clients. These clients are the "ultimate investors" who receive the earnings from their investment. These ultimate investors are often referred to as the individual investors.

There are single independent institutional investors, but it is common for an investment group to offer various funds that follow different investment strategies and offer different investment products to their clients. These individual funds are often separate legal entities and belong to a group of funds – a "fund family". The intermediaries can be legally structured in several ways. The individual investor may own the shares directly, or the institutional investor may be the owner.[31] Most importantly, the individual investor who invests in the fund – the "ultimate investor" – receives the direct returns, while the institutional investor usually charges a management fee, typically as a percentage of the assets invested. The institutional investor manages the assets and votes on behalf of the ultimate investor.[32]

While institutional investment has existed for a long time, there has recently been a trend away from direct ownership of shares towards intermediated investment through institutional investors.[33] The number of institutional investors and the amount of capital invested indirectly have grown in recent decades. While direct share ownership in the U.S. was around 84% in

[26] See Chapter 2.A.II.2.c)(3).
[27] See Chapter 2.A.II.2.c)(1).
[28] *Seldeslachts/Newham/Banal-Estañol,* DIW Economic Bulletin 2017, 303, 303.
[29] *Wambach/Weche*, Wirtschaftsdienst 2016, 900, 901.
[30] *Posner/Scott Morton/Weyl*, Antitrust Law Journal 2017, 669, 673.
[31] *Celik, Serdar/Isaksson, Mats*, Institutional Investors as Owners – Who Are They and What Do They Do?, OECD Corporate Governance Working Papers, 2013, No. 11.
[32] *Monopolkommission*, Wettbewerb 2018, Hauptgutachten No. 22, 2018, paras. 422 f.
[33] *OECD*, Common Ownership by Institutional Investors and its Impact on Competition – Background Note by the Secretariat, 2017, para. 23.

the 1960s, it fell to only 40% in 2011.[34] As a result, institutional investors have become more important. There are several reasons for this trend, which is expected to continue for the foreseeable future.[35]

2. Passive and Active Investment

Institutional investors can be classified as either active or passive, depending on their investment strategy.

a) Active Investment

Traditionally, institutional investors actively manage their assets and employ investment managers to pick individual stocks or investments that fit a particular investment strategy. Their performance is usually measured against an index. Actively managed funds still manage the majority of assets currently invested in the market.[36] Active investors, or more precisely actively managed funds, must also be distinguished from activist investors. While the former describes the style of asset management, activist investors are actively involved in corporate governance issues.[37]

b) Passive Investment

Passive investment strategies do not employ asset managers to actively select a portfolio, but instead buy shares in all companies included in an index and replicate the performance of that index. Following the efficient-market hypothesis[38], they assume that professional asset managers are unable to consistently outperform the market in the long run. The features that make passive funds attractive are their diversification and the lower costs compared to actively managed funds.[39] The expense ratio of passive funds is significantly lower.[40]

There are two common types of passive funds: index funds and exchange-traded funds. Index funds are traditional mutual funds that follow a passive investment strategy. Exchange-traded funds (ETFs) are another common passive investment vehicle, similar to index funds. ETFs have the same investment objective as index funds, which is to track an index. The main difference is that they can themselves be traded like shares.[41] ETFs were developed later than traditional index funds and are attractive to investors because of their intraday tradability, price

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[34] *OECD*, Common Ownership by Institutional Investors and its Impact on Competition – Background Note by the Secretariat, 2017, para. 23.
[35] *Bebchuk/Hirst*, Boston University Law Review 2019, 721, 725 ff.
[36] *Jahnke*, Business and Politics 2019, 327, 336: In 2019, 45% of U.S. equity assets were held by passive funds, leaving the remaining assets to individual investors and active funds.
[37] *Butu*, Shareholder Activism by Hedge Funds: Motivations and Market's Perceptions of Hedge Fund Interventions, p. 17.
[38] *Fama,* Journal of Finance 1970, 383.
[39] *Bebchuk/Hirst*, Boston University Law Review 2019, 721, 727.
[40] *Investment Company Institute*, 2022 Investment Company Fact Book, p. 107.
[41] *Law*, A Dictionary of Finance and Banking, Fifth Edition, 2014, exchange traded fund (ETF).

transparency, and tax efficiency.[42] Although ETFs are constructed differently from traditional index funds, they share a common characteristic. Both replicate the performance of an underlying index and do not actively select a portfolio. “Index funds” and “exchange-traded funds” can therefore be included in the broader category of “passive funds”.[43] From an investor’s perspective, they are close substitutes because they can achieve the same investment goals.[44]

The structure of passive funds leads to investment in all firms that are included in an index. If two or more firms in the index are competitors, passive investment will result in common ownership, as a side-effect of the investment strategy.

c) Recent Trends

(1) Diversification

Diversification is a common feature of most investment strategies. It can generally be described as “*the division of an investment portfolio between a range of financial assets*”.[45] The general aim is to reduce the investment risk. While passive investment strategies are designed to achieve a high degree of diversification and, thus, create common ownership links, the potential extent of the common ownership issue is not limited to index investing. Common ownership can occur both with active and passive investments. In practice, active funds also diversify their invested capital to varying degrees, primarily to reduce investment risk.

While diversification is common to any investment strategy, a specific example of how an active investor might acquire overlapping holdings is the trend of “closet indexing”,[46] whereby actively managed funds diversify their portfolio to more closely match the performance of a comparable index. This strategy results in a growth-rate of the actively managed portfolio which does not vary significantly from the index. Since relative performance is often assessed in comparison to a specific index, by “hugging the index”[47] fund managers reduce the risk of significant underperformance. Many actively managed funds’ portfolios differ only in the extent to which they deviate from their underlying benchmark. This trend of closet indexing can increase

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[42] *Antoniewicz/ Heinrichs,* Investment Company Institute Research Perspective 2014, Vol. 20, No. 5, pp. 3 ff., www.ici.org/pdf/per20-05.pdf.

[43] *Fichtner/Heemskerk/Garcia-Bernardo*, Business and Politics 2017, 298, 298 f; the terms *index fund* and *passive fund* will be used interchangeably and are meant to include ETFs.

[44] *Bessler/Hockmann*, Journal of Banking Law and Banking 2016, 406, 409.

[45] *Black/Hashimizade/Myles*, A Dictionary of Economics, Fifth Edition, 2017, institutional investor.

[46] *Bebchuk/Cohen/Hirst*, Journal of Economic Perspectives 2017, 89, 98 f.; *Ackman*, Pershing Square Capital Management, L.P., Annual Investor Letter, 2016, available at: https://assets.pershingsquareholdings.com/2014/09/Pershing-Square-2015-Annual-Letter-PSH-January-26-2016.pdf, pp. 4 f.

[47] *Ackman,* Pershing Square Capital Management, L.P., Annual Investor Letter, 2016, available at: https://assets.pershingsquareholdings.com/2014/09/Pershing-Square-2015-Annual-Letter-PSH-January-26-2016.pdf, p. 5.

diversification. There is some evidence that this is a very common behaviour among large actively managed funds.[48] Studies suggest that 10% of actively managed assets in the U.S. and between 5% and 15% in Europe fall into this category.[49] Thus, it could be a contributing factor to high levels of diversification.

(2) The Growth of Passive Investment

One of the first retail index funds was launched by John Bogle in 1975. This index fund was offered by his company Vanguard, which is now one of the largest resellers of passive funds.[50] However, the main growth in index mutual funds did not begin until the 1990s. ETFs started to grow a little later around the year 2000.[51] With the onset of the global financial crisis in 2008/2009, the growth of passive funds accelerated. In 2016, passive funds accounted for 34% of equity mutual funds.[52] Between 2009 and 2018, asset flows into passive funds were 18 times greater than the asset flows into actively managed funds.[53]

(3) Concentration of Passive Funds

The relative growth of passive investment relative to active investment has led to an overall increase in the level of diversification. Greater diversification increases the potential for the occurrence of common ownership links. In addition, the growth in passive investment has been concentrated in only a small number of fund families, the so-called “Big Three”[54]: BlackRock, Vanguard, and StateStreet. In 2016, these three investment funds together managed 90% of all assets under management in passive equity funds.[55] In 2019, only five of the largest fifty ETFs were not managed by the Big Three, and these accounted for less than 7% of assets.[56] This illustrates the dominance of the Big Three in the index fund market.

Moreover, this concentration of passive investment funds is unlikely to diminish in the future, mainly for four reasons: *First*, the Big Three have a first mover advantage. As the first passive institutional investors, they have a strong position in the market. *Second*, there are economies of scale that allow large funds to offer passive investment at a lower price than many competitors.[57] The cost of managing a fund does not increase significantly in relation to the capital invested. This cost advantage is all the more important as competition in passive

[48] *Cremers/Petajisto*, The Review of Financial Studies 2009, 3329.
[49] *Jahnke*, Business and Politics 2019, 327, 337.
[50] *Bessler/Hockmann*, Journal of Banking Law and Banking 2016, 406, 408.
[51] *Bessler/Hockmann*, Journal of Banking Law and Banking 2016, 406, 411.
[52] *Bogle*, Financial Analysts Journal 2016, 9, 9.
[53] *Bebchuk/Hirst*, Boston University Law Review 2019, 721, 730.
[54] *Fichtner/Heemskerk/Garcia-Bernardo*, Business and Politics 2017, 298.
[55] *Fichtner/Heemskerk/Garcia-Bernardo*, Business and Politics 2017, 298, 304.
[56] *Bebchuk/Hirst*, Boston University Law Review 2019, 721, 730.
[57] *Bogle*, Bogle Sounds Warning on Index Funds, Wall Street Journal, 29.11.2018.

investment tends to focus on fees rather than performance.[58] This reinforces the first mover advantage of the established passive funds. An already large fund is cheaper to run and can attract more investment capital. It is difficult for smaller funds to enter the market and compete on price.[59] *Third*, the Big Three can charge very low prices for their investment products compared to active funds. Passively managed funds have lower costs than actively managed funds.[60] Passive investors do not need to actively select a portfolio and employ specialists. Instead, they simply have to perform the administrative task of buying and selling shares according to the index composition. *Fourth*, the market position of the three leading passive investors is relatively stable. It is difficult to disrupt the market by introducing new and innovative products, as the incumbents can easily supply new products that are also offered by new entrants.[61] These characteristics provide the Big Three with a stable market environment that is difficult to disrupt either through price competition or innovation.

As the trend towards passive investing is likely to continue, the role of the Big Three may also grow. One study estimates that the Big Three will hold 27.6% of the shares in S&P 500 companies by 2028 and 33.4% by 2038.[62] Of course, such predictions must be treated with some caution, but there is good reason to believe that the rise of passive investment will continue and that the importance of the Big Three will increase. This implies that the level of common ownership will continue to rise with the growth of concentrated passive institutional investors.

(4) Cross-Ownership Among Institutional Investors

Passive funds are also important investors in other investment funds, creating direct horizontal links between the investment funds and passive investors.[63] This cross-ownership makes the overall level of interconnectedness even higher than is expressed by the levels of direct shareholdings. It also supports the assumption that there is a general collective alignment of interests among passive investors. However, there is no evidence that these institutional investors are colluding or trying to maximise their collective profits.

(5) Preliminary Results

In recent decades there has been a trend towards greater investment in passive funds, concentrated mainly in three large fund families. This trend is likely to continue and to significantly impact the trend towards more common ownership. Passive investors are common owners by design because their investment strategy requires them to have a broadly

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[58] *Jahnke*, Business and Politics 2019, 327, 335.
[59] *Bogle*, Bogle Sounds Warning on Index Funds, Wall Street Journal, 29.11.2018.
[60] *Investment Company Institute*, 2016 Investment Company Fact Book, pp. 96 f.
[61] *Bebchuk/Hirst*, Boston University Law Review 2019, 721, 731.
[62] *Bebchuk/Hirst*, Boston University Law Review 2019, 721, 738 ff.
[63] *Monopolkommission*, Wettbewerb 2016, Hauptgutachten No. 21, 2016, para. 673.

diversified portfolio, which often includes investments in several competing firms. In addition, the strategic diversification of actively managed funds also contributes to higher common ownership levels.

III. The Extent of Common Ownership

General trends in the ownership of firms were discussed in the previous chapter. Building on this, this chapter provides an overview of how these trends relate to the increase in common ownership. Four main factors contribute to the increase in common ownership: (i) the shift from direct to indirect ownership, (ii) the increase in passive investment, (iii) the increasing concentration in the asset management market, especially in passive funds and (iv) the dispersed ownership of publicly listed companies.[64]

As has been outlined in the previous chapter, factors (i), (ii) and (iii) are important general trends. They will therefore be examined in more detail in terms of their variation across economies. Factor (iv), dispersed ownership, is another contributor to high levels of common ownership and its potential for competitive harm, as common ownership by institutional investors is more likely in industries that lack strong, controlling shareholders. All of the above factors, as well as the extent and patterns of common ownership vary widely across regions. For example, the dispersion of ownership is very pronounced in the U.S., but less so in many other economies. Although common ownership is not limited to any geographic region, this assessment will focus on the U.S. and Europe, the latter with a particular focus on Germany.

The extent of common ownership today is substantial. It is common in both the U.S. and in Europe, although the level of common ownership is generally higher in the U.S. than in Europe. In particular, the rise of passive investing has led to an increase in overlapping ownership positions. Yet, there is some evidence that the rise in common ownership is not only due to the increase in passive investment strategies. The general increase in diversified investment strategies, which began even before the massive increase in index investing, is another important factor.[65]

Until recently, the extent of common ownership has not been studied in depth, and there has been little effort to systematically map these links because they have not been regarded as problematic. The rise of passive investment has been recognised mainly because of its implications for corporate governance and the developments in the investment industry. The

[64] *OECD*, Common Ownership by Institutional Investors and its Impact on Competition – Background Note by the Secretariat, 2017, para. 23.

[65] *Backus/Conlon/Sinkinson*, Common Ownership in America: 1980-2017, NBER Working Paper Series, 2019, Working Paper 25454, p. 35.

ownership structures have been studied at the level of the individual firm, but not as an issue of links between multiple firms.

Empirical studies on common ownership have mainly focused on U.S. markets. Recently, however, a growing body of research has also emerged for Europe, and Germany, in particular. The extent of common ownership can be evaluated by using descriptive information, e.g., about the size of shareholdings and the number of common owners. However, this descriptive data does not directly provide meaningful results for assessing the effects of common ownership and is not informative for possible anti-competitive effects. Nevertheless, it can still give a broad picture of the overlapping shareholdings in different countries, industries, and markets. There are also various indices that can be calculated, and which have been used in empirical studies, and can be applied to assess the level of common ownership, such as the modified Herfindahl-Hirschman Index (MHHI). Although some of the common ownership indices are presented in this chapter, they will be discussed in more detail later.[66]

1. United States

The degree of common ownership is particularly high in the United States. In the U.S., most equity is now held by institutional investors. Historically, the ownership base of US-companies was highly dispersed in the second half of the 20th century, making it an outlier in the world economy regarding the dispersion of its shareholders.[67] However, the early 2000s saw a partial reversal of this general trend, with ownership becoming slightly more concentrated. The inflow of capital into mutual funds led to an increase in indirect share ownership.[68] As a result of the relatively high concentration in the fund industry, a small number of fund families grew rapidly and had $ 1.1 trillion in assets under management.[69] During this so-called "new finance capitalism"[70], the concentration of ownership increased significantly, with some institutional investors holding large ownership stakes in various firms. Yet, this trend, which ended around the year 2008 with the global financial crisis, did not lead to an increase in large, strategic and controlling shareholders, but to a more modest increase in ownership concentration. Passive funds were still considered a relatively new phenomenon.[71]

Over the past decade, there has been a steady shift in investment behaviour. It is clear that many investors have shifted their strategies from investing in actively managed funds to investing in passive funds. Many investors have come to believe that active investors cannot deliver better long-term returns than passive investors while at the same time incurring

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[66] See Chapter 2.B.I.
[67] *Fichtner/Heemskerk/Garcia-Bernardo*, Business and Politics 2017, 298, 301.
[68] *Davis*, European Management Review 2008, 11, 15.
[69] *Davis*, European Management Review 2008, 11, 16.
[70] *Davis*, European Management Review 2008, 11.
[71] *Davis*, European Management Review 2008, 11, 16.

significantly higher costs.[72] This trend towards passive investment strategies can be traced back to the beginning of the global financial crisis.[73] In 2007, 15% of the money invested in long-term funds was allocated to index mutual funds and ETFs, while ten years later in 2017, already 35% of these long-term assets were invested in passive funds.[74] Still, this also means that the remaining 65% of assets were invested in actively managed funds, and passive index funds did not manage the majority of assets. However, as noted above, common ownership is not limited to passive funds. For example, in the second quarter of 2013, the actively managed investment fund Berkshire Hathaway acquired a substantial common ownership position when it became one of the top five shareholders in three of the six largest U.S. banks.[75]

In terms of the level of common ownership, it is not only the total amount of assets that is important. The key question is how these investments relate to the control of companies. When considering common ownership, general trends in investment behaviour are important as a background. Ultimately, control through ownership of companies as a result of these trends is the main issue. It is therefore important to reiterate that the passive fund industry is highly concentrated. The three largest providers of passive investment strategies control most of the assets. BlackRock, Vanguard, and State Street account for 71% of the market share.[76] Accordingly, these investment firms have comparatively large stakes in many companies. The importance of diversified institutional investors is often illustrated by their relative size. When considered together the Big Three are the largest shareholder in 90% of S&P 500 companies.[77] Furthermore, in the U.S., there are strong indications that the growth of passive investment will continue.[78]

The concentration of passive funds, combined with the growth of passive investment has led to an overall increase in ownership concentration. *Fichtner et al.* distinguish between two factors that contribute to common ownership: breadth and depth of investment.[79] Breadth is defined as the number of firms in which the institutional investor is invested. Depth refers to the size of the holdings. Passive funds naturally have very broad portfolios as they are invested in most publicly listed companies. For example, in 2016, BlackRock had holdings of more than 5% in around 2,000 of the approximately 3,900 publicly listed companies in the U.S.[80] The breadth of shareholdings alone does not necessarily lead to an increase in large common

[72] *Fichtner/Heemskerk*, Economy and Society 2020, 493, 494.
[73] *Fichtner/Heemskerk/Garcia-Bernardo*, Business and Politics 2017, 298, 298.
[74] *Investment Company Institute*, 2018 Investment Company Fact Book, p. 41.
[75] *Azar/Raina/Schmalz*, Financial Management 2022, 227, 232.
[76] *Fichtner/Heemskerk/Garcia-Bernardo*, Business and Politics 2017, 298, 303 f.
[77] *Fichtner/Heemskerk*, Economy and Society 2020, 493, 505.
[78] *Bebchuk/Hirst*, Boston University Law Review 2019, 721, 721.
[79] *Fichtner/Heemskerk/Garcia-Bernardo*, Business and Politics 2017, 298, 311 f.
[80] *Fichtner/Heemskerk/Garcia-Bernardo*, Business and Politics 2017, 298, 312.

owners. However, the concentration in the fund industry and the depth of shareholdings result in individual common ownership links that are substantial and may become relevant to the strategic decision-making of the portfolio companies, as discussed below.

Since 1980, there has been a sharp increase in overlapping ownership in the U.S.[81] Various indices of common ownership all point to a sharp rise.[82] The "profit weights", the weight that firms place on each other's profits, rose from 0.2 in 1980 to around 0.7 in 2017.[83] Other measures suggest that common ownership increased by around 1.600% to 2.300% between 1980 and 2012.[84] By 2015, the probability of two competitors sharing a common shareholder with a stake of more than 5% had increased to around 90%. In 1995, this probability was less than 20%.[85] Moreover, the top five shareholders of the 20 largest U.S. firms together hold an average of 20.8% of the shares.[86] In 2018, BlackRock had around 2,000 holdings of 5% or more in U.S. companies.[87] This is more than in any other economy in the world.

Looking at specific industries, there is significant common ownership in many U.S. industries such as airlines, banking, aluminium, mobile phones, soft drinks and breakfast cereals.[88]

2. Europe

The overall extent of common ownership in Europe is difficult to measure because the corporate landscape is much more diverse than in the U.S. In France and Germany, similar to Japan and South Korea, ownership remains very concentrated and characterised by single controlling shareholders.[89] With regard to passive investors, BlackRock had 229 holdings of more than 5% in the UK, but only 35 of these blockholdings in Germany.[90]

In Europe, the role of passive investors and the level of diversification have also increased. The European market is following a similar trend to the U.S., albeit to a lesser extent. The trend towards index investing is unlikely to slow down in the near future. Especially in Europe, this trend has not been as pronounced as in the U.S. and is likely to continue.[91]

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[81] *Appel/Gormley/Keim,* Journal of Financial Economics 2016, 111, 112; *Gilje/Gormley/Levit*, Journal of Financial Economics 2020, 152, 160 ff.

[82] See Chapter 2.B.I on the different measurement of common ownership and the debate on meaningful indices.

[83] *Backus/Conlon/Sinkinson*, Common Ownership in America: 1980-2017, NBER Working Paper Series, 2019, Working Paper 25454, p. 2.

[84] *Gilje/Gormley/Levit*, Journal of Financial Economics 2020, 152, 160 f.

[85] *Azar*, Portfolio Diversification, Market Power, and the Theory of the Firm, 2017, p. 42, available at: https://papers.ssrn.com/sol3/ papers.cfm?abstract_id=2811221.

[86] *Bebchuk/Cohen/Hirst*, Journal of Economic Perspectives 2017, 89, 92.

[87] *Fichtner/Heemskerk*, Economy and Society 2020, 493, 503.

[88] *Posner/Scott Morton/Weyl*, Antitrust Law Journal 2017, 669, 669.

[89] *Mizruchi*, Theory and Society 2004, 579, 580.

[90] *Fichtner/Heemskerk*, Economy and Society 2020, 493, 503.

[91] *Fichtner/Heemskerk*, Economy and Society 2020, 493, 495.

For example, in the European banking market, the degree of common ownership is high.[92] In 2015, BlackRock was the largest shareholder of seven European banks: HSBC, Barclays, Unicredit, ING, Deutsche Bank, Banco Santander, and Banco Bilbao.[93] However, the common ownership situation in individual countries is much more nuanced. In the UK, the common ownership links between retail banks are much less pronounced than in the U.S.[94] The top ten investors in the UK's retail banks are among the largest shareholders in almost all banks, with BlackRock being among the top ten investors in each of the largest banks.[95] In other countries, including Germany, the structure of the retail banking sector is again very different.

The European Commission initiated a study on common ownership in the EU, which found that 67% of publicly listed companies have a common owner who simultaneously holds at least 5% in both the firm and a competitor.[96] The Big Three on average hold between 1% and 3% of the shares.[97] The European Commission also assessed the level of common ownership in the agrochemical industry in its *Dow/DuPont* decision. It looked at the common ownership links, focusing on the extent of small, dispersed owners who are unlikely to be able to influence the management of a company.[98] The European Commission also examined overlapping ownership in the seed and crop protection industry in the *Bayer/Monsanto* case.[99] Its data show that BlackRock, as the shareholder with the largest total investment, has holdings of between 6.04% and 6.89% in Bayer, BASF, DowDuPont, and Monsanto respectively.[100] BlackRock was the only investor to hold more than 5% in Bayer and BASF. DowDuPont and Monsanto had only 3 and 2 shareholders holding more than 5%, one of which was also BlackRock.[101] In total, a group of 17 shareholders held around 21% of Bayer, BASF and Syngenta and between 29% and 36% of Dow, DuPont and Monsanto.[102]

3. Germany

In Germany, the concentration of ownership has also increased, mainly due to the growth of passive investments. However, the dispersion of ownership in Germany is not as high as in

[92] *OECD*, Common Ownership by Institutional Investors and its Impact on Competition – Background Note by the Secretariat, 2017, para. 24.
[93] *Frazzani et al.*, Barriers to Competition through Common Ownership by Institutional Investors, 2020, pp. 37 ff.
[94] *Siciliani/Norris*, Bitesize: Common ownership across UK banks: implication for competition and financial stability, available at: https://bankunderground.co.uk/2017/07/14/bitesize-common-ownership-across-uk-banks-implications-for-competition-and-financial-stability.
[95] *OECD*, Hearing on Common Ownership by Institutional Investors and its Impact on Competition – Note by the United Kingdom, 2017, paras. 32 ff.
[96] *Rosati et al.*, Common Shareholding in Europe, 2020, p. 52.
[97] *Rosati et al.*, Common Shareholding in Europe, 2020, p. 61.
[98] *Commission*, Decision of 27.3.2017 in Case No. M.7932 – *Dow/DuPont*, Annex 5, para. 32.
[99] *Commission*, Decision of 21.3.2018 in Case No. M.8084 – *Bayer/Monsanto*.
[100] *Commission*, Decision of 21.3.2018 in Case No. M.8084 – *Bayer/Monsanto*, para. 213.
[101] *Commission*, Decision of 21.3.2018 in Case No. M.8084 – *Bayer/Monsanto*, Tables 3 and 4.
[102] *Commission*, Decision of 27.3.2017 in Case No. M.7932 – *Dow/DuPont*, Annex 5, para. 80.

many other countries. In contrast, its corporate landscape is largely dominated by controlling shareholders with large and undiversified holdings. A 2020 study found that these strategic investors held 18.6% of the equity in DAX companies, while institutional investors held 62.1% and private households held 16.7%.[103] While this may suggest that institutional investors are the most important shareholder group in Germany, it is important to note that the level of diversification between institutional and strategic investors differs significantly. Most institutional investors have much less concentrated shareholdings in a single company, whereas strategic investors acquire shares in order to influence and control a company. Although strategic investors hold only about 20% of total equity, their individual holdings in a single company tend to be larger and they are often among the largest shareholders. Nevertheless, there has been a sharp increase in the concentration of institutional investors. The Herfindahl-Hirschman Index, which measures market concentration, more than doubled for the institutional investors in Germany between 2007 and 2015.[104]

Traditionally, in Germany, the largest shareholders have been banks and strategic shareholders with concentrated holdings.[105] In recent years, however, there has been a trend towards a reduction in ownership concentration, an internationalisation of the shareholder base and a reduced role for banks in Germany.[106] Nevertheless, family owners and state investors remain the largest strategic owners overall. These and other less diversified investors still hold more than half of German publicly traded equity.[107]

Accordingly, there are many industries with low levels of common ownership, such as the car industry. Two of the three largest car manufacturers are family owned. At Volkswagen, the Porsche family is the largest investor with 42% of the shares. The state of Lower Saxony is the second largest shareholder with around 20%, and is also exclusively invested in VW.[108] Its competitor BMW is also predominantly owned by a few individual shareholders. The three largest shareholders are members of the Quandt family, each holding more than 10% of the shares. The fourth largest shareholder is BlackRock with 7%.[109] In contrast, only the Mercedes-Benz Group does not have large individual shareholders; and BlackRock is the largest shareholder of Mercedes-Benz with 8% of the shares.[110] Hence, common ownership concentration in the German automotive industry is relatively low.

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[103] *DIRK/Ipreo*, Investoren der Deutschland AG 3.0, 2016, p. 7.
[104] *Seldeslachts/Newham/Banal-Estañol,* DIW Economic Bulletin 2017, 303, 307.
[105] *Fichtner/Heemskerk*, Economy and Society 2020, 493, 505.
[106] *Ringe,* American Journal of Comparative Law 2015, 493, 537.
[107] *Seldeslachts/Newham/Banal-Estañol,* DIW Economic Bulletin 2017, 303, 303.
[108] *Seldeslachts/Newham/Banal-Estañol,* DIW Economic Bulletin 2017, 303, 309.
[109] *Seldeslachts/Newham/Banal-Estañol,* DIW Economic Bulletin 2017, 303, 309.
[110] *Seldeslachts/Newham/Banal-Estañol,* DIW Economic Bulletin 2017, 303, 308 f.

Moreover, many companies in Germany are not publicly listed.[111] This makes it more difficult to measure the extent and impact of common ownership in the economy as a whole. It also suggests that the level of common ownership will be overstated if only publicly listed firms are considered. Nevertheless, there is a significant degree of common ownership, especially between the DAX companies. The largest funds invested in the DAX are index funds and ETFs. In 2016, these passive funds held 26.1% of the institutional widely held shares.[112]

On average, the Big Three hold 7.9% of the shares in German DAX companies.[113] Taken together, this makes them the largest shareholder in 40% of DAX companies.[114] This is much less than in the U.S., where the figure is as high as 90%. As overall ownership is less dispersed in Germany, it is less common for a passive investor to be the largest single investor in a company. Nonetheless, some large active institutional investors also have highly diversified portfolios. For example, the actively managed Norwegian Pension Fund, the third largest institutional investor in the DAX, is invested in all 30 DAX companies. DWS Deutschland, the sixth largest investment fund in the DAX, is invested in 26 firms.[115] Accordingly, active funds have also become important common owners of many large German companies.

However, it would be wrong to conclude that common ownership patterns can be observed in all or even most German industries. The patterns of common ownership by institutional investors occur almost exclusively in industries without large majority owners or single strategic investors. There are only a limited number of industries in Germany where there are no majority shareholders. Often there are firms in an industry without dispersed ownership. In the chemical industry, for example, institutional investors held around 60% of the shares in 2015.[116] Yet, Henkel is a largely family-owned competitor with a low level of common ownership links with competitors. The Henkel family owns the majority of the company's shares, and shareholder overlap with its competitors is very low.[117] Thus, although the chemical industry has a high level of common ownership, there is still one company that breaks this pattern. The "level of connectedness" between companies, a measure introduced by *Gilje et al.*[118] to measure the connection between two firms through overlapping investors, increased in the chemical industry from 0.13 in 2007 to 0.15 in 2015, whereas in the automotive industry the measure

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[111] *Fichtner/Heemskerk*, Economy and Society 2020, 493, 505.

[112] *DIRK/Ipreo*, Investoren der Deutschland AG 3.0, 2016, p.4.

[113] *Fichtner/Heemskerk*, The New Permanent Universal Owners: Index funds, (Im)patient capital, and the Claim of Long-termism, CORPNET Working Paper, 2019, p. 14, available at: https://papers.ssrn.com/ sol3/papers.cfm?abstract_id=3321597.

[114] *Fichtner/Heemskerk*, Economy and Society 2020, 493, 505.

[115] *DIRK/Ipreo*, Investoren der Deutschland AG 5.0, 2018, pp. 12, 17.

[116] *Seldeslachts/Newham/Banal-Estañol,* DIW Economic Bulletin 2017, 303, 307.

[117] *Monopolkommission*, Wettbewerb 2018, Hauptgutachten No. 22, 2018, para. 421.

[118] *Gilje/Gormley/Levit*, Journal of Financial Economics 2020, 152. The measure will be explained in more detail in Chapter 2.B.I.5.

increased from 0.04 to 0.07 over the same time period.[119] While the level of common ownership increased in both industries, it confirms the observation that the chemical industry has a higher level of common ownership than the automotive industry.

The German telecommunications industry is another example of an industry with many common ownership links that still contains at least one firm with a strong, controlling shareholder. Shareholders who were invested in all of the six largest competitors held more than 14% in all of these major industry players. However, despite this general pattern of common ownership, Deutsche Telekom is largely owned by the German state which holds about 30% of its shares. Although about 15% of the shares were held by shareholders that are also invested in all other major competitors, Deutsche Telekom has a large, undiversified and highly influential – if not controlling – shareholder.

The German oil and gas industry, on the other hand, is a sector with a typical pattern of common ownership. 20% of the shares in all five major German oil companies are held by shareholders who simultaneously hold shares in all other competitors.[120]

Overall, there are many differences between the German and the U.S. economy in terms of their common ownership levels. The growth of institutional investment in Germany has not been as strong as in the U.S. Institutional investors account for less than 50% of the value of German companies and their share has not changed significantly over the past decade.[121] The examples of several industries – like automotive and chemicals – show that many German industries still have one or more companies with a large controlling and undiversified shareholder.

In general, because of the prevalence of single strategic investors in many industries, common ownership is not an economy-wide phenomenon in Germany. Rather it is concentrated in a few industries where there are no controlling shareholders and only institutional investors dominate.[122] In these industries, the diversified, passive investors dominate among the institutional investors as the largest shareholders. Accordingly, the level of common ownership is higher in markets without strategic investors. Overall, there is an increase in common ownership concentration in Germany, albeit to a lesser extent than in other regions.

4. Preliminary Results

Several factors have led to an increase in common ownership: a shift from direct to indirect ownership, dispersed corporate ownership, concentration of institutional investment and an

[119] *Seldeslachts/Newham/Banal-Estañol,* DIW Economic Bulletin 2017, 303, 310.
[120] *Monopolkommission*, Wettbewerb 2018, Hauptgutachten No. 22, 2018, para. 420.
[121] *Seldeslachts/Newham/Banal-Estañol,* DIW Economic Bulletin 2017, 303, 307.
[122] *Seldeslachts/Newham/Banal-Estañol,* DIW Economic Bulletin 2017, 303, 307.

increase in passive investment. In particular, the growth of index investing has had a strong impact on the diversification of institutional investment and thus on common ownership levels. There is a widespread trend towards increased investment by institutional investors and a sharp increase in the use of passive investment strategies. Due to the high concentration of passive mutual funds, these institutional investors have large and highly diversified portfolios. In the absence of large individual shareholders, these funds can become the largest and most influential shareholders in a firm. Accordingly, they have obtained an important role as shareholders of competing companies. In the U.S. economy, the two trends – the growth of passive investment and the concentration of the passive fund industry – go hand in hand with a general increase in concentration in many industries.[123] In addition, ownership of U.S. publicly listed companies has traditionally been highly dispersed.

In Europe, and particularly in Germany, this trend is visible but not yet so pronounced. However, the trend towards passive investment will probably increase in the coming years. In Europe, there are certain industries where there is a large overlap of shareholders. Nonetheless, this trend is largely confined to concentrated industries with publicly listed companies, a lack of strategic and controlling owners and otherwise dispersed ownership. In Germany, in particular, the dispersion of ownership is not as high as in the U.S. It varies between EU Member States but is on average lower than in the U.S.

Common ownership is now ubiquitous in many economies. In terms of the size of the individual holdings, the portfolios of passive funds are naturally highly diversified. Most investments of common owners do not exceed 10%.[124] For example, in 2016, BlackRock had only 375 holdings larger than 10%.[125] Typically, the Big Three each have holdings between 3% and 7%. This makes them the most important shareholder group in many publicly listed companies today.

Overall, the large increase in common ownership levels highlights the importance of the common ownership hypothesis. If common ownership is indeed detrimental to competition, the harm can be substantial. The effects would extend over different industries and geographical areas, potentially affecting all markets with tradable shares.[126] However, as actual levels of common ownership concentration vary widely, it is difficult to generalise about the extent of the problem. The anti-competitive potential may vary widely across economies and even more in specific markets within those economies. It is important to distinguish between the level of common ownership in industries and in specific markets. To assess the overall level of

[123] *Scott Morton/Hovenkamp*, The Yale Law Journal 2018, 2026.
[124] *Monopolkommission*, Wettbewerb 2018, Hauptgutachten No. 22, 2018, para. 413.
[125] *Fichtner/Heemskerk/Garcia-Bernardo*, Business and Politics 2017, 298, 312.
[126] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1514.

common ownership, it is helpful to look at the industry level and the overlapping ownership between firms. For a competitive assessment, however, it is always necessary to consider the individual markets in which these companies compete.

B. Theoretical and Empirical Analysis

I. Measuring Common Ownership

1. Overview

The previous chapters have described the patterns of common ownership in different regions and industries in general terms. The extent of common ownership can be measured by using indicators like the number of companies with common owners, the number of companies with the same largest shareholder, or the proportion of shares held by common owners in the commonly owned firms. These can give an indication of the degree of common ownership and summarise the ownership patterns. However, there are, other measures to calculate the level of common ownership, such as the MHHI. These measures do not summarise ownership data, but assign a precise value to the level of common ownership.

These potential measures of common ownership can be used in two ways. *First*, they can be used descriptively as a general indicator of the level of common ownership concentration. *Second*, they can also be used empirically. While the overall increase in common ownership can be clearly seen using simple indicators, it is also important to focus on the second type of common ownership measures. These may have more theoretical meaning and value for empirical studies and can be used in practice to indicate competitive effects.

Different studies have used various measures of common ownership and some studies have applied multiple measures of common ownership to compare the results or to add robustness to their analysis. These measures may help to identify the factors contributing to the increase in common ownership and to better assess the level of common ownership in different markets.

2. MHHI

a) The Herfindahl-Hirschman Index

The modified Herfindahl-Hirschman Index (MHHI) is a method for measuring the competitive effects of partial ownership links between competitors.[127] It is based on the Herfindahl-Hirschman Index (HHI)[128], and adds a measure (the MHHI delta) to incorporate the effects of partial ownership links between firms. Because of this close relationship between the HHI and the MHHI, the HHI is analysed before its modified version is introduced.

The HHI is primarily a measure of market concentration and was developed independently by *Herfindahl* and *Hirschman* respectively.[129] It is defined as the sum of the squares of the market

[127] *O'Brien/Salop*, Antitrust Law Journal 2000, 559, 594.

[128] It is sometimes also referred to as the H-Index or the Herfindahl-Index. The term 'Herfindahl-Hirschman Index' acknowledges both contributors. See *Hirschman*, The American Economic Review 1964, 761.

[129] *Calkins*, California Law Review 1983, 402, 409.

shares of all firms in a market. With *n* as the number of firms, *s* as the market share, and *j* as the identifier for a specific firm, the HHI can be expressed as follows:

$$HHI = \sum_j {s_j}^2$$

When market shares are measured as fractions, the HHI ranges from 1 (in the case of a monopoly) to close to 0 (in the case of many firms with very small market shares). If market shares are expressed as percentages, as is common, the possible results range from 10.000 to 0. The HHI delta is the difference between the pre-merger and the post-merger HHI. It equals $2s_js_k$.[130]

The HHI has properties that illustrate market concentration well and are useful in practice. The squaring of market shares gives a relatively large weight to firms with high market shares.[131] Correspondingly, firms with small market shares have a relatively small impact on the HHI. In general, the calculation of the HHI requires the collection of data on all firms and their market shares. Nonetheless, this also means that the HHI includes information on all firms and not just on the few largest firms.[132]

The degree of concentration in a market can be an indicator of market power. In the past, it was common to use either concentration ratios[133] or the Herfindahl-Hirschman Index to measure market concentration. The HHI is directly related to market power. However, this result depends on certain assumptions, more precisely on a Cournot model with quantity setting competitors and barriers to market entry.[134] Here the industry-average Lerner index is proportional to the HHI. This result can be derived directly from the HHI formula.[135]

Stigler shows that the HHI is a good measure of potential negative competitive effects when the risks are seen mainly in the facilitation of collusion.[136] As the HHI increases, it becomes easier to stabilise a collusive agreement. The main reason for this is that deviations from an

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[130] This approach assumes that the output remains unchanged after the merger. This is not obvious, because the firms’ incentives change due to the new market structure. Typically, the market share of the merged firm will be lower after the merger. Therefore, the $2s_js_k$ formula is inaccurate in many cases. Nevertheless, this approach can be used to estimate the HHI delta at least approximately. See *Farrell/Shapiro*, American Economic Review 1990, 107, 107, *Schwalbe/Zimmer*, Law and Economics in European Merger Control, 2009, p. 198.

[131] *Schwalbe/Zimmer*, Kartellrecht und Ökonomie, 2021, p. 333.

[132] *Kwoka*, The Antitrust Bulletin 1985, 915, 921.

[133] Concentration ratios are calculated as the sum of market shares of the biggest firms in a market. For example, in a market where the four largest firms each have a market share of 20%, the CR4, which includes the top four firms, equals 80.

[134] *Bishop/Walker*, The Economics of EC Competition Law, 2010, p. 68.

[135] *Motta*, Competition Policy, 2009, pp. 123 f; *Schwalbe/Zimmer*, Law and Economics in European Merger Control, 2009, p. 196.

[136] *Stigler*, Journal of Political Economy 1964, 44.

agreement are easier to detect in more concentrated markets.[137] However, the HHI is not a good direct measure of competitive effects. Instead, it is mainly an index of market concentration, and as such can be an indicator of competitive effects that warrant a thorough economic analysis.[138]

There are several problems with using the HHI as a measure of market power. As described above, when using market shares, a relevant market must first be clearly defined, as this is crucial for the calculation of the MHHI. This means that the definition of the relevant market must adequately take into account the competitive constraints faced by the firms.[139] Uncertainty about market definition may lead to uncertainty about the application of the safe harbour thresholds.[140] Furthermore, it is possible that a change in the structure of a market, as measured by the HHI, may not only affect market power but also create efficiencies. Therefore, higher profitability could be caused by both.[141] The relationship between prices and the HHI is also not well established empirically.[142] The relationship between HHI and competitive effects can sometimes be misleading. A highly concentrated market may be very competitive, while a market with many participants may be cartelised.[143] Especially in markets with differentiated goods, a structural approach using the HHI does not capture the non-coordinated effects well. The more relevant question in these cases is whether the market participants produce close substitutes.[144] The empirical relationship between the HHI and prices has been shown to be unstable, and its ability to assess the impact of a merger is uncertain.[145]

For the HHI to be directly related to market power, all of its assumptions must be met, which is difficult to prove. For this reason, most competition authorities use the HHI only as a preliminary screen of the likely impact of a merger. The European Commission has adopted HHI thresholds as a safe harbour in its Horizontal Merger Guidelines. The guidelines take into account both the HHI level and the HHI delta, i.e., the change in the HHI caused by the merger. If the HHI is below 1000, negative effects are unlikely, and the Commission will usually take no further action.[146] HHI levels between 1000 and 2000 with a delta below 250 are also not

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[137] *Patel*, Antitrust Law Journal 2018, 279, 319.
[138] *Kwoka*, The Antitrust Bulletin 1985, 915, 947.
[139] *Bishop/Walker,* The Economics of EC Competition Law, 2010, p. 70.
[140] *Shapiro*, Antitrust Law Journal 2010, 49, 69.
[141] *Vives*, CPI Antitrust Chronicle, June 2017, 7, 8.
[142] *Azar/Raina/Schmalz*, Financial Management 2022, 227, 234 f.
[143] *Bishop/Walker*, The Economics of EC Competition Law, 2010, p. 70.
[144] *Schwalbe/Zimmer*, Law and Economics in European Merger Control, 2009, p. 200.
[145] *Rosati et al.*, Common Shareholding in Europe, 2020, p. 26.
[146] *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, ("Horizontal Merger Guidelines"), para. 19.

considered to be harmful for competition, unless other factors raise concerns.[147] The Commission's thresholds are lower than those in the U.S. Horizontal Merger Guidelines. Those guidelines consider markets with an HHI above 2500 to be "highly concentrated" and those between 1500 and 2500 to be "moderately concentrated".[148] While the U.S. guidelines use HHI levels as a general preliminary screen, the European guidelines only identify concentration levels at which competition concerns are unlikely to arise. In the EU, the HHI has only limited practical significance in the substantive assessment of mergers.[149]

It is important to stress that HHI levels are only considered as indicators of competitive effects and do not constitute a presumption of competitive effects.[150] A measure of market concentration cannot accurately predict competitive effects. Still, it can give an indication of possible effects. The European Commission considers the HHI to be an "*important element of appreciation of the likely anticompetitive effect of a concentration between undertakings*"[151]. In general, the HHI can be a useful tool for competition authorities to measure potential competition problems arising from a merger. The HHI is most valuable as a measure of market concentration that may affect the competitive outcome and determine the need for further investigation.[152]

b) The Modification for Partial Ownership

The modified Herfindahl-Hirschman Index (MHHI) was developed by *Salop* and *O'Brien*. Based on the HHI, the MHHI also incorporates the unilateral effects of cross-ownership between competitors.[153] The MHHI is the sum of the HHI and the MHHI delta. It assumes a Cournot oligopoly with homogeneous goods. Two factors are relevant for the effect of minority shareholdings between competitors: financial interest and corporate control.[154] Financial interest refers to the right to a share in the profits of the acquired firm. Financial interest concerns the acquiring firm, which takes into account the impact of its own actions on the profits of the acquired firm. Corporate control is the ability to influence the decisions of another company and affects the incentives of the acquired firm.[155] A financial interest may make a price increase profitable, given that some of the lost profits can be recaptured through the

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[147] *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, ("Horizontal Merger Guidelines"), para. 20.
[148] *U.S. Department of Justice/Federal Trade Commission*, Horizontal Merger Guidelines, 2010, p. 19.
[149] *Rosenthal/Thomas*, European Merger Control, 2010, p. 126.
[150] *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, ("Horizontal Merger Guidelines"), para. 21.
[151] *Commission*, Decision of 27.3.2017 in Case No. M.7932 – *Dow/DuPont*, Annex 5, p. 17.
[152] *Kwoka*, Antitrust Bulletin 1985, 915, 947.
[153] *O'Brien/Salop*, Antitrust Law Journal 2000, 559, 611.
[154] *Bresnahan/Salop*, International Journal of Industrial Organisation 1986, 155.
[155] *O'Brien/Salop*, Antitrust Law Journal 2000, 559, 568.

stake in the acquired firm.[156] Corporate control may change the behaviour of the acquired firm.[157]

Given the market share *s*, the two firms *j* and *k*, the owner *i*, the corporate control *y* and the financial interest *ß*, the MHHI can be expressed as follows:

$$MHHI = \sum_{j} s_j{}^2 + \sum_{k \neq j} \sum_{j} s_k * s_j \quad * \frac{\sum_i \gamma_{ij} * \beta_{ik}}{\sum_i \gamma_{ij} * \beta_{ij}}$$

The same relationship between the MHHI and the intensity of competition that exists for the HHI also applies to the MHHI. However, this is only the case if the assumptions of the model are met – i.e., there is a Cournot oligopoly with homogeneous goods.[158] In this case, the MHHI is proportional to the industry average Lerner index which reflects the mark-up in a market.[159] The result is similar to the traditional HHI. Like the HHI, the MHHI can only be a rough indicator of the effects of a change in ownership structure.[160] This interpretation of the MHHI levels is comparable to that of the HHI.

Several competition authorities have used the MHHI, because its interpretation is very similar to the HHI and it can be applied with relatively few input data. While the financial interest is clearly identifiable, the quantification of corporate control is often more difficult. In order to calculate the MHHI, it is necessary to precisely quantify the level of control and there are several control scenarios in which the degree of control varies.[161] However, especially when the minority shareholding is small, the degree of control is difficult to measure. Although there may be some degree of influence, it is often unclear how to correctly quantify the level of control in these cases.[162] As with market share and the traditional HHI, the MHHI can sometimes be more or less reliable as a measure of the level of competition in a market, depending on the market characteristics and other factors. Overall, it can only provide a rough estimate of the competitive effects.[163]

[156] *O'Brien/Salop*, Antitrust Law Journal 2000, 559, 573.
[157] See Chapter 3.A.II.2.b)(1)(b) for a detailed discussion of the change in incentives due to financial interest and corporate control.
[158] *O'Brien/Salop*, Antitrust Law Journal 2000, 559, 610.
[159] *Patel*, Antitrust Law Journal 2018, 279, 295 f.
[160] *O'Brien/Salop*, Antitrust Law Journal 2000, 559, 596.
[161] *O'Brien/Salop*, Antitrust Law Journal 2000, 559, 579 ff. discuss several scenarios between full control and no control.
[162] *Rosati et al.*, Common Shareholding in Europe, 2020, p. 28.
[163] *O'Brien/Salop*, Antitrust Law Journal 2000, 559, 596.

c) The Application of the MHHI for Common Ownership

The *O'Brien/Salop* paper uses the MHHI to measure the effects of direct minority shareholdings between competitors. The empirical work of *Azar et al.* then applies it to a common ownership situation.[164]

The following example illustrates how the MHHI can measure common ownership links: In an oligopolistic scenario with two firms A and B, and a market share split of 60% - 40%, the HHI is 5200. Now, to take into account the case of common ownership, it is assumed that there are two investors: X and Y. X owns 70% of firm A and 10% of firm B, while Y owns 30% of firm A and 90% of firm B. Based on these assumptions, the MHHI delta is calculated as follows:

$$40 * 60 * \frac{70 * 10 + 30 * 90}{70 * 70 + 30 * 30} + 60 * 40 * \frac{10 * 70 + 90 * 30}{10 * 10 + 90 * 90} = 2402$$

The MHHI is the most prominent measure of common ownership and has played a very central role in the debate on common ownership. Most importantly, it was used in the empirical study that first identified anti-competitive effects of common ownership.[165] It was then used as an indicator to assess the extent of common ownership. The European Commission took it into account in two decisions.[166] In addition, a policy proposal suggested that antitrust enforcement should be based on MHHI thresholds.[167] The debate on the empirical usefulness of the MHHI in the case of common ownership is still ongoing and will be discussed in the context of the empirical studies. There are some problems with the application of the MHHI in the case of common ownership. In particular, the central assumption is that firms maximise the value of their shareholders' portfolios, rather than focusing only on maximising their own-firm's value.

While the U.S. antitrust authorities have remained sceptical about the potential anti-competitive effects of common ownership, the European Commission argues that the MHHI can be applied in the context of common ownership, referring to it as "common shareholding":

> *"The analysis of the theoretical unilateral impact of common shareholders can be directly derived from the model developed by O'Brien and Salop (2000). As explained in detail in Azar, Schmalz and Tecu (2016), O'Brien and Salop (2000) develop a model of oligopoly in which firms maximize a weighted sum of the portfolio profits accruing to their shareholders, where a shareholder's weight in a firm's objective function is proportional to the fraction of the control of the firm held by that shareholder. As a consequence, the*

[164] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1522.
[165] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1522.
[166] *Commission*, Decision of 27.3.2017 in Case No. M.7932 – *Dow/DuPont*; Decision of 21.3.2018 in Case No. M.8084 – *Bayer/Monsanto*.
[167] *Elhauge*, Harvard Law Review 2016, 1267, 1303.

theoretical framework, the methodology and the conclusions of O'Brien and Salop (2000) apply to common shareholdings."[168]

In the *Dow/DuPont* case, the Commission calculated the MHHI including the potential effect of common ownership, but did not rely directly on this measure in its decision. It was interpreted as an additional indicator that allows the traditional analysis of market concentration to be extended to include common ownership links between competitors. Relying solely on the concentration based on the market shares does not take into account the importance of direct or indirect links between the competitors.[169]

3. Price Pressure Indices

Price pressure indices are another measure to gauge effects of common ownership. While the MHHI focuses on Cournot competition with homogeneous goods, price pressure indices can be used in a Bertrand model with differentiated products.[170] They calculate the effect of a change in ownership structure on the incentives of competitors and measure the economic pressure to raise prices.[171]

Two common price pressure indices are the Upward Pricing Pressure (UPP)[172] and the Gross Upward Pricing Pressure Index (GUPPI)[173]. The UPP concept does not rely on the identification of a relevant market, but rather on whether the merging parties' products are close substitutes as measured by diversion ratios.[174] Firms will take into account that some of their lost profits with their product will be recaptured by the merged firm's product.[175] This concept for a full merger can also be applied in the case of minority shareholdings, where part of the lost profits can be recaptured.[176] In the case of common ownership, this measure can then be extended to capture the incentive to include a rival's profit. *Brito et al.* introduce the GUPPI, an index that incorporates both cross-ownership and common ownership.[177]

The use of the Upward Pricing Pressure (UPP) shows that common ownership can both mitigate and exacerbate unilateral effects.[178] The expansion of the common ownership network as a result of a merger can increase the upward pricing pressure, provided that common

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168 *Commission*, Decision of 27.3.2017 in Case No. M.7932 – *Dow/DuPont*, Annex 5, para. 45.
169 *Commission*, Decision of 21.3.2018 in Case No. M.8084 – *Bayer/Monsanto*, para. 228.
170 *O'Brien/Salop*, Antitrust Law Journal 2000, 559, 598.
171 *O'Brien/Salop*, Antitrust Law Journal 2000, 559, 598.
172 *Farrel/Shapiro*, The B.E. Journal of Theoretical Economics 2010, Vol. 10, Article 9.
173 *Salop/Moresi*, Updating the Merger Guidelines: Comments, 2009, available at: http://ssrn.com/abstract=2756487.
174 *OECD*, Market Definition – Background Note by the Secretariat, 2012, p. 49. In the next step, potential efficiencies must also be included in the analysis.
175 *OECD*, Market Definition – Background Note by the Secretariat, 2012, p. 49.
176 *O'Brien/Salop*, Antitrust Law Journal 2000, 559, 575.
177 *Brito/Osório/Ribeiro/Vasconcelos*, International Journal of Industrial Organization 2018, 127, 148.
178 *Inderst/Thomas,* World Competition 2019, 551.

ownership is effective.[179] However, if there was common ownership between the merging parties before the merger, the price effect of a merger will be lower. Since common ownership has already influenced the firm's strategy before the merger, the additional effect of the merger on prices is smaller. Conversely, if the merger increases common ownership between the competitors, the UPP is higher.[180]

4. Profit Weights

Another approach to measuring common ownership is the use of profit weights. The measurement of profit weights assumes that firms do not simply maximise their own profits, but also maximise the profits of their shareholder.[181] If firms are indeed acting in the interest of their shareholders, they will give a positive weight to the profits of their rivals.[182] Profit weights can be calculated between each pair of two firms.

By following the changes in these profit weights over time it is possible to track the increase in common ownership concentration. For example, investor concentration has less of an impact on the level of common ownership as measured by profit weights. In contrast, investor diversification and the increasing portfolio similarity are more important drivers of common ownership.[183] The more similar an investor's holdings are to the index, the higher the weight that is placed on the profits of other firms.[184] This trend is not limited to the largest index investors, but applies to all investors. Moreover, the rise of common ownership did not begin with passive investing, but can be traced back to 1980.[185] It therefore began earlier than the sharp rise in index investing after 2008. Accordingly, the view that the rise in common ownership is solely or mainly due to the growing importance of the "Big Three" may be incorrect.

However, it does highlight the important role of indexing. The concentration of passive owners and the general rise of passive investment strategies may still be a very important factor, but other trends are also relevant. The rise of passive investors has been accompanied by a

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[179] *Inderst/Thomas,* World Competition 2019, 551, 565.
[180] *Inderst/Thomas,* World Competition 2019, 551, 565.
[181] *Backus/Conlon/Sinkinson*, Common Ownership in America: 1980-2017, NBER Working Paper Series, 2019, Working Paper 25454, p. 1.
[182] *Backus/Conlon/Sinkinson*, Common Ownership in America: 1980-2017, NBER Working Paper Series, 2019, Working Paper 25454, p. 1.
[183] *Backus/Conlon/Sinkinson*, Common Ownership in America: 1980-2017, NBER Working Paper Series, 2019, Working Paper 25454, p. 23.
[184] *Backus/Conlon/Sinkinson*, Common Ownership in America: 1980-2017, NBER Working Paper Series, 2019, Working Paper 25454, p. 28.
[185] *Backus/Conlon/Sinkinson*, Common Ownership in America: 1980-2017, NBER Working Paper Series, 2019, Working Paper 25454, p. 35.

general increase in investment diversification even among active investors, leading to an increase in common ownership from 1980 onwards.[186]

5. Interconnectedness Between Firms

Another measure is also calculated on a bidirectional basis, taking into account the horizontal links between each pair of firms.[187] It is therefore similar to the concept of profit weights discussed above. A key feature of this variable is that it assumes that the weight a firm's management places on its competitor's profits is related to the attention an investor pays to the behaviour of the management of an individual portfolio company. The assumption is that an investor will be better informed if a shareholding in a particular company is more important for the overall portfolio. To measure this, the "attention" is replaced by the share of the individual holding in an investor's portfolio. An important implication of this assumption is that diversification increases the overlap of holdings, but reduces the importance of each holding to the investors' overall portfolio.[188]

According to this hypothesis, highly diversified investors are less likely to be informed. Since management is less likely to consider the preferences of an uninformed investor, this will reduce the effect of the ownership overlap.[189] However, adding the attention measure almost inevitably reduces the relevance of passive investments. Each individual holding is less important to a diversified investor than to a less diversified investor. A passive investor is naturally highly diversified. This makes each individual shareholding relatively smaller, reducing the impact of passive investments and giving greater weight to less diversified investors.

The key question is whether this assumption that the relative value of a shareholding in the portfolio matters is justified. It is not obvious that it is necessary to take this into account when measuring common ownership. While the incentive to engage increases with the absolute number of shares, various other factors may also affect the influence of shareholders. All in all, calculating the interconnectedness and placing a high weight on the importance of a particular firm in the portfolio may oversimplify the real impact of different shareholders on firm behaviour. The measure of connectedness depends heavily on the validity of the underlying assumption that the relative importance of a firm in an investor's portfolio is the key factor in determining how much attention that investor will pay to the strategic behaviour of each portfolio firm.

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[186] *Backus/Conlon/Sinkinson*, Common Ownership in America: 1980-2017, NBER Working Paper Series, 2019, Working Paper 25454, p. 3.
[187] *Gilje/Gormley/Levit*, Journal of Financial Economics 2020, 152.
[188] *Gilje/Gormley/Levit*, Journal of Financial Economics 2020, 152, 154.
[189] *Gilje/Gormley/Levit*, Journal of Financial Economics 2020, 152, 154.

Using their measure of interconnectedness, *Gilje et al.* reach an overall conclusion similar to other studies, namely that common ownership has increased over the past decades.[190] A key finding is that passive investment does not necessarily increase common ownership using their measure.[191] However, as discussed above, the measure proposed by *Gilje et al.* gives more weight to less diversified investors, which makes this result less meaningful as it is almost implicit in the design of the calculation. While they find that common ownership has increased, their assumptions lead to the conclusion that passive investors are less important for this result.

II. Empirical Studies

1. Effects on Competition

a) The Airline Study

(1) Overview

The paper "Anticompetitive Effects of Common Ownership" [192] ("Airline Study") by *Azar et al.* was the first empirical study to examine the relationship between common ownership and competition. The study explores the effect of a change in common ownership concentration on price. The empirical focus of the paper is a regression analysis of market price on the MHHI and other market factors. Besides, the effects of both the HHI and the MHHI delta are examined.

The authors specify their research question as follows:

> *„The empirical question we address is whether common ownership concentration as measured by MHHI delta has explanatory power for airline ticket prices after controlling for market concentration as traditionally measured (by HHI) and other known determinants of prices."*[193]

The authors find that common ownership has a statistically significant positive effect on price. More specifically, they estimate that prices are 3% to 7% higher due to common ownership between firms, as measured by the MHHI delta.[194] The study thus establishes a link between common ownership concentration and prices in the airline sector.[195] This empirical work has been fiercely debated. There have been doubts about the econometric approach and its connection with the economic theory. The core of the empirical study is the MHHI as a measure of common ownership concentration.

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[190] *Gilje/Gormley/Levit*, Journal of Financial Economics 2020, 152, 171.
[191] *Gilje/Gormley/Levit*, Journal of Financial Economics 2020, 152, 172.
[192] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513.
[193] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1522.
[194] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1559.
[195] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1559.

(2) Methodology

Azar et al. use a fixed-effects panel regression to determine whether the change in common ownership concentration measured over time is correlated with changes in ticket prices on the same route. The MHHI delta is used as a regressor for common ownership concentration. It is therefore important that it adequately reflects the degree to which the main owners of a firm also own its competitors.[196] It is also important that it finds a correlation between ownership concentration and prices rather than a relationship between other factors included in the MHHI that are indirectly responsible for the measured price effect, i.e., to avoid endogeneity concerns.[197]

Many aspects of the empirical study and especially its theoretical basis have been questioned. Some critical aspects have been addressed in the Airline Study with further robustness and placebo testing. Others remain open and controversial. This part of the analysis focuses on the empirical methodology, while possible causal mechanisms are discussed separately in Chapter 2.C.

(a) Data

A useful feature of the airline sector for an empirical study is that data are publicly available for each route and airline, including information on passengers and prices. *Azar et al.* use the Department of Transportation's Airline Origin and Destination Survey DB1B database to construct their dataset. With this data it is possible to observe fares and passenger shares in each market. The researchers consider all pairs of airports as markets. They exclude very small airports with an average of less than 20 passengers per day.[198] To calculate airline ownership and common ownership, they use the Thomson-Reuters Spectrum dataset, which is based on the SEC's 13F filings, and complement it with other data from the SEC website.[199]

Criticism has been voiced about one of the data processing steps of the ownership data: The authors exclude shareholdings below 0.5% from their regression analysis on the assumption that such small shareholders do not affect firm strategy.[200]

(b) Application of the MHHI

An important aspect of the Airline Study is the use of the MHHI as a measure of common ownership concentration. There are two main problems with the use of the MHHI. *First*, it is questionable whether the measure is generally suitable for empirical studies. *Second*, there

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196 *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1559.
197 *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1534.
198 *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1523.
199 *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1525.
200 *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1525.

are several problems with the specific calculation of the MHHI and its three components: market share, financial interest and control.[201]

As explained above, the MHHI, which is used as an explanatory variable in the regression model, has been developed in the literature under the assumption of a Cournot oligopoly. Under these circumstances, it has a direct relationship with market power. However, the authors of the Airline Study explicitly state that their model does not rely on the connection of the MHHI with a Cournot model of competition, even though this framework may be appropriate for the airline industry.[202] The MHHI is used as a measure of common ownership concentration, not as a direct measure of the degree of competition in a Cournot setting.

Another point of criticism is that the MHHI may be an endogenous variable. Endogeneity occurs when the explanatory variable is correlated with the error term and the effect on the response variable is, thus, distorted.[203] One case of endogeneity is reverse causality, where the correlation is bidirectional and it is not possible to distinguish cause from effect. The MHHI delta is a function of both common ownership and market concentration. This means that changes in the MHHI delta could be the result of either changes in common ownership or changes in market shares.[204]

However, the Airline Study tests for this reverse causality concern.[205] Most importantly, the study uses the merger between Barclays Global Investors ("BGI") and BlackRock as an event that led to a change in MHHI in airline markets – specifically only in the common ownership element of the MHHI delta. Market concentration in the airline market remained constant, allowing the common ownership effects to be analysed in isolation. Since airline shares represented only a small part of both portfolios, it can be assumed that expectations about the performance of these shares were not a reason for the merger, e.g., the merging parties did not expect air fares to rise.[206] Accordingly, the change in common ownership was exogenous, as the merger was unlikely to have been influenced by the demand for airline shares.[207]

(c) Market Definition

In order to calculate market shares, it is important to first define the relevant markets correctly. In their study, *Azar et al.* use airport pairs as the relevant markets. It could be argued that the correct market definition would require city pairs, as different airports are considered

[201] *Rosati et al.*, Common Shareholding in Europe, 2020, p. 29.
[202] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1546.
[203] *Wooldridge*, Introductory Econometrics, 2020, p. 83.
[204] *Torshizi/Clapp*, The Antitrust Bulletin 2021, 39, 54.
[205] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513 1534 ff.
[206] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1518.
[207] *Elhauge*, Harvard Business Law Review 2020, 207, 228.

substitutable by passengers.[208] However, *Azar et al.* test for this concern and show that the effect is the same or even stronger when city pairs are used instead of airport pairs.[209] Thus, the different market definition did not change the results.

(d) Corporate Control

When calculating the MHHI it is also important to determine who is to be identified as the owner. As shown above, most common owners are institutional investors who invest money on behalf of their clients. As investment funds are not the economic owners of the shares, they do not directly benefit from the gains of the underlying assets and do not face their risks. Rather, they act as agents for the real owners, which are the individuals invested in the funds.[210] It could therefore be argued that the investment fund is merely an intermediary and that the real owners are only the individual investors.[211]

Nonetheless, the study attributes the shareholdings to the investment funds that are invested in the airline and not to the individual investors who receive the returns. There are several arguments in favour of treating the institutional investors as the owners of the shares for the purpose of quantifying common ownership. The main argument for treating asset managers as the relevant owners is their ability to exercise shareholder power.[212] The important objective for identifying the owner is to find the entity that can exercise control over the company. Although investment funds do not directly benefit from the economic success of the portfolio firm, they act as agents that can exercise shareholder rights. They are also referred to as the "mandate owners" as opposed to the "entitlement owners".[213] Entitlement owners are the end-investors who buy shares and bear the economic risks and rewards. Mandate owners act as intermediaries. They have de facto decision-making power and can exercise control over the firm.[214] Although the individual owners differ from the intermediaries as the direct shareholders, these institutional investors have both a financial interest and corporate control. The financial interest is not as direct for the investment intermediary as it is for the individual investor. Institutional investors only benefit from an increase in fees, but there is still a financial interest in the firm.[215]

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[208] *Rock/Rubinfeld*, Antitrust Law Journal 2018, 221, 245.
[209] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1534.
[210] *BlackRock,* Viewpoint "Index Investing and Common Ownership Theories", March 2017, p. 7 f.
[211] *BlackRock,* Viewpoint "Index Investing and Common Ownership Theories", March 2017, p. 7 f.
[212] *Shenkar/Heemskerk/Fichtner*, CPI Antitrust Chronicle, June 2017, 51, 52.
[213] *Shenkar/Heemskerk/Fichtner*, CPI Antitrust Chronicle, June 2017, 51, 53.
[214] *Shenkar/Heemskerk/Fichtner*, CPI Antitrust Chronicle, June 2017, 51, 54.
[215] See Chapter 2.C.II. for a more detailed analysis of the incentives of institutional investors.

(e) Aggregation of Ownership

The Airline Study aggregates the holdings of all funds belonging to the same fund family.[216] Some argue that this is not justified as fund families typically comprise many different funds that may invest in the same company.[217] The argument is that it is not just the overall performance of the fund family that matters, but also the performance of the individual funds. These individual funds and their investors may have different interests from those of the fund family as a whole.[218] Each fund is separately managed and has an interest in maximising its own value. Thus, their interests may differ.[219] Applying this argument to the airline industry, an actively managed fund may not have a diversified portfolio of airlines, but may hold only one airline that it believes will outperform its competitors.

However, the main reason for aggregating funds from the same family is that they do not engage with their portfolio companies individually.[220] On the contrary, most fund families have joint corporate governance departments and centralise their voting and engagement processes.[221] This is supported by the very high level of voting consistency across funds in a fund family. BlackRock's funds split their votes across the fund family on only 18 out of 100.000 proposals. In the Vanguard Group, funds voted differently on only 6 out of 100.000 proposals.[222] This suggests that fund families coordinate their voting behaviour. While voting differences are theoretically possible, funds within a fund family appear to split their votes only in a very small number of cases.[223] Therefore, it is plausible to aggregate shareholdings when shareholder rights are exercised at the group level. Moreover, even if fund managers do have different incentives, they typically do not engage with firms and do not exert influence.

Furthermore, European competition law provides an argument that the shareholdings of a fund family should be aggregated and that individual funds should not be regarded as separate owners. From the perspective of European competition law, the funds in a fund family, as subsidiaries of a parent company, form a single undertaking. As the management of a fund family may direct the individual funds in its group, it controls them and therefore forms an economic unit.[224] Accordingly, the European Commission will treat all funds in a fund family as a single undertaking.[225] This assessment is not affected by the freedom that individual fund

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[216] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1525 f.
[217] *Lambert/Sykuta,* Virginia Law and Business Review 2019, 213, 238.
[218] *Lambert/Sykuta,* Virginia Law and Business Review 2019, 213, 238 f.
[219] *BlackRock,* Viewpoint "Index Investing and Common Ownership Theories", March 2017, p. 11.
[220] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1525.
[221] *Fichtner/Heemskerk/Garcia-Bernardo*, Business and Politics 2017, 298, 308.
[222] *Fichtner/Heemskerk/Garcia-Bernardo*, Business and Politics 2017, 298, 317.
[223] *Condon*, Washington Law Review 2020, 1, 57 f.
[224] See for the definition of undertaking: *European Court of Justice*, Judgment of 10.9.2009, Case C-97/08 P, ECLI:EU:C:2009:536, paras. 58, 60 – *Akzo Nobel*.
[225] *Crocco/Nilsson/Sarma*, CPI Antitrust Chronicle, June 2017, 58, 62.

managers may have to make individual investment decisions, nor by the actual transfer of voting rights to a common voting group.

(f) The Proportional Control Assumption

In the Airline Study, control is defined as the percentage of voting shares in another company.[226] It therefore assumes that control is proportional to the number of voting shares. Nevertheless, it is unclear whether this simplification accurately reflects the real voting power of the shareholders. The assumption that control is related to voting power seems plausible, as more voting power implies more influence.

However, it is difficult to determine the exact level of control associated with each level of shareholding. This problem was addressed in the Airline Study by testing several different control scenarios.[227] For example, it was assumed that only the top 3, 5 or 10 shareholders had control. These alterations did not significantly affect the results, suggesting that the proportional control assumption was not confounding the results. Ranking shareholders showed that only the first and second largest shareholders had a significant effect on prices. The authors also used a Banzhaf voting power index, which produced similar results to the proportional control assumption.[228]

The European Commission faced the same problem when calculating the MHHI. The *Dow/DuPont* decision highlights the problems of using the MHHI in a case-specific analysis. If the control scenario is not clear, it is difficult to measure control weights and it is necessary to rely on assumptions to calculate the MHHI. The Commission argued that all investors have the same type of control, which is related to their shares.[229] However, this does not mean that the shareholders' control is necessarily proportional. It simply means that control increases with the respective shareholding. Because of these uncertainties, the Commission did not base its decision on the MHHI.[230]

(3) Results

Overall, the results indicate a causal relationship between common ownership and higher prices.[231] The authors of the study find that ticket prices are 3% to 7% higher due to common ownership.[232] Additional robustness tests show that in particular the largest shareholders and those with a long-term interest have a statistically significant effect on ticket prices.[233] This is

[226] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1525.
[227] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1544 ff.
[228] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1544 ff.
[229] *Commission*, Decision of 27.3.2017 in Case No. M.7932 – *Dow/DuPont*, Annex 5, para. 75.
[230] *Commission*, Decision of 27.3.2017 in Case No. M.7932 – *Dow/DuPont*, Annex 5, para. 79.
[231] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1558.
[232] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1559.
[233] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1518.

consistent with the expectation that only large shareholders have a direct or indirect influence on management decisions and, thus, an impact on market strategy and prices. In addition, management can more easily identify these shareholders and their interests. Furthermore, the effect of common ownership is more pronounced in more concentrated and in larger markets. This could mean that investors and firms rationally focus their attention on these markets, where the impact of price increases is greatest.[234]

Another element is the impact of the BlackRock/BGI merger on prices. The Airline Study finds that the effect of the merger, or more specifically the associated increase in common ownership concentration, led to an increase in the price of air travel of around 10% to 12%. Although the BlackRock/BGI merger was mainly used as a robustness test, the results suggest that there may be a need to scrutinise mergers of investment funds and to limit the concentration of institutional investors.[235]

In conclusion, the Airline Study provides strong evidence of anti-competitive effects of common ownership. While it is debatable what conclusions can be drawn from a study only focused on a single industry, the Airline Study supports the hypothesis that firms internalise the interests of their shareholders in some way and that prices are higher due to common ownership. The possible reasons for this internalisation of the shareholders' anti-competitive interests, and the means by which it is achieved, are further discussed in the context of the causal mechanisms in Chapter 2.C.

(4) Related Studies

Three empirical studies have attempted to replicate the Airline Study and have looked for a relationship between price and common ownership using different model specifications. These studies have found results both supporting and contradicting the finding of anti-competitive effects of common ownership.

When replicating the initial study by using a similar approach, they mostly find the same results. However, when using different measures of common ownership, two studies do not find a positive relationship between their measure of common ownership and price, while one study does.

There is debate about how best to study potential causal effects. There is no agreed upon theory and framework for studying the possible effects of common ownership, and different measures could be used to empirically investigate common ownership and its effect on price.

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[234] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1550.
[235] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1560.

(a) The Competitive Effects of Common Ownership – Economic Foundations and Empirical Findings

Kennedy et al. replicate the Airline Study and also use a different empirical approach.[236] Their approach focuses mainly on avoiding sources of endogeneity that exist when using the MHHI as a measure of common ownership. The researchers question the reliability of the empirical approach used in the Airline Study because the MHHI depends on common ownership and market shares which may be endogenous.[237] Instead, they use a common ownership incentive term, comparable to profit weights, to avoid the possible endogeneity of market shares.

Their results do not support those of the Airline Study. Using their methodology, *Kennedy et al.* find a negative effect of common ownership on price.[238] They argue that their approach is better suited to deal with endogeneity concerns and question the results of the Airline Study. Nevertheless, *Kennedy et al.* do not interpret the negative effect on price as evidence of a causal relationship, but rather as a robustness analysis of the Airline Study.[239]

Nonetheless, it is questionable whether the *Kennedy et al.* paper uses an approach that is superior to the Airline Study. For example, the authors only use a subsample of 10% of the available data.[240] In addition, the BlackRock/BGI merger had a negative effect on common ownership concentration as defined by the common ownership proxy used by *Kennedy et al.*[241] This casts doubt on the applied common ownership proxy, since the merger led to a concentration of institutional investors and, consequently, to an increase in common ownership concentration. Furthermore, the structural model implies that distance has a negative effect on marginal cost, which is contrary to economic logic.[242] Therefore, there is no clear indication that the approach is advantageous, and it does not cast serious doubt on the original findings of the Airline Study.

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[236] *Kennedy/O'Brien/Song/Waehrer,* The Competitive Effects of Common Ownership: Economic Foundations and Empirical Evidence, July 2017, available at: https://ssrn.com/abstract=3008331.

[237] *Kennedy/O'Brien/Song/Waehrer,* The Competitive Effects of Common Ownership: Economic Foundations and Empirical Evidence, July 2017, p. 3, available at: https://ssrn.com/abstract=3008331.

[238] *Kennedy/O'Brien/Song/Waehrer,* The Competitive Effects of Common Ownership: Economic Foundations and Empirical Evidence, July 2017, p. 5, available at: https://ssrn.com/abstract=3008331.

[239] *Kennedy/O'Brien/Song/Waehrer,* The Competitive Effects of Common Ownership: Economic Foundations and Empirical Evidence, July 2017, p. 16, available at: https://ssrn.com/abstract=3008331.

[240] *Azar/Schmalz/Tecu*, The Competitive Effects of Common Ownership: Economic Foundations and Empirical Evidence: Reply, September 2018, p. 5, available at: https://ssrn.com/abstract=3044908.

[241] *Azar/Schmalz/Tecu*, The Competitive Effects of Common Ownership: Economic Foundations and Empirical Evidence: Reply, September 2018, p. 4, available at: https://ssrn.com/abstract=3044908.

[242] *Azar/Schmalz/Tecu*, The Competitive Effects of Common Ownership: Economic Foundations and Empirical Evidence: Reply, September 2018, available at: https://ssrn.com/abstract=3044908.

(b) Common Ownership Does Not Have Anticompetitive Effects in the Airline Industry

The study "Common Ownership Does Not Have Anticompetitive Effects in the Airline Industry" by *Dennis et al.* also analyses common ownership in the Airline Industry.[243] The authors claim shortcomings of the original study and use different specifications to test the hypothesis of anti-competitive effects. Their approach does not find a positive relationship between common ownership and ticket prices.[244] The authors criticise the Airline Study on several additional points. *First*, the use of passenger count would emphasise markets with higher passenger count, so that these highly frequented routes would count heavily in the regression and significantly influence the results.[245] *Second*, they change the assumption that shareholders retain control in bankruptcy because during these periods the management acts in favour of creditors rather than shareholders.[246]

In particular, the treatment of ownership data in this study has been criticised. The authors of the Airline Study identify the diverging approaches to data processing as a possible explanation for the conflicting results.[247] An important step in calculating ownership in the Airline Study is the aggregation of holdings across fund families. *Dennis et al.* omit this step and use the original 13 F-filing data without aggregation, i.e., each fund is counted individually. As discussed above, the aggregation of holdings is an important step that relies on the fact that the shares of a fund family form a common voting group.

(c) Common Ownership and Product Market Competition: Evidence from the U.S. Airline Industry

Another paper uses a model that is similar to the *Kennedy et al.* approach and also tries to avoid endogeneity problems. Yet, it supports the Airline Study and finds that the higher the degree of common ownership between airlines, the more likely they are to coordinate their prices.[248]

(5) Preliminary Results

The Airline Study justifies concerns about anti-competitive effects. Although its findings have been challenged by other studies, several robustness tests have subsequently been added to further strengthen the study. Some scholars have disputed that the Airline Study has

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[243] *Dennis/Gerardi/Schenone*, Journal of Finance 2022, 2765.
[244] *Dennis/Gerardi/Schenone*, Journal of Finance 2022, 2765, 2796.
[245] *Dennis/Gerardi/Schenone*, Journal of Finance 2022, 2765, 2768.
[246] *Dennis/Gerardi/Schenone*, Journal of Finance 2022, 2765, 2767; see also *Elhauge*, Harvard Business Law Review 2020, 207, 231 f. discussing bankruptcy periods.
[247] *Azar/Schmalz/Tecu*, Reply to: 'Common Ownership Does Not Have Anti-Competitive Effects in the Airline Industry', April 2018, available at: https://ssrn.com/abstract=3168095.
[248] *Park/Seo*, Korean Journal of Financial Studies 2019, 617.

empirically demonstrated that an increase in common ownership concentration leads to higher prices.[249] Although various empirical concerns have been addressed, two important problems with the empirical approach remain.

First, it is difficult to assign a degree of control to the different owners. The control scenarios are not the same as in the *O'Brien/Salop* model. It is necessary to make assumptions about control because in the absence of a clear control scenario the degree of influence cannot be reliably estimated. Proportional control is a plausible hypothesis and the Airline Study used different specifications to mitigate this challenge. Nevertheless, there remains some ambiguity about the choice of control.

Second, the possible endogeneity of market shares in the MHHI is another major problem. Other empirical studies have attempted to address this issue by using different measures. These studies also have shortcomings, and the approaches used by the replications of the Airline Study do not appear to be superior to the original methodology.

Additionally, the Airline Industry is an oligopolistic and concentrated market with high barriers to entry. It is uncertain whether the results are similar for other markets that do not share the same characteristics.[250]

b) The Banking Study

(1) The Initial Study

The paper "Ultimate Ownership and Bank Competition"[251] ("Banking Study") by *Azar et al.* finds similar results to the Airline Study for the banking sector, linking common ownership concentration to higher prices. It follows a similar but not identical approach: Instead of using the MHHI as an explanatory variable, it employs a generalised Herfindahl-Hirschman Index (GHHI), which includes both common ownership by third parties and direct cross-ownership links between competitors. The study examines whether either the traditional HHI or the GHHI is more closely related to the prices of different bank deposit products.[252]

The banking industry in the U.S., as in many other countries, is characterised by significant cross-ownership between banks. Many U.S. banks hold minority stakes in their competitors. There are also indirect ownership links through funds that hold shares in competing banks. The MHHI can only measure either cross-ownership or common ownership at the same time.

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[249] *O'Brien/Waehrer*, Antitrust Law Journal 2017, 729, 730.
[250] *He/Huang,* The Review of Financial Studies 2017, 2674, 2681.
[251] *Azar/Raina/Schmalz*, Financial Management 2022, 227.
[252] *Azar/Raina/Schmalz*, Financial Management 2022, 227, 245.

Therefore, the study uses a generalised Herfindahl-Hirschman Index to capture both cross-ownership between banks and common ownership by third parties simultaneously.[253]

Their results suggest that the GHHI is more closely related to prices than the traditional HHI.[254] This indicates that the HHI does not measure the real level of concentration, or at least not the concentration that is most relevant to prices. For example, prices are higher in markets with many competitors than in markets with fewer competitors – a surprising result given the traditional economic theory that higher concentration is associated with higher prices.[255] This suggests that the HHI may not be the best measure of market concentration. Instead, the GHHI may be a more reliable predictor of competitive effects. As a consequence, it may be preferable to use the GHHI for merger analysis in the banking sector.

The study adds further tests to provide evidence of a causal effect between changes in GHHI and price. It uses the change in index fund ownership to test whether common ownership is associated with higher prices. Since bank ownership of passive funds is not affected by the active investment decisions of fund managers, index fund ownership is not affected by the banks' pricing decisions or the prospect of future performance.[256] The study finds a robust relationship between common ownership and higher prices for all observed products.[257] This suggests a causal effect. However, the same doubts that remain about the Airline Study apply here as well. In particular, the use of the MHHI as a measure of common ownership concentration is a common feature of both studies and is therefore subject to the same criticism.

(2) The Effect of Common Ownership on Profits: Evidence from the U.S. Banking Industry

Another study uses a different approach to test the common ownership hypothesis in the banking sector. The study "The Effect of Common Ownership on Profits"[258] does not use the GHHI as a measure of concentration, but instead uses profit weights. Although this approach addresses the problem of endogeneity and calculates the incentives of the firms, it does not take into account the market shares of the firms.[259] Furthermore, the study does not correct

[253] *Azar/Raina/Schmalz*, Financial Management 2022, 227, 245.
[254] *Azar/Raina/Schmalz*, Financial Management 2022, 227, 246.
[255] *Azar/Raina/Schmalz*, Financial Management 2022, 227, 238.
[256] *Azar/Raina/Schmalz*, Financial Management 2022, 227, 250.
[257] *Azar/Raina/Schmalz*, Financial Management 2022, 227, 251.
[258] *Gramlich/Grundl*, The Effect of Common Ownership on Profits: Evidence from the U.S. Banking Industry, 2018, Finance and Economics Discussion Series Working Paper No. 2018-069.
[259] *Elhauge,* New Evidence, Proofs, and Legal Theories on Horizontal Shareholding, January 2018, p. 23, available at: https://ssrn.com/ abstract=3096812.

the data to aggregate the holdings of fund families.[260] The results do not confirm anti-competitive effects, with most estimates being either zero or very small.[261]

c) Other Studies

(1) Common Ownership in the Ready-to-Eat Cereal Industry

One industry-specific study focuses on the ready-to-eat cereal industry and tests whether firms maximise shareholder value.[262] In the context of common ownership, this means that firms relax competition in order to maximise the portfolio value of the common owners.[263] The authors use profit weights and do not use the MHHI. They conclude that their results support the classical model of own-profit maximisation – and not the maximisation of shareholder value.[264]

(2) Effects of Common Ownership in the Seed Sector

Another industry-specific study concentrates on the seed sector.[265] It examines the effects of common ownership on seed prices. The seed sector is highly concentrated and has seen a large increase in common ownership in recent decades.[266] The study does not focus on the prices of specific seed varieties, but examines the effect of common ownership on average seed prices.[267] The study uses a variant of the MHHI. Like the Airline Study, it also assumes that the control, which is attributed to a shareholder, is proportional to the size of the shareholding.[268] After controlling for other factors that may affect prices, the authors find that about 14.6% of the increase in maize, soybean, and cotton seed prices between 1997 and 2017 can be attributed to common ownership.[269] Accordingly, the study supports the finding that common ownership can have anti-competitive effects.

Additionally, the authors note that the depth of linkages between different common owners and the alignment of their interests may be an avenue for future research, as this could amplify the

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[260] *Elhauge,* New Evidence, Proofs, and Legal Theories on Horizontal Shareholding, January 2018, p. 23, available at: https://ssrn.com/abstract=3096812; *Gramlich/Grundl*, The Effect of Common Ownership on Profits: Evidence from the U.S. Banking Industry, 2018, Finance and Economics Discussion Series Working Paper No. 2018-069, p. 19.

[261] *Gramlich/Grundl*, The Effect of Common Ownership on Profits: Evidence from the U.S. Banking Industry, 2018, Finance and Economics Discussion Series Working Paper No. 2018-069, p. 31.

[262] *Backus/Conlon/Sinkinson,* Common Ownership and Competition in the Ready-to-Eat Cereal Industry, NBER Working Paper Series, 2021, Working Paper 28350.

[263] *Backus/Conlon/Sinkinson,* Common Ownership and Competition in the Ready-to-Eat Cereal Industry, NBER Working Paper Series, 2021, Working Paper 28350, p. 1.

[264] *Backus/Conlon/Sinkinson,* Common Ownership and Competition in the Ready-to-Eat Cereal Industry, NBER Working Paper Series, 2021, Working Paper 28350, p. 39.

[265] *Torshizi/Clapp*, The Antitrust Bulletin 2021, 39.

[266] *Torshizi/Clapp*, The Antitrust Bulletin 2021, 39, 40.

[267] *Torshizi/Clapp*, The Antitrust Bulletin 2021, 39, 52.

[268] *Torshizi/Clapp*, The Antitrust Bulletin 2021, 39, 64.

[269] *Torshizi/Clapp*, The Antitrust Bulletin 2021, 39, 65.

effects of common ownership.[270] In other words, the true common ownership concentration may be higher than is suggested by the MHHI delta because of these linkages between common owners.

(3) Common Shareholding in Europe – Beverage Industry

Another study focuses on the BlackRock/BGI merger and its effects on the prices of soft drinks, bottled water, juices, and beer. It finds that the BlackRock/BGI merger affected the markups of the portfolio firms, resulting in a Lerner index that was 0.07 points higher after the merger.[271] The increase in profitability was driven by revenues rather than costs.[272] While acknowledging that the results should be treated with caution, the authors conclude that common ownership is positively associated with firms' market power.[273]

(4) Product Market Competition in a World of Cross-Ownership: Evidence from Institutional Blockholdings

A study by *He and Huang* analyses the effects of common ownership on product market performance and behaviour.[274] The study focuses on a wider range of industries and does not explicitly focus on product market competition. Hence, it is not directly comparable with the Airline Study. Nevertheless, it may provide some insights into the behaviour of firms under significant common ownership. The authors conclude that commonly owned firms have higher market-share growth, and that common ownership facilitates explicit product market cooperation such as joint ventures or intra-industry acquisitions.[275]

He and Huang consider that common ownership allows investors to "*influence the product market strategies of these same-industry firms to enhance the combined value of their holdings*"[276]. This means that these investors benefit from common ownership, but it could also mean that commonly owned firms do not act as independently as they would without common ownership. This finding contradicts the assumption that firms act as fully independent competitors, maximising only their own profits – a key finding of their study:

> *"Fourth, and most importantly, our study illustrates that the traditional practice of treating firms as independent decision-makers in the product market (along with conventional measures of industry competitiveness) may not adequately capture real strategic*

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[270] *Torshizi/Clapp*, The Antitrust Bulletin 2021, 39, 66.
[271] *Rosati et al.*, Common Shareholding in Europe, 2020, p. 184.
[272] *Rosati et al.*, Common Shareholding in Europe, 2020, p. 184.
[273] *Rosati et al.*, Common Shareholding in Europe, 2020, p. 215.
[274] *He/Huang,* The Review of Financial Studies 2017, 2674. *He* and *Huang* call this "institutional cross-ownership".
[275] *He/Huang,* The Review of Financial Studies 2017, 2674, 2713.
[276] *He/Huang,* The Review of Financial Studies 2017, 2674, 2676.

interactions among firms or characterize the actual level of competition within an industry."[277]

This statement highlights the fact that commonly owned firms are not necessarily completely independent in their strategic decisions. Although it does not provide direct evidence of actual anti-competitive influence, it does refute the notion that common ownership by institutional investors is strategically irrelevant for firms. The study underlines that common ownership has the potential to create anti-competitive effects.

He and Huang identify some key differences between their research and the Airline Study. The most important difference is that their study focuses on a variety of industries and not just the effects in a single industry. They also limit their observations to shareholdings of at least 5%, whereas the Airline Study included all shareholdings above 0.5%.[278] Thus, their study is much broader and covers only comparatively large shareholdings.

The airline sector as an industry has some clear characteristics. It is highly concentrated and has high barriers to entry. Therefore, *He and Huang* conclude that the results of the Airline Study are not necessarily applicable to other markets that do not share these same features.[279] The study may show that common ownership has an efficiency-enhancing effect by increasing cooperation between market participants.[280] More broadly, it suggests that common ownership influences the behaviour and interaction of firms.

(5) Common Ownership and Competition in Product Markets

Koch et al. focus on the relationship between common ownership and industry profitability.[281] It is a cross-market study that looks at different industries. Their assumption is that if common ownership links between firms reduce competition, this would probably be accompanied by an increase in industry profitability. The study uses different indices that are proposed in the literature to measure common ownership and also uses various subsamples of industries. While common ownership is associated with higher industry profitability in some cases, the study finds no evidence that higher levels of common ownership concentration are positively associated with industry profitability in general and across alternative specifications.[282] These results cast doubt on the assumption that the industry-specific studies can be generalised across the economy and across industries.[283] For example, *Koch et al.* find effects in the airline

[277] *He/Huang,* The Review of Financial Studies 2017, 2674, 2678.
[278] *He/Huang,* The Review of Financial Studies 2017, 2674, 2681 f.; *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1525.
[279] *He/Huang,* The Review of Financial Studies 2017, 2674, 2681.
[280] *He/Huang,* The Review of Financial Studies 2017, 2674, 2676.
[281] *Koch/Panayides/Thomas*, Journal of Financial Economics 2021,109.
[282] *Koch/Panayides/Thomas*, Journal of Financial Economics 2021,109, 134.
[283] *Koch/Panayides/Thomas*, Journal of Financial Economics 2021,109, 135.

industry that are consistent with the Airline Study – but not in several other industries.[284] This could mean that the Airline Study found a reliable result that cannot be generalised across industries.

Overall, the results are limited to the observed levels of common ownership concentration and may not be applicable to significantly higher levels of common ownership.[285] Common ownership may possibly only have an effect when the common ownership concentration exceeds a certain threshold and may be negligible at lower levels, which may explain the mixed results of the study.

(6) Testing the Theory of Common Stock Ownership

Boller and Scott Morton use index entry as an event that can change the common ownership concentration.[286] They ask whether an increase in common ownership due to the entry of a competitor is relevant to the profits of competing firms that are already in the index. They measure the impact on share prices as an indicator of future returns. Importantly, the authors do not look at the effects on the firm entering the index, which can have various causes. Instead, they concentrate on the effect on the competing firms that are already listed in the index.[287] Consistent with the common ownership hypothesis, they find that the positive effect on competitors only occurs when common ownership also increases with the entry of the firm.[288] Furthermore, the results suggest that all shareholders and not only large funds are relevant for the results and can influence the competitive outcome.[289]

2. Effects on Compensation

Some studies examine the relationship between common ownership and executive compensation. They try to clarify whether compensation could be a mechanism linking the possible interest of common owners in maximising industry profits with actual anti-competitive outcomes. Accordingly, they do not focus on the effects of common ownership per se, but on potential underlying mechanisms that could lead to these effects. As will be shown in this section, their results are mixed.

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[284] *Koch/Panayides/Thomas*, Journal of Financial Economics 2021,109, 132.

[285] *Koch/Panayides/Thomas*, Journal of Financial Economics 2021,109, 135.

[286] *Boller/Scott Morton*, Testing the Theory of Common Stock Ownership, NBER Working Paper Series, July 2020, Working Paper 27515.

[287] *Boller/Scott Morton*, Testing the Theory of Common Stock Ownership, NBER Working Paper Series, July 2020, Working Paper 27515, p. 2.

[288] *Boller/Scott Morton*, Testing the Theory of Common Stock Ownership, NBER Working Paper Series, July 2020, Working Paper 27515, p. 57.

[289] *Boller/Scott Morton*, Testing the Theory of Common Stock Ownership, NBER Working Paper Series, July 2020, Working Paper 27515, p. 58.

The study "Common Ownership, Competition and Top Management Incentives"[290] ("Compensation Study") by *Antón et al.* addresses the issue of a possible link between the compensation of top executives and their competitive behaviour as market participants. It does not provide direct evidence of a relationship between pricing and common ownership, but it does provide support for a potential underlying mechanism that could link higher prices and common ownership. It tests the hypothesis that compensation is the mechanism that alters managerial incentives, and, in turn, causes anti-competitive effects.

The study uses the MHHI delta to measure the level of common ownership. The authors conclude that managerial wealth is less sensitive to firm performance when the MHHI is higher and competitors have common owners.[291] Accordingly, management incentives of commonly owned firms are aligned through their compensation structure. As incentives are more aligned between commonly owned firms, direct communication between two commonly owned firms, or portfolio firms and shareholders is not a necessary mechanism for anti-competitive effects.[292] The study does not directly provide a reason for changes in executive compensation with more common ownership. However, it suggests that common owners, who have no direct control over pricing, create low incentives for the management to compete, which in turn leads to higher prices.[293]

The results have been criticised as implausible. Asset managers would not be in a position to fine-tune compensation structures as they are not involved in the design of compensation.[294] The study does not directly address this issue and does not examine the channels through which shareholders might influence compensation contracts.[295]

Overall, the study suggests that compensation provides a mechanism that links investors' anti-competitive incentives to their implementation through management decisions. However, there are other studies that examine the relationship between common ownership and executive pay, with both supportive and contradictory results.

Kwon concludes that higher levels of common ownership lead to more relative performance-based compensation, a different result from the Compensation Study.[296] Apart from also using the MHHI delta as a measure for the level of common ownership, the empirical approach differs

[290] *Antón/Ederer/Giné/Schmalz*, Journal of Political Economy 2023, 1294.
[291] *Antón/Ederer/Giné/Schmalz*, Journal of Political Economy 2023, 1294, 1349.
[292] *Antón/Ederer/Giné/Schmalz*, Journal of Political Economy 2023, 1294, 1296.
[293] *Antón/Ederer/Giné/Schmalz*, Journal of Political Economy 2023, 1294, 1308.
[294] *BlackRock,* Viewpoint "Index Investing and Common Ownership Theories", March 2017, p. 10.
[295] See Chapter 2.C.II.2.c)(2) for a theoretical analysis of compensation as a causal mechanism.
[296] *Kwon,* Executive Compensation under Common Ownership, November 2016, Working Paper, p. 34.

significantly from the Compensation Study. For instance, the data sets analysed, the industry specifications and the performance measures differ considerably.[297]

Liang finds results that support the Compensation Study.[298] The study does not use the MHHI delta but instead employs a dummy variable approach: It defines two firms as co-owned if they have a common investor with more than 5% of the shares.[299] As common ownership increases, executive pay becomes more sensitive to the performance of co-owned rivals. These executives therefore have greater incentive to cooperate.[300] It supports the idea that compensation could be used to reduce managers' incentive to compete with commonly owned rivals.

In conclusion, the Compensation Study suggests that executive compensation incentivises managers of commonly owned firms to take into account the profits of a rival firm because their compensation is less performance-based than in other markets. The incentives to improve relative performance are lower than in the absence of common ownership. This finding is supported by a similar study by *Liang*. In contrast, *Kwon's* paper challenges this result by finding a positive relationship between common ownership and relative performance evaluation. The different studies show that it is important how executive compensation is measured.

Accordingly, the empirical evidence on compensation as a possible mechanism for anti-competitive effects is mixed. It is possible that compensation is one of several reasons for higher prices in the context of common ownership, but it is not clear that it has a major impact and is a primary concern. Although it would make sense that common owners would push for compensation not to be too closely linked to individual performance, the official guidelines of many institutional investors and proxy advisors favour a strong use of relative performance evaluation (RPE).[301] This seems to be at odds with some of the empirical findings. More research is needed to assess the effect of common ownership on executive pay.

As will be shown in Chapter 2.C., compensation is not necessarily the dominant causal mechanism linking common ownership and anti-competitive effects. Several other channels can plausibly explain anti-competitive effects as well.

[297] *Kwon,* Executive Compensation under Common Ownership, November 2016, Working Paper, p. 10 f.
[298] *Liang*, Common Ownership and Executive Compensation, October 2017, Working Paper.
[299] *Liang*, Common Ownership and Executive Compensation, October 2017, Working Paper, p. 8 f.
[300] *Liang*, Common Ownership and Executive Compensation, October 2017, Working Paper, p. 25 f.
[301] *Rock/Rubinfeld*, Antitrust Law Journal 2020, 201, 240.

3. Other Effects of Common Ownership

There are several other studies that examine the links between common ownership and various effects on firm behaviour and the economy. This research has raised new issues, such as the positive effects on research and development, and cooperation between firms.

a) Innovation

Several studies have focused on increased innovation as a possible positive effect of common ownership. *Lopez* and *Vives* provide a theoretical analysis of possible welfare-enhancing effects of common ownership through increased R&D activity.[302] They conclude that common ownership can be positive for innovation and efficiency enhancing under certain conditions. The most important factor is the extent of spillovers. If the spillovers between competitors are sufficiently large, common ownership can increase innovation.[303] In highly concentrated markets, however, there is no welfare-enhancing effect.[304]

Antón et al. empirically test the effects of common ownership on innovation.[305] They find that innovation activity is higher when there are technological spillovers between commonly owned firms and their distance in the product market is greater. *Kostovetsky* and *Manconi* observe the diffusion of innovation between commonly owned firms.[306] They find that the rate of patent citations is positively associated with higher levels of common ownership. They interpret this as a sign that common ownership increases the diffusion of innovation between firms.[307] *Geng et al.* find that the success of patents is greater with more shareholder overlap.[308] *Borochin et al.* conclude that common ownership by diversified long-term investors encourages innovation while common ownership by short-term investors discourages innovation.[309]

Overall, the empirical evidence suggests that common ownership can have a positive effect on innovation, and it can increase cooperation in this area. Economic theory also suggests that these positive effects can occur, at least under certain circumstances.

[302] *López/Vives*, Journal of Political Economy 2019, 2394.
[303] *López/Vives*, Journal of Political Economy 2019, 2394, 2432.
[304] *López/Vives*, Journal of Political Economy 2019, 2394, 2432.
[305] *Antón/Ederer/Giné/Schmalz*, Journal of Financial Economics 2022, 44.
[306] *Kostovetsky/Manconi,* Common Institutional Ownership and Diffusion of Innovation, April 2020.
[307] *Kostovetsky/Manconi,* Common Institutional Ownership and Diffusion of Innovation, April 2020, p. 29.
[308] *Geng/Hau/Li*, Patent Success, Patent Holdup, and the Structure of Property Rights, April 2020, Swiss Finance Institute, Research Paper Series No. 15-39.
[309] *Borochin/Yang/Zhang,* Common Ownership Types and Their Effects on Innovation and Competition, May 2020, available at: https://ssrn.com/abstract=3204767.

b) Voluntary Disclosure

Two studies find that common ownership is correlated with increased voluntary disclosure.[310] One study uses both the MHHI as a variable to measure common ownership and applies an indicator variable that equals 1 if firms have a common owner with at least a 5% shareholding. The study uses proxies for firms' voluntary disclosure and find that measures of common ownership are positively associated with all their proxies for voluntary disclosure.[311] A second study supports this result and finds that common ownership is associated with greater voluntary disclosure of management forecasts of earnings and capital expenditure.[312] This increased disclosure could be explained by three rationales: (i) common owners apply pressure, (ii) the firm anticipates that disclosure will benefit commonly owned firms, or (iii) lower levels of competition make disclosure less costly for firms.[313]

c) Merger Activity

Several studies focus on the effect of common ownership between firms on the likelihood and the performance of mergers.[314] Two studies find that the level of common ownership has a positive effect on the likelihood of mergers. One of them concludes that a higher degree of common ownership between merging firms has an additional positive effect on the performance of the deal and leads to better long-term performance.[315] Another study takes a more critical perspective. While it also finds that common ownership contributes to higher merger activity, it also concludes that more "bad deals" for the acquiring firm are approved with higher common ownership. The underlying reason could be that for common owners the losses of a bad deal for the acquiring firm may be outweighed by the fact that common owners are also invested in rivals that may perform better after the merger.[316] The overall outcome of a merger may be positive for the common owners even though the merger itself was a "bad deal" for the acquirer. Another study concludes that the likelihood of a competing bid is lower when the acquirer and the target have a common owner.[317]

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[310] *Pawliczek/Skinner/Zechman*, Journal of Accounting Research 2022, 1651; *Park/Sani/Shroff/White*, Journal of Accounting & Economics 2019, 387.

[311] *Pawliczek/Skinner/Zechman*, Journal of Accounting Research 2022, 1651, 1653.

[312] *Park/Sani/Shroff/White*, Journal of Accounting & Economics 2019, 387.

[313] *Pawliczek/Skinner/Zechman*, Journal of Accounting Research 2022, 1651, 1687.

[314] *Antón/Ederer/Giné/Schmalz*, Journal of Financial Economics 2022, 44; *Brooks/Chen/Zeng*, Journal of Corporate Finance 2018, 187; *Irani/Yang/Zhang*, How Are Firms Sold? The Role of Common Ownership, February 2023, available at: https://ssrn.com/abstract=3461284.

[315] *Brooks/Chen/Zeng*, Journal of Corporate Finance 2018, 187, 213.

[316] *Antón/Ederer/Giné/Schmalz*, Journal of Financial Economics 2022, 44, 58.

[317] *Irani/Yang/Zhang*, How Are Firms Sold? The Role of Common Ownership, February 2023, available at: https://ssrn.com/abstract=3461284.

d) Market Entry

Common ownership may also affect the likelihood of market entry. One study focuses on the market entry of generic drugs in the pharmaceutical industry.[318] It finds that higher levels of common ownership significantly reduce the likelihood of a generic's entry. Since the loss of revenue to the branded firm is usually much higher than the gain from the generic's entry, a common owner may have the incentive and ability to block entry.[319] This is consistent with the theory that common ownership affects a firm's strategic decision making and may lead firms to take into account the effect of their actions on other firms' profits.

Another paper examines patent infringement lawsuits brought by branded firms against generic manufacturers.[320] It finds that higher common ownership between brand and generic firms is positively associated with the likelihood that two firms reach a settlement agreement. This is consistent with the common ownership hypothesis that firms' incentives to cooperate with competitors increase and they are more likely to settle a lawsuit.

These studies are closely related to the studies of competitive effects, as the likelihood of entry affects market concentration and the level of competition in an industry: A lower probability of entry also means less potential competition from outsiders.

e) Firm Financial Policy

Another paper found a correlation between a firm's cash holdings and the MHHI delta.[321] Increases in the MHHI delta led to lower cash holdings. The reduced uncertainty that could be associated with higher levels of common ownership could lead firms to hold less cash reserves because they do not feel the need to insure themselves against negative events.[322]

f) Vertical Effects

Instead of focusing on horizontal effects on coordination between competitors, other studies examine possible vertical effects of common ownership. One study finds that a firm receives larger loans at lower interest rates if it shares common owners with the bank.[323] The effect is larger for smaller and unrated firms. This could suggest that common owners reduce

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318 *Newham/Seldeslachts/Banal-Estanol*, Common Ownership and Market Entry: Evidence from the Pharmaceutical Industry, June 2018, DIW Berlin Discussion Paper No. 1738.

319 *Newham/Seldeslachts/Banal-Estanol*, Common Ownership and Market Entry: Evidence from the Pharmaceutical Industry, June 2018, DIW Berlin Discussion Paper No. 1738, p. 34.

320 *Xie/Gerakos*, AEA Papers and Proceedings 2020, 569.

321 *Semov*, Common Ownership, Competition and Firm Financial Policy, April 2017, available at: https://ssrn.com/abstract=2956062.

322 *Semov*, Common Ownership, Competition and Firm Financial Policy, April 2017, p. 1 f., available at: https://ssrn.com/abstract=2956062.

323 *Ojeda*, Common Ownership in the Loan Market, January 2019, available at: https://waldotekampa.me/files/Ojeda_ BankingCommonOwnership.pdf.

information asymmetries and act as a channel for better information.[324] Another study supports this notion by showing that common ownership can strengthen customer-supplier-relationships and facilitate vertical cooperation.[325] These studies show that common ownership can also affect the vertical relationship between firms.

4. Preliminary Results

Many studies have examined the effects of common ownership. Most conclude that common ownership has effects ranging from reduced competition to increased merger activity and voluntary disclosure. It may also affect vertical relationships between firms. All these studies exemplify that common ownership between competing firms can change their strategies and market behaviour. Although the possible effects of common ownership cover a wide range of areas, they show that management is likely to be aware of the underlying shareholder structure, or that there are other mechanisms at work that lead to changes in firm behaviour. The majority of the studies suggest that a firm's ownership affects its behaviour.

Most importantly, there is evidence that common ownership leads to higher prices in product markets. The studies that have been carried out so far cannot unequivocally identify common ownership as the cause of price effects. Despite the ongoing debate about the empirical and econometric approach, a major shortcoming of the empirical studies is that they only examine a few markets and do not yet provide sufficient evidence to generalise the results to a wider set of markets. Further research is therefore needed. This research may show that there are only certain market conditions that allow common ownership to have an effect on prices. For example, the airline industry may have some characteristics that are not present in other markets. Many studies may not find price effects of common ownership and there are several studies that justify scepticism about broad and economy-wide effects of common ownership. The availability of data is a major issue for future empirical studies.

There is also an ongoing debate about the best empirical approach to identify effects on competition. These issues are likely to remain unresolved and controversial for some time to come. Thus, it is important to have a reliable theoretical background for evaluating common ownership and its anti-competitive effects. It is clear that common ownership can have anti-competitive effects in extreme cases where the common owner controls several firms. However, it is important to study the determinants of anti-competitive effects in different situations – especially when the level of control is more ambiguous or when there is no possibility to directly influence the firms. The empirical studies strongly challenge the traditional

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[324] *Ojeda*, Common Ownership in the Loan Market, January 2019, p. 36, available at: https://waldotekampa.me/files/Ojeda_ BankingCommonOwnership.pdf.

[325] *Freeman*, Overlapping Ownership Along the Supply Chain, Kelly School of Business Research Paper No. 16-84, December 2021.

assumption that firms only maximise their own firm value.[326] The anti-competitive incentives of common owners pose a threat to the competitiveness of the markets concerned.

In the literature, the empirical studies have received both positive and negative reactions. Some have concluded that the empirical evidence justifies competition concerns.[327] Others have expressed scepticism about the empirical results.[328] The Airline Study has addressed many of the critical points with additional robustness tests. Nonetheless, an important issue that has not been addressed is whether the MHHI is a useful measure to empirically study common ownership at all, or whether other measures should be used.

Although the initial studies were heavily criticised and the empirical evidence on the anti-competitive effects of common ownership is far from conclusive, the evidence that common ownership can have anti-competitive effects is strong. The following analysis assumes that there is indeed a relationship between common ownership and the intensity of competition. Economic theory generally supports this assumption.

However, before focusing on the legal implications this may have, it is important to evaluate the potential underlying mechanisms that could provide a link between the ownership structure and price effects. In particular, the ability of investors to influence firm behaviour are relevant in this context. One example of such a mechanism, which has already been discussed is the role of executive compensation structure. There are also other possibilities that should not be ignored, e.g., the use of voting rights.

A narrow focus on the empirical studies obscures the fact that there is a large potential risk to competition arising from the existing patterns of common ownership.[329] If there is a structural risk to competition, it needs to be examined independently of evidence that this anti-competitive potential has materialised in specific markets.[330] Focusing only on empirical observations has shortcomings because the studies focus on unilateral effects and do not test for coordinated effects. Thus, these studies may miss an important aspect of common ownership. Furthermore, empirical studies require sufficient data. If data are not available or the data sources are not reliable, empirical studies reach a dead end. As an additional caveat, it should also be noted that empirical research is unlikely to reach a point where there is

[326] *Schmalz*, Annual Review of Financial Economics 2018, 413, 441 f.
[327] *Schwalbe*, Journal of European Competition Law & Practice 2018, 596, 601; *Elhauge*, Harvard Law Review 2016, 1267; *Posner/Scott Morton/Weyl*, Antitrust Law Journal 2017, 669.
[328] *O'Brien/Waehrer*, Antitrust Law Journal 2017, 729; *Rock/Rubinfeld*, Antitrust Law Journal 2018, 221, 240 ff.; *Woodbury*, CPI Antitrust Chronicle, June 2017, 26, 32 f.
[329] *Wambach/Weche*, Wirtschaftsdienst 2019, 575, 579 f.
[330] *Wambach/Weche*, Wirtschaftsdienst 2019, 575, 579 f.

"definitive proof". Empirical research can only infer causality, not prove it, and must also work in conjunction with a strong theory.[331]

Regardless of the importance of the empirical evidence, a debate on common ownership is necessary, and the theory of harm is important both for the overall understanding of the issue and for the assessment of individual cases in different industries. These industries may not yet have been studied empirically, or empirical research may be difficult due to a lack of data. In these cases, it is important to have a general theoretical understanding of the effects of common ownership.

[331] *Schmalz*, The Antitrust Bulletin 2021, 12, 18; *Posner*, The Antitrust Bulletin 2021, 140, 142.

C. The Causal Mechanisms

I. Overview

The causal mechanism is largely irrelevant to the empirical finding of a correlation between price and common ownership. However, it is central to the application of competition law and to potentially finding a viable solution to the problem. Understanding the mechanism by which an ownership structure may lead to an anti-competitive outcome helps to ensure the correct application of the law and to identify targeted reform proposals.[332] If there is a clear channel through which competition is reduced, it is possible to design a policy that eliminates the effect without affecting ownership itself.[333] Therefore, it is important to consider different mechanisms in order to better understand and discuss the different approaches to tackling the problem more accurately. There are no cases where competition authorities have collected positive evidence of anti-competitive or collusive conduct, and no precise mechanism has yet been established. This means that the discussion has to be based on theories and the plausibility of different channels compared to others.

In general, two broad mechanisms can be distinguished: active and passive. Active mechanisms assume that investors actively influence a firm's decision. A passive mechanism, on the other hand, does not imply any active behaviour on the part of the institutional investor but assumes that only the ownership structure causes harm without the need for additional action on the part of the common owners.

As a starting point it is helpful to understand how these potential mechanisms might operate. Furthermore, one mechanism may generally be better at explaining the way in which an ownership pattern leads to anti-competitive outcomes, and there may also be some specifications that make one mechanism more likely in certain circumstances.

For either mechanism to work, two steps are required: *First*, there must be an incentive for the institutional investor to prefer a less competitive outcome to fierce competition. If investors do not benefit from establishing collusion or softer competition, there is no reason to engage in any activity that might reduce competition. Managers would also have no reason to internalise anti-competitive objectives on their own. *Second*, it must be answered whether a passive or active mechanism can explain potential anti-competitive effects.

Accordingly, the next section first examines the hypothesis that common owners have incentives to reduce competition between their portfolio companies. In a next step, these

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[332] *Hemphill/Kahan*, Yale Law Journal 2020, 1392, 1399.

[333] *Scott Morton,* Horizontal Shareholding, A Summary of the Argument, CPI Antitrust Chronicle, January 2018, p. 4.

incentives may become relevant for the management of portfolio companies. While the investors' anti-competitive incentives are a prerequisite for both the active and the passive mechanism, the ability and opportunity to influence firm strategy depend on whether the common owners exert an active influence or are passive.

In addition, for active mechanisms, the question is whether common owners do not only have a general incentive to favour less competition, but also sufficient incentives to use active mechanisms. Even if common owners prefer market profits to firm profits, they may still refrain from influencing their portfolio companies because they lack incentives to engage and only passively favour less competitive market conditions.

II. The Incentives of Common Owners

The general interest in reduced competition is clearest in the case of a direct common owner, whereas it is more complex in the case of an institutional investor. For institutional investors, a further distinction has to be made between active and passive investors.

1. Incentives of Direct Owners

The theory that common ownership leads to anti-competitive incentives is based on the relatively simple assumption that owners who are diversified across a market have an interest in less competition because they benefit from maximising the profits of their portfolio. Thus, the interest is not in increasing the profits of each individual firm in the portfolio, but in maximising the profits of all the firms in the portfolio.[334]

An example may be helpful: A group of shareholders has equal stakes in two competing companies, A and B. They are common owners of both companies. If firm A gains market share at the expense of firm B, they will not benefit. Since market share is a zero-sum game, if firm A gains market share, firm B loses market share. This aggressive strategy would also cause firm B to lower its prices in response – a socially desirable outcome. Firm A would profit individually. However, from the point of view of the owners who are also invested in firm B, this is not a good outcome. For these common owners, firm A's individual gains must be weighed against firm B's losses. And since prices are now lower, the combined profits of A and B would shrink. The portfolio would be worth less overall. In this case, it is clear that the common owners have an interest in ensuring that the joint profits of firm A and B are maximised.[335] This increase in profits can be achieved by reducing competitive pressure.[336] Therefore, highly competitive

[334] *Rosati et al.*, Common Shareholding in Europe, 2020, p. 149.
[335] *Patel*, Antitrust Law Journal 2018, 279, 290 f.
[336] *Schwalbe*, Journal of European Competition Law & Practice 2018, 596, 597.

strategies that would only be profitable for one of the two competitors are not in the interest of the common owners.

Of course, there are some more complexities than this basic example suggests. These arise from the fact that the level of common ownership concentration can vary widely across markets and firms. Common owners may have very uneven stakes in competing firms.[337] It is plausible that if common owners have a significantly larger stake in one particular firm, it will initially be in their interest that the firm with the larger stake maximises its profits.

2. Incentives of Active Funds

For institutional investors, as typical common owners, a further complication is that they are not the direct owners of their assets. They do not benefit directly from the investment. The ultimate beneficiaries are the individual investors who invest in the funds. The result of reduced competition and higher profits would mainly benefit these ultimate owners. They benefit directly from the higher profits of the portfolio firms.

The profits and therefore the incentives of actively managed funds are very similar to those of direct owners, but they can only capture a fraction of the benefits. The active fund can benefit indirectly from an increase in firm value. Improved performance of a portfolio firm indirectly affects the institutional investor as a financial intermediary in two main ways. *First*, it changes the relative performance of a fund and affects fund inflows.[338] When a fund performs well, it earns higher returns, and this increases the flow of investment into the fund. This also has a positive impact on the incentive-based compensation of fund-managers.[339] *Second,* it affects the assets under management in general. This in turn increases the management fees. As management fees are usually calculated as a percentage of the assets under management, this creates incentives to increase the value of the assets.[340] An empirical study has also shown that institutional investors benefit substantially from increases in share value both through higher management fees and higher fund inflows.[341] This shows that institutional investors are interested in the performance of their portfolio firms despite the fact that they are only financial intermediaries and not the ultimate owners.

Furthermore, if fund managers strictly follow the interests of their ultimate investors, they have incentives to facilitate collusion and to maximise the aggregate profits of all their portfolio

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[337] *Rock/Rubinfeld*, Antitrust Law Journal 2018, 221, 232 ff.
[338] *Lewellen/Lewellen*, The Journal of Finance 2022, 213, 214.
[339] *Scott Morton/Hovenkamp*, The Yale Law Journal 2018, 2026, 2031.
[340] *Hemphill/Kahan*, Yale Law Journal 2020, 1392, 1430.
[341] *Lewellen/Lewellen*, The Journal of Finance 2022, 213.

firms.[342] By maximising the aggregate value of their funds' shares, they would also be pursuing the interests of their investors.

A further complication is that most funds belong to fund families, which may not have the same incentives. It could be argued that the incentive of a fund family is not simply the aggregate of its holdings, but depends on the underlying incentives of the different funds.[343] Since the different funds have different margins and therefore the interests of some funds may be more important than others, a simple aggregation and a combined incentive would not be plausible.[344] But this argument would require a micro-management to calculate the incentives for which there is no empirical support. Moreover, it would be very costly to maintain such a method of micro-management. In addition, even though an individual actively managed fund may have an incentive to favour profit maximisation for a single firm, that fund will also benefit from a reduction in competition because it is profitable for all firms and hence for their shareholders.[345]

Moreover, the managers of the portfolio firms would have to be able to identify such incentives. However, most funds aggregate their votes at the fund family level and vote their shares identically.[346] This means that the fund family level is the important reference point for both portfolio companies and investors, as institutional investors do not engage with portfolio firms at the level of a single fund but for the whole fund family.[347] Thus, it is implausible for portfolio companies to identify the potentially complex incentives of different funds in a fund family. Accordingly, when responding to the incentives of their shareholder base, they are likely to consider the shareholders at the fund family level.

3. Incentives of Passive Funds

For passive funds, which do not actively select a portfolio but track an index, the incentives are somewhat different. Although passive funds also benefit from the overall performance of their funds, they do not gain a competitive advantage from reduced competition and higher profits in an industry. This is because index investors do not try to outperform other funds, since all funds that replicate a given index perform similarly. Index funds compete on cost, customer service and their ability to correctly track the performance of an index.[348] An active fund attracts more investment inflows when it performs well. Passive funds lack this characteristic. Because

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[342] *Rotemberg*, Financial Transaction Costs and Industrial Performance, MIT Working Paper, 1984, p. 32.
[343] *Koch/Panayides/Thomas*, Journal of Financial Economics 2021,109.
[344] *Lambert/Sykuta,* Virginia Law and Business Review 2019, 213, 240 f.
[345] *Rock/Rubinfeld*, Antitrust Law Journal 2020, 201, 216.
[346] *Fichtner/Heemskerk/Garcia-Bernardo*, Business and Politics 2017, 298, 317.
[347] *Frazzani et al.*, Barriers to Competition through Common Ownership by Institutional Investors, 2020, p. 47.
[348] *Appel/Gormley/Keim,* Journal of Financial Economics 2016, 111, 112.

index funds have similar portfolios, their returns do not differ significantly. Therefore, an increase in the fund's performance does not translate into a competitive advantage over other competing index funds.[349] Admittedly, a passive fund does not benefit relative to its competitors because all funds tracking the same index grow equally. Nevertheless, a passive fund does benefit from the fact that a fund's profits increase as assets under management grow. Funds are paid as a percentage of the value of their assets. So, as the total value of their assets rises, funds will generate higher profits.[350] Coupled with the general interest in reducing competition between commonly owned firms, this also creates anti-competitive incentives for passive funds.

Another reason why passive investors may be less interested in reducing competition is that they may be diversified across many industries, not just one. Funds may not only be diversified across individual industries, but may also hold shares in companies that are vertically related or may otherwise be affected by changes in another industry. If prices rise in one industry this could lead to higher costs in another industry in which the investor holds shares.[351] Although, this problem theoretically exists for all investors, it is especially relevant to passive funds because they are more broadly diversified. For example, an index fund may simultaneously hold shares in airlines, hotels, car rental companies and other companies that operate in markets that are related to air travel. Firms in related markets may suffer from higher prices for air travel as an input cost or fewer customers for their services. Consequently, the institutional investors who are invested in both the original industry and vertically related markets would also suffer.[352] Assuming that managers seek to maximise the portfolio value for their investors, their incentives are less clear when they also consider the impact on vertically related firms. Therefore, the overall effect of maximising industry profits for the institutional investor may not be clear and institutional investors, especially passive funds, may not have an incentive to maximise industry profits over firm profits.[353] It would be extremely difficult to calculate these effects for all the firms in which they hold shares.[354] If vertically related companies were included in the incentives of common owners, the maximising their shareholder value would become more complex. This could be difficult for management to resolve and would mitigate the incentives to raise prices.

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[349] *Bebchuk/Cohen/Hirst*, Journal of Economic Perspectives 2017, 89, 97 f.; *Lambert/Sykuta,* Virginia Law and Business Review 2019, 213, 233.
[350] *Frazzani et al.*, Barriers to Competition through Common Ownership by Institutional Investors, 2020, p. 59.
[351] *Lambert/Sykuta,* Virginia Law and Business Review 2019, 213, 234.
[352] *Baker*, Harvard Law Review Forum 2015-2016, 212, 225.
[353] *Lambert/Sykuta*, Regulation, Fall 2018, 28, 30 f.
[354] *Rock/Rubinfeld*, Antitrust Law Journal 2018, 221, 236.

However, these potential holdings in vertically related firms do not negate the general anti-competitive incentives. Even if the inclusion of vertically related markets were convincing, it can only reduce these incentives, not eliminate them. Furthermore, there is no actual evidence that common owners have comparably large investments in vertically related firms and the hypothesis that this complexity negates anti-competitive effects conflicts with the empirical studies that show such effects.[355] It may sometimes be the case that passive funds also hold stakes in vertically related firms. They are more likely to hold shares in vertically related industries because they are broadly diversified. Nonetheless, this will mainly be the case when both industries have firms that are publicly listed and are included in the same index. Often, however, ownership and concentration of ownership will differ between vertically related industries.[356] One reason for this is that the concentration varies considerably between vertically related markets. While one market may be concentrated with most competitors publicly listed, vertically related retail markets may be less concentrated. Accordingly, the assumption that an index investor will naturally be a shareholder in vertically related firms is not obvious. Taking airlines as an example, it is argued that for large funds, airline holdings represent a small percentage of their investments. In contrast, other companies would bear the cost of higher air fares for their business travellers.[357] However, only 31% of airline passengers are business travellers, 17% of whom are employed by S&P 500 companies, so only 5% of air fares are incurred by companies in which the index funds are also invested.[358]

Moreover, if there is indeed a high level of common ownership in vertically related markets, there will also be less competition in those markets. Thus, the reduced level of competition in the two vertically related markets may accumulate and the competition problem may be exacerbated by common ownership in several related markets.[359] The negative effects on several markets may be cumulative and price increases would be passed on to consumers. Furthermore, the empirical studies have found these effects of common ownership despite possible effects on other markets. If prices have indeed risen in certain airline markets, it is difficult to argue that this should not have happened in theory.

In summary, passive funds also benefit from the growth of their assets under management because it increases their fees. Common ownership in several related markets may perhaps reduce the anti-competitive incentives. However, there are no indications that these linkages are sufficiently strong and there is no general rule to prove this effect. They could be a factor to be assessed in specific cases where the investments in vertically related markets are indeed

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[355] *Elhauge*, Ohio State Law Journal 2021, 1, 46 f.
[356] *Elhauge*, Ohio State Law Journal 2021, 1, 47.
[357] *Lambert/Sykuta,* Virginia Law and Business Review 2019, 213, 234.
[358] *Elhauge*, Ohio State Law Journal 2021, 1, 47 f.
[359] *Elhauge*, Ohio State Law Journal 2021, 1, 49.

large. Nonetheless, even in such cases, the assessment of these links can only mitigate the anti-competitive effects. It does not change the anti-competitive effects as such. Even if one assumes that firms would maximise the value of a set of competing firms and take into account the effects on complementary products and vertically related markets, the result would still not be a competitive outcome. Common owners would still have a preference for maximising of the value of a particular set of firms – in the case of passive funds mostly publicly listed firms in the relevant index.

4. Preliminary Results

All common owners have incentives to maximise the value of their portfolio. Highly diversified owners do not have incentives to push their portfolio firms to actively compete for market share and better relative performance. This is true for a direct shareholder and for actively managed funds. In the case of passive funds, several factors may mitigate these incentives, but they do not negate the general anti-competitive incentives of common owners.

The general incentive of shareholders towards the reduction of competition and the maximisation of portfolio value is a core element of the theory of common ownership. It is plausible that there is an incentive to promote industry profit maximisation rather than individual firm profit maximisation. Investors' interest in less competition provides an anti-competitive potential. But these incentives alone are not sufficient to establish the likelihood of an actual anti-competitive harm. For actual anti-competitive harm to occur, these must transfer to the portfolio firms. There must be the opportunity of influencing the companies, of facilitating a parallel conduct or there must be reason to believe that the portfolio firms proactively act in the interest of their investors by unilaterally softening competition or by tacitly colluding.[360] It is therefore important to distinguish between active and passive mechanisms. Active mechanisms rely on investors actively encouraging anti-competitive behaviour, whereas passive mechanisms assume that the common owners do not actively encourage competitive behaviour by their portfolio firms.

III. The Potential Mechanisms

1. Active Mechanisms

a) Incentive to Influence Companies

Having established the plausible anti-competitive incentives of common owners, it is important to ask how these incentives might affect firm strategy and market outcomes. One possible explanation is that common owners actively influence a portfolio firm to raise prices or

[360] *Monopolkommission*, Wettbewerb 2016, Hauptgutachten No. 21, 2016, para. 675.

coordinate with competitors.[361] However, it is difficult to determine in general whether investors directly influence their portfolio companies in this way.

While there is a general preference for less fierce competition between portfolio companies, any active mechanism requires that investors have an incentive to actively influence their portfolio companies. If the institution benefits from supporting anti-competitive behaviour, it has an incentive to do so. For investors to have an incentive to engage, the additional profit must outweigh the cost of engagement. Therefore, the difference between the cost of engagement and the potential profit of increased performance and higher value of the portfolio firms is key.

In terms of profits, institutional investors tend to charge a fee as a percentage of assets under management, which means they benefit from good performance.[362] They can also attract new clients when their funds perform well.[363] Thus, they have an incentive to actively influence their portfolio firms when the increase in fees from better performance exceeds the cost of engagement. Through this channel, institutional investors still benefit from better firm performance, although their incentives are only indirect. As already shown above, active investors profit from both an increase in assets under management and an increase in fund inflows. For passive investors, the only relevant benefit is the increase in the value of their assets under management.[364]

On the cost side, any engagement activity is expensive. Smaller, non-controlling shareholders generally refrain from costly engagement activities. These investors face a collective action problem. While the individual cost of engagement is borne by only one investor, the potential benefits of improved performance are shared by all shareholders.[365] For passive investors, the problem is even greater. If the passive investor increases spending on engagement and stewardship, the improved performance would also benefit other passive funds invested in that index. Yet, the investor who engages bears all the costs.[366] This collective action problem is particularly relevant for passive investors because they cannot generate higher fund inflows by increasing fund performance.[367] They are primarily interested in delivering the returns of an index at low cost.[368] Any costs associated with corporate governance would consequently be counterproductive to limiting cost and would put the active shareholder at a disadvantage

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[361] *OECD*, Common Ownership by Institutional Investors and its Impact on Competition – Background Note by the Secretariat, 2017, para. 4.
[362] *Bebchuk/Cohen/Hirst*, Journal of Economic Perspectives 2017, 89, 96 f.
[363] *Lewellen/Lewellen*, The Journal of Finance 2022, 213, 214.
[364] *Frazzani et al.*, Barriers to Competition through Common Ownership by Institutional Investors, 2020, p. 59.
[365] *Davis*, European Management Review 2008, 11, 20.
[366] *Bebchuk/Cohen/Hirst*, Journal of Economic Perspectives 2017, 89, 98.
[367] *Bebchuk/Cohen/Hirst*, Journal of Economic Perspectives 2017, 89, 98.
[368] *Appel/Gormley/Keim,* Journal of Financial Economics 2016, 111, 112.

relative to competing index funds.[369] In addition, there is evidence that passive funds spend little on stewardship and employ few engagement and proxy voting staff. On average, they spend less than one person-workday per firm per year.[370]

Nevertheless, large institutional investors benefit considerably from an increase in fees. Thus, they have strong incentives to be active shareholders, since these incentives increase with the size of the investment.[371] It follows that the largest institutional investors with very large individual holdings also benefit substantially. The difference in incentives between passive and active funds is mitigated by the fact that they tend to belong to fund families that include both. To the extent that the holdings of active and passive funds overlap, this mitigates the potentially weak incentives of passive investors, as there are usually combinations of active and passive funds invested in each portfolio firm.[372]

When active and passive funds are combined into a fund family and engagement is aggregated at the fund family level, there is no additional cost of engagement for the individual fund.[373] If investors vote anyway, the only relevant choice is how to use their influence and how to cast the vote.[374] If shareholders engage and take decisions, the costs of taking either decision are the same, as there is usually no additional cost for voting one way or the other.[375] Thus, cost does not prevent passive funds from engaging.

Large institutions have strong incentives to be active shareholders.[376] Finally, there is evidence that passive investors regularly engage with companies and are active owners.[377] Accordingly, large common owners have plausible incentives to actively influence firms.

b) Channels of Influence

When considering direct influence as a possibility, there are generally three possible mechanisms for influencing a firm's strategy as a shareholder: Voice, Vote, and Exit.[378] Shareholders can engage with companies, use their voting rights to influence decisions, or sell their shares. In addition, instead of actively advocating anti-competitive behaviour, the

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[369] *Bebchuk/Cohen/Hirst*, Journal of Economic Perspectives 2017, 89, 97 f.
[370] *Bebchuk/Cohen/Hirst*, Journal of Economic Perspectives 2017, 89, 100.
[371] *Lewellen/Lewellen*, The Journal of Finance 2022, 213, 260.
[372] *Elhauge*, Ohio State Law Journal 2021, 1, 61 f.
[373] *Elhauge*, Ohio State Law Journal 2021, 1, 50.
[374] *Elhauge*, Ohio State Law Journal 2021, 1, 51.
[375] *Bebchuk/Cohen/Hirst*, Journal of Economic Perspectives 2017, 89, 96; *Elhauge*, Ohio State Law Journal 2021, 1, 51.
[376] *Lewellen/Lewellen*, The Journal of Finance 2022, 213, 260.
[377] *Appel/Gormley/Keim,* Journal of Financial Economics 2016, 111.
[378] *Hirschman*, Exit, Voice and Loyalty, 1970.

exchange of strategically relevant information between portfolio companies could also be a way to facilitate a collusive outcome.

(1) Voice

Institutional investors can influence strategic decisions by using their voice in behind-the-scenes meetings, earnings calls, or public statements. Private engagement with portfolio firms is at the heart of passive investors' efforts to engage with companies. According to institutional investors, this engagement is used to discuss various issues related to a firm's governance, but not product pricing.[379] Investors explain that they require managers to provide them with a strategic plan in order to compare firm conduct against this plan.[380]

However, there is little information on the specific content of the private meetings. Whether and to what extent product strategy or the call for less fierce competition is a subject of the communication remains unclear and an open question. Although many institutional investors publicly describe their broad objectives, there is little evidence of what is discussed in private meetings.

Using their voice, especially in private discussions, is perhaps the most important way for institutional investors to exert influence. One survey shows that 63% of large institutional investors engage in discussions with the management.[381] The authors of the survey conclude from their findings that investors try to engage with management through private discussions and only use voting when these private interventions are unsuccessful.[382] Another study finds that the discussion of "capacity discipline" in earnings calls between airlines and their investors led to a reduction in seats, and sees this as evidence that owners are using public communications to influence firms to reduce output.[383] Anecdotal evidence suggests that institutional investors discuss product market strategy with their portfolio firms.[384]

The use and effectiveness of private discussions is supported by statements from passive investors. Index funds do not spend a lot of money on engagement and employ very few people for this purpose.[385] Still, passive investors emphasise that they are not necessarily passive owners and that they use their voice to engage with portfolio companies and do so effectively. In one example cited by the European Commission, a representative of a large passive fund said:

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[379] *BlackRock,* Viewpoint "Index Investing and Common Ownership Theories", March 2017, p. 8.
[380] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1554.
[381] *McCahery/Sautner/Starks*, The Journal of Finance 2016, 2905, 2911.
[382] *McCahery/Sautner/Starks*, The Journal of Finance 2016, 2905, 2912.
[383] *Aryal/Ciliberto/Leyden*, Review of Economic Studies 2022, 3055.
[384] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1554 ff.
[385] *Bebchuk/Cohen/Hirst*, Journal of Economic Perspectives 2017, 89, 100.

"We have found through hundreds of direct discussions every year that we are frequently able to accomplish as much — or more — through dialogue as we are through voting. Importantly, through engagement, we are able to put issues on the table for discussion that aren't on the proxy ballot. We believe that our active engagement on all manner of issues demonstrates that passive investors don't need to be passive owners."[386] Glenn H. Booraem, Vanguard group

Passive funds only have passive investment strategies, but do not act like passive owners, i.e., they do not abstain from voting and engaging with a firm's management in private meetings. Various statements made by investors, such as the one cited above, as well as surveys show that passive investors actively engage with their portfolio companies.[387] Although shareholder engagement is not limited to passive funds and is practised by all types of investors,[388] these statements show that passive investors actively engage with firms. However, they are not evidence that the investors are influencing companies to reduce competition. Yet, it does show that many common owners are active owners, and that the portfolio firms know their major shareholders and recognise their preferences.

There is also some anecdotal evidence that issues of strategy may come up in these meetings. For instance, *Azar et al.* quote a representative of a financial institution invested in several airlines as demanding that airlines do not increase capacity and saying that similar conversations have taken place with other airlines.[389] The Wall Street Journal reported that there have been meetings between investors in the fracking industry where they discussed how to reduce capacity and make more profits, and agreed to send this message to fracking companies.[390]

This anecdotal evidence suggests that investors actively engage with their portfolio companies. They communicate with the management and discuss various issues in private meetings. Nonetheless, the exact topics which are discussed are unknown. Depending on the topics of the meetings, institutional investors can have a positive impact on corporate governance, and shareholder engagement is not undesirable in general. However, shareholder engagement can also potentially be used to negatively impact competition. Both investor statements and empirical evidence show that institutional and passive investors in

[386] Cited after *Commission*, Decision of 21.3.2018 in Case No. M.8084 – *Bayer/Monsanto*, para. 215.
[387] See for example *Appel/Gormley/Keim,* Journal of Financial Economics 2016, 111.
[388] *McCahery/Sautner/Starks*, The Journal of Finance 2016, 2905, 2913.
[389] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1555 f.
[390] *Olson/Cook*, Wall Street Tells Frackers to Stop Counting Barrels, Start Making Profits, Wall Street Journal, 13.12.2017.

particular play an active role as shareholders. Thus, private engagement is a channel for influencing corporate behaviour.

Many common owners use their voice to communicate with their portfolio firms. According to their own statements, this provides them with a solid basis for influencing these firms. However, this does not mean that they use their voice to promote anti-competitive behaviour. They claim that they focus only on general corporate governance issues and that they are effective in doing so. If the use of voice is effective in influencing companies, there is no reason why this influence cannot be used to promote anti-competitive conduct. Combined with the anti-competitive incentives of common ownership, this creates a risk that private discussions or public statements will be used to influence portfolio companies. Although the claims of investor influence must be treated with some caution, the argument is obvious: If passive investors claim to be able to influence a wide range of corporate decisions, there is no reason why they should not be able to influence pricing or output decisions in a similar way.[391]

Even if institutional investors do not use their engagement to promote anti-competitive conduct, it is still a possible way of influencing firms and, thus, is a potential risk to competition. The fact that investors claim to have a positive impact on corporate governance is insufficient to mitigate anti-competitive effects. There are no legal rules to enforce how investors use their influence and therefore no way to change investor behaviour. Most importantly, there is no way of knowing how institutional investors use their voice in private meetings.

(2) Voting

The other main channel through which passive investors can influence a firm is through voting. Shareholder voting is not primarily concerned with strategic decisions.[392] Accordingly, it is difficult to directly influence companies through voting.[393] It should also be noted that the ability to influence firm behaviour through voting depends on the national corporate law. In Germany, for instance, the opportunities to influence through voting are more indirect than under U.S. law. For example, according to § 199 AktG, the shareholders do not directly elect the board of directors, but only the supervisory board.[394] Nevertheless, shareholders can express their dissatisfaction with the board of directors by refusing to approve the actions of its members,

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[391] See also *Condon*, Washington Law Review 2020, 1, 27, who makes this argument in relation to ESG initiatives.

[392] *Monopolkommission*, Wettbewerb 2018, Hauptgutachten No. 22, 2018, paras. 441, 456.

[393] *BlackRock,* Viewpoint “Index Investing and Common Ownership Theories”, March 2017, p. 8.

[394] The supervisory board (*Aufsichtsrat*) is a governing body of the firm, which is primarily responsible for appointing the managing directors and monitoring the management. See *Habersack* in: Münchener Kommentar zum Aktiengesetz, Band 2, Fifth Edition, 2022, Vierter Teil, Zweiter Abschnitt, Vorbemerkung, para. 2.

§ 120 AktG (*Entlastung*). This vote has no direct legal consequences, but as it is a public expression of mistrust, it can have a negative impact on the reputation of directors.[395]

By contrast, in the U.S., investors do not directly influence the strategy of the firm, but they do elect the board of directors.[396] This puts them in a strong position to influence directors, since it incentivises managers to act in the interests of their largest shareholders in order to get re-elected.[397] Even in uncontested elections, lower shareholder support makes directors more likely to leave the board in the following year and also reduces their opportunities to become directors of other firms.[398] Some institutional investors recognise that voting against management acts as an implicit sanction.[399]

The combined voting power of the Big Three is important for votes in many companies.[400] The Big Three are major investors in many firms. These investment companies rarely split their votes among their fund families, so there is consistency in voting across funds.[401] They also vote more consistently than the average investor. As a result, the proportion of votes cast by the Big Three is usually higher than their shareholding in a company.[402] This gives them a decisive vote on the success of activists and corporate governance in general. Still, this does not necessarily mean that they use this power. However, given their incentives, it is not in their interest to vote for highly competitive strategies and, for example, to support activists. Furthermore, passive funds have incentives to defer to and largely support management.[403] Passive funds tend to simplify their voting decisions by developing guidelines that support director independence, link executive pay to long-term performance, and oppose changes in corporate structure and anti-takeover provisions.[404]

One particular way in which the voting power of influential common owners could be used is to protect management from activist shareholders. An example of this is the proxy fight between the hedge fund Trian and the management of DuPont in 2015, which is also referred to by the European Commission.[405] This case may be an example of the voting power of

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[395] *Kubis* in: Münchener Kommentar zum Aktiengesetz, Band 3, Fifth Edition, 2022, § 120, para. 38.
[396] *Bessler/Hockmann*, Journal of Banking Law and Banking 2016, 406, 420.
[397] *Elhauge*, Ohio State Law Journal 2021, 1, 10.
[398] *Aggarwal/Dahiya/Prabhala*, Journal of Financial Economics 2019, 134, 151.
[399] *Wallace*, Index Funds Must Use Their Huge Power Over Companies, Says BlackRock Chief Larry Fink, The Telegraph, 29.04.2018; A State Street governance representative explained: "*The option of exercising our substantial voting rights in opposition to management provides us with sufficient leverage and ensures our views and client interests are given due consideration*."
[400] *Griffin*, Maryland Law Review 2020, 954, 970 f.
[401] *Shenkar/Heemskerk/Fichtner*, CPI Antitrust Chronicle, June 2017, 51, 54.
[402] *Bebchuk/Hirst*, Boston University Law Review 2019, 721, 735 f.
[403] *Bebchuk/Hirst,* Index Funds and the Future of Corporate Governance: Theory, Evidence and Policy, NBER Working Paper Series, 2019, Working Paper 26543, pp. 28 ff.
[404] *Griffin*, Maryland Law Review 2020, 954, 965.
[405] *Commission*, Decision of 27.3.2017 in Case No. M.7932 – *Dow/DuPont*, Annex 5, paras. 46 ff.

common owners. DuPont's main competitor in the seed market was Monsanto. Both DuPont and Monsanto had a large overlapping shareholder base. Of the top six shareholders, five were the same in both companies. These five shareholders owned 21.9% of DuPont and 24.5% of Monsanto.[406] The only fund that was among the top six shareholders in DuPont and that was not invested in Monsanto was Trian. According to Trian, DuPont was underperforming relative to its competitors, mainly Monsanto. Therefore, Trian wanted to put directors on the board. Trian sought to achieve several goals: DuPont should invest more in R&D and try to gain market share. It also wanted DuPont to revise its compensation structure to focus more on relative performance.[407] In the end, its proposal was voted down.

The European Commission cited this example as a case study to illustrate the potentially conflicting interests of two types of large shareholders: large activist shareholders focused on the profitability of an individual firm, and large common shareholders with fewer incentives to promote competition.[408] It can be argued that the economic incentives of the investors likely led them to vote against the proposal. DuPont's largest shareholders who voted against the proposal are also the largest shareholders of Monsanto. Thus, these common owners have no interest in aggressive competition. This may have been one reason why shareholders voted against the proposal, but other explanations are also possible. The voting behaviour in the proxy fight is not evidence that the common owners voted against the campaign *because* they wanted less competition. But that is exactly what they achieved by voting down the activist proposal.[409] This brief case study shows that proxy voting can be a mechanism that does not directly influence corporate strategy but shields management from activists and allows them to enjoy a quiet life without pressure to compete aggressively. However, it is only one example and as such insufficient to establish a pattern.

In summary, voting does not provide investors with a channel for directly influencing strategic decisions, but it is an important way in which the investor can indirectly influence management. In Germany, although there is no direct election of the directors, it can still act as an implicit threat to management.

(3) Exit

Another channel of influence is the ability to exit. Exit and the threat of exit have traditionally been the most important tools for shareholders. The use of voice or voting both require activity,

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[406] *Schmalz,* How Passive Funds Prevent Competition, available at: http://ericposner.com/martin-schmalz-how-passive-funds-prevent-competition/.

[407] *Trian Partners*, DuPont – A Referendum on Performance and Accountability, 17.2.2015, available at: https://www.sec.gov/Archives/ edgar/data/30554/000093041315000692/c80358_ex-1.htm.

[408] *Commission*, Decision of 27.3.2017 in Case No. M.7932 – *Dow/DuPont*, Annex 5, para. 51.

[409] *Schmalz,* How Passive Funds Prevent Competition, available at: http://ericposner.com/martin-schmalz-how-passive-funds-prevent-competition/.

are costly, and do not have an immediate effect. If anything, they may require repeated, and sustained engagement and may even be ultimately unsuccessful. Exit is easier and cheaper than engagement.[410] It is also an important threat to support other means of engagement.[411]

However, the exit option is not available to passive investors who are often forced to hold their portfolio. At the very least, the exit option is not exercised because these investors are trying to deliver the return of a market index and are not using exit as a tool to influence managerial decisions.[412] From the perspective of the managers of the portfolio firms, the threat of exit can thus be ignored.[413] For passive investors, voting and voice become more important.[414]

There are two possible interpretations of this lack of an exit option. On the one hand, it may reduce the influence of investors who will continue to hold shares anyway. On the other hand, it may provide an incentive for investors to use means other than selling their shares. The fact that passive owners are permanently invested may increase their influence. For common owners who are simply broadly diversified but not passive investors, the exit option is still available and may support other channels of influence.

(4) Exchange of Information

Another way of influencing a firm's strategy could be to set up a system of information exchange. Knowledge of the general or specific strategy of other firms would help to establish a more cooperative behaviour. In this hypothetical scenario, one or more investors would act as an intermediary. It should be noted that, unlike the use of voice and voting – channels that are not generally illegal or undesirable – there is no evidence that investors actually exchange information between their portfolio companies. Nevertheless, the existence of common ownership links facilitates the possibility of exchanging information privately between portfolio companies. The exchange of information is not a direct way of influencing firm behaviour. However, it may facilitate collusive conduct that portfolio companies would have the incentive to initiate on their own but lack the means to implement.

c) Limitations

There are multiple practical and legal barriers that limit the influence of institutional investors. Limits to active mechanisms include fiduciary duties, either of portfolio firms to their shareholders or of investors to their clients, insider trading rules and the influence of non-

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[410] *Davis*, European Management Review 2008, 11, 20.
[411] *Fichtner/Heemskerk/Garcia-Bernardo*, Business and Politics 2017, 298, 306.
[412] *Appel/Gormley/Keim,* Journal of Financial Economics 2016, 111, 112.
[413] *Rock/Rubinfeld*, Antitrust Law Journal 2018, 221, 240.
[414] *Appel/Gormley/Keim,* Journal of Financial Economics 2016, 111.

common owners. The potential violation of competition law may also be a constraint, but will be discussed later.

(1) Fiduciary Duty of Management Towards Their Shareholders

One possible constraint that could limit the effect of common ownership is the fiduciary duty of a portfolio firm' management to its shareholders as a whole. While firms may have common owners who favour industry profit maximisation, they may also have undiversified owners who want the firm to maximise its own profit. If management were to act in the interests of only a small group of shareholders at the expense of the other owners, it would be in breach of its fiduciary duties to all shareholders.[415] These fiduciary duties exist in corporate law in EU member states and prohibit sacrificing profits to promote the interests of a small group of – diversified – shareholders.[416] The general idea is that the management of a company owes a duty to all its shareholders. Accordingly, it is prohibited to advance the interests of one or more shareholders to the detriment of the interests of the rest of the shareholder base. Management should not pursue a strategy that is supported only by a group of diversified shareholders at the expense of undiversified shareholders.[417]

However, there are certain factors that may limit the potential restraining effect of fiduciary obligation. As an overarching issue, it is questionable whether the management would disregard the interests of its largest shareholders in favour of a perceived interest of its shareholder majority. It is also unclear whether this sacrifice of one major shareholders' interest to the detriment of others is necessary for the emergence of common ownership effects.[418]

Common ownership does not necessarily lead to behaviour that is contrary to the interests of the firm and the majority of shareholders. For fiduciary duty to restrain management, undiversified owners must have a strong interest in seeing their portfolio firms act competitively. In this case, firms would have to disregard the interests of part of their shareholder base if they chose to follow a less competitive strategy. However, the immediate common goal of all shareholders is to improve the firm's performance which can be achieved through competition as well as collusion. By softening competition, the firm's profits can be even higher than by competing aggressively.[419] This means that the interests of undiversified owners are not necessarily disregarded when firms engage in anti-competitive behaviour. A cartel can be profitable for its members and therefore for its shareholders, whether or not they

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[415] *Lambert/Sykuta,* Virginia Law and Business Review 2019, 213, 236; *O'Brien/Waehrer*, Antitrust Law Journal 2017, 729, 765 f.
[416] *Frazzani et al.*, Barriers to Competition through Common Ownership by Institutional Investors, 2020, p. 69.
[417] *Lambert/Sykuta,* Virginia Law and Business Review 2019, 213, 236.
[418] *Elhauge*, Ohio State Law Journal 2021, 1, 32.
[419] *Schmalz*, Annual Review of Financial Economics 2018, 413, 422.

are common owners.[420] Accordingly, the general assumption that all undiversified shareholders have an interest in aggressive competition is unjustified. Non-common owners would not oppose actions that benefit the performance of their portfolio firms, only those where there are conflicting interests.[421] In conclusion, the assumption that undiversified shareholders favour aggressive competition and that common owners favour soft competition is unjustified in many cases, as all shareholders can benefit equally from less competition. Since common ownership effects do not require firms to sacrifice some of their profits for the benefit of their competitors, less competition would not automatically conflict with the interests of undiversified shareholders.[422]

Thus, it is not obvious that the management is strongly constrained by its fiduciary duty. It makes it less likely that managers will completely disregard the preferences of their own firm. But coordinated behaviour is in the interest of each firm individually, and in many cases increases firm value for all competitors. A non-common owner would not disagree with encouraging coordination between firms in order to maximise profits.[423] Common ownership means that there are shareholdings in several competing firms, which may also reduce the competitiveness of rival firms. Therefore, common ownership would increase profits for all firms at the same time and is not harmful – and even beneficial – to non-common owners.[424] This effect is in the interests of all shareholders and is therefore not in direct conflict with the interests of undiversified shareholders.

Thus, the fiduciary duty is a possible limitation on management's actions only when there is a conflict of interest between common owners and non-common owners. One case where a firm may take a unilateral action that is at least partly not in its own interest is the decision not to enter a market. A decision not to enter a market in favour of an incumbent firm is detrimental to one firm and beneficial to the other. For example, in the context of the pharmaceutical industry, a generic firm could delay entry to the benefit of the branded firm. This would only be good for the branded drug maker and would have no positive consequences for the generic firm.[425] This scenario was also the subject of two studies in the context of entry in the pharmaceutical sector.[426]

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[420] *Rock/Rubinfeld*, Antitrust Law Journal 2020, 201, 216.
[421] *Hemphill/Kahan*, Yale Law Journal 2020, 1392, 1402.
[422] *Boller/Scott Morton*, Testing the Theory of Common Stock Ownership, NBER Working Paper Series, July 2020, Working Paper 27515, pp. 8 f.
[423] *Hemphill/Kahan*, Yale Law Journal 2020, 1392, 1402.
[424] *Elhauge*, Ohio State Law Journal 2021, 1, 32.
[425] *Hemphill/Kahan*, Yale Law Journal 2020, 1392, 1402 f.
[426] *Newham/Seldeslachts/Banal-Estanol*, Common Ownership and Market Entry: Evidence from the Pharmaceutical Industry, June 2018, DIW Berlin Discussion Paper No. 1738; *Xie/Gerakos*, AEA Papers and Proceedings 2020, 569.

Nevertheless, even if there is a conflict of interest, it is questionable whether shareholders can detect and subsequently enforce this potential breach of fiduciary duty. In their paper on partial ownership, *O'Brien* and *Salop* discuss some of the shortcomings of the fiduciary obligation to restrain management. They acknowledge that both detecting and proving a breach of fiduciary duty can be difficult.[427] For example, the decision not to enter a market may be taken for a variety of reasons and is often accompanied by uncertainty. There will probably be no evidence that a firm did not enter a market because of its common owners. On the contrary, there are likely to be various reasons why it is in the firm's best interest not to enter a market. More generally, the high costs of litigation and the burden of proof make it difficult to bring a claim for breach of fiduciary duty.[428] As a result, fiduciary duty has a limited ability to change the managers' incentives and prevent possible anti-competitive conduct even in cases where shareholders' interests diverge. Even if the legal framework prohibits actions that are only in the interests of only a few shareholders and disregard the interests of the own firm, this does not mean that the legal rules can strictly determine the actual behaviour of managers. Fiduciary duty may create a legal risk for managers, but it does not actually prevent firms from acting less competitively or colluding.

Similarly, competition law does not expect fiduciary duties to sufficiently constrain management. Where a firm acquires a controlling interest in a competitor, competition law recognises the competitive risks and presumes that the acquiring firm has the ability to influence the behaviour of the acquired firm. If the fiduciary duty were sufficiently constraining, the acquiring firm would not be able to use its power to reduce competition between the firms because its management would be able to resist this influence. Any action in favour of the controlling firm would be against the interests of the shareholders of the acquired firm.[429] Since competition law does not accept that fiduciary duties restrain management in the case of direct shareholdings, there is no reason to assume that the opposite is true in the case of common ownership.[430]

In conclusion, fiduciary duties can only effectively constrain managers when the interests of shareholders diverge. A strategy to promote less fierce competition in an industry is not necessarily against the interests of undiversified shareholders. In cases where a conduct would potentially breach a fiduciary duty, detection and enforcement are difficult. Accordingly, there is no indication that fiduciary obligations can deter managers from engaging in anti-competitive behaviour.

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[427] *O'Brien/Salop*, Antitrust Law Journal 2000, 559, 580.
[428] *Burnside/Kidane*, Journal of Antitrust Enforcement 2020, 456, 479.
[429] *Elhauge*, Ohio State Law Journal 2021, 1, 33.
[430] *Elhauge*, Ohio State Law Journal 2021, 1, 33.

(2) Fiduciary Duty of Institutional Investors Towards Their Clients

Institutional investors have a fiduciary duty to all their clients, not all of whom have diversified portfolios. Some non-diversified clients may not favour industry profit maximisation. If an institutional investor takes action that increases the overall value of the portfolio, but not the value of the client's portfolio, it violates its fiduciary duty.[431] Nevertheless, similar to the fiduciary duties of the portfolio firms' managers, this duty is both difficult to prove and difficult to enforce. In addition, the non-diversified investor may also benefit from an overall increase in portfolio value.[432]

(3) Insider Trading Rules

Insider trading rules limit the type of information that portfolio firms can share with common owners and are particularly relevant to the potential exchange of information between portfolio firms and investors. In the EU, the Market Abuse Regulation[433] imposes an obligation under Article 17(1) for a publicly listed company to disclose to the public any material non-public information that it has disclosed to a limited group of individuals.[434] Any information relating to competitive strategy is likely to constitute inside information within the meaning of Article 7(1) lit. a). Therefore, a possible exchange of information has only limited relevance as a channel for creating anti-competitive effects.[435]

(4) Influence of Non-Common Owners

A de facto constraint on the influence of common owners is the possible countervailing influence of non-common owners. Firms that have common owners as their largest shareholders may simultaneously have a majority of shareholders who are not diversified. These undiversified investors do not have the same interest in maximising industry profits. It may seem implausible that this group of shareholders would be ignored by the management despite holding the majority of shares.[436] This is mainly a question of facts as to who can exercise control and whether a small shareholding provides sufficient leverage to influence firm strategy in the absence of large shareholders.

O'Brien/Waehrer provide an example to illustrate the issue. In their example, a common owner holds a small stake of 1% in all competing companies. The rest of the shares are equally distributed among a very large block of shareholders. In this scenario, it would be counterintuitive for the common owner to have full control of the firm, despite having a much

[431] *Hemphill/Kahan*, Yale Law Journal 2020, 1392, 1437.
[432] *Elhauge*, Ohio State Law Journal 2021, 1, 32.
[433] Regulation (EU) No 596/2014 of the European Parliament and of the Council of 16 April 2014 on market abuse (market abuse regulation).
[434] *Seitz*, Common Ownership im Wettbewerbsrecht, 2020, p. 121.
[435] *Monopolkommission*, Wettbewerb 2018, Hauptgutachten No. 22, 2018, para. 466.
[436] *Lambert/Sykuta,* Virginia Law and Business Review 2019, 213, 236 f.

larger relative shareholding than the other shareholders.[437] Nevertheless, it is not implausible that a 1% shareholder can influence a firm's strategy. Management will place at least some weight on the competitor's profits since someone must determine the firm's strategy.[438]

However, the degree of influence is unclear. Since larger shareholders are structurally more prominent, they may have some disciplinary power over management.[439] It could even be argued that, in the absence of other large shareholders, the largest owners are in a position to determine a firm's strategy.[440] It is unclear whether a dispersed group of undiversified shareholders has sufficient power to significantly influence management and set a limit to the influence of the common owners.

d) Preliminary Results

Common owners have an incentive to actively influence their portfolio firms. Moreover, in a good corporate governance system, shareholder influence is not an anomaly, but the norm.[441] This applies to both active and passive investors.

Voice, i.e., the use of private engagement or public statements, opens up a channel that can be used to influence corporate behaviour. There is evidence that passive investors regularly use their voice and engage directly with the management. Many institutional investors provide some information on the content of their meetings and their engagement priorities. However, the exact topics of these meetings are not known. Statements from common owners may be the most obvious and direct mechanism for common owners to influence portfolio firms.[442] Nonetheless, voice alone may not have a significant impact if it is not backed up by some means of reinforcing proposals. In addition, legal restrictions on direct communication in private meetings, e.g., regarding the exchange of information must be taken into account.

Voting is the second main way in which investors can exert influence. However, voting has only a limited ability to affect corporate behaviour. There is just a narrow range of decisions that can be influenced by shareholder voting. Voting can therefore primarily be a means of supporting direct engagement. Using voice may not be a binding, yet a persuasive method. In contrast, the binding votes are likely to be a secondary measure if efforts to apply pressure in private engagement meetings are unsuccessful.[443]

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[437] *O'Brien/Waehrer*, Antitrust Law Journal 2017, 729, 760 f.
[438] *Posner/Scott Morton/Weyl*, Antitrust Law Journal 2017, 669, 685.
[439] *Fichtner/Heemskerk/Garcia-Bernardo*, Business and Politics 2017, 298, 319.
[440] *Posner/Scott Morton/Weyl*, Antitrust Law Journal 2017, 669, 684 f.
[441] *Rock/Rubinfeld*, Antitrust Law Journal 2018, 221, 273.
[442] *Rock/Rubinfeld*, Antitrust Law Journal 2020, 201, 219.
[443] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1557, suggesting that "*engagement is the carrot and voting is the stick"*.

Additionally, the ability to exit and sell shares can be another supporting mechanism, at least for active investors. The exchange of information may hypothetically be a factor, but this mechanism remains speculative.

While mechanisms exist to influence firm management, it is difficult to assess how effective these channels are. A major obstacle for passive investors in influencing companies is the lack of an exit option. But again, it is difficult to assess how important the threat of exit is and whether the lack of it weakens the potential influence. The extent of the potential influence and the effectiveness of the mechanisms are uncertain. This makes it difficult to assess the impact of active mechanisms associated with common ownership on firm strategy and competitive behaviour. Nevertheless, common owners have incentives to promote anti-competitive behaviour, and this also gives them an incentive to use active mechanisms to achieve their objectives.

In summary, active mechanisms can be used by both active and passive investors to influence firm behaviour. Investors can mainly use their voice which can also be supported by voting and, at least for active investors, the threat of exit. Since common owners can exert influence, it can be concluded that the use of these channels to promote anti-competitive behaviour can at least not be ruled out.

2. Passive Mechanisms

a) Two Variations of Passive Mechanisms

Passive mechanisms can be defined as those that do not require direct engagement between investors and portfolio companies. To better understand passive mechanisms, two theories can be distinguished as to how investor passivity can lead to anti-competitive effects.

A first explanation is the general lack of incentives to compete. According to this theory, managers have less incentive to compete if they are not encouraged to do so without actively considering the incentives of their shareholders. The main argument is not that firms internalise their shareholders' incentives. Instead, one could argue that managers have less incentive to compete if they are not actively pushed to do so.[444]

A second explanation is the internalisation of the institutional investors' incentives. Investors may not necessarily influence firms, but managers could proactively take decisions to raise prices or reduce output, taking into account the interests of their diversified shareholders.[445]

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[444] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1553.
[445] *Patel*, Antitrust Law Journal 2018, 279, 287.

b) Lack of Incentives to Compete

One mechanism to explain anti-competitive effects is the lack of incentives to compete. The theory is that in a scenario where the management is not pressured to compete, it will not show initiative and will not implement a highly competitive strategy. The reduction in competition may be a result of not actively pursuing a competitive strategy. It may be the failure to explicitly demand tougher competition that allows managers not to have to compete fiercely.[446] Investors may simply "do nothing" instead of pressuring their portfolio companies to lower prices to increase market share.[447] Managers may avoid intense competition because they are not actively pressured to compete.[448] This failure to push for competition is still possible if investors do not directly exert anti-competitive influence on the firm's management. This theory would be consistent with institutional investors having less incentive to actively influence strategy as they have less to gain from increasing portfolio value than individual investors.[449] Institutional investors are not the ultimate owners of the shares and therefore do not have an equivalent ownership interest.[450] They do not benefit from increases in portfolio value to the same extent as individual investors. In addition, passive funds charge lower fees than active funds.[451] Hence, their share of profits is smaller. As a result, they may have less incentive to push for aggressive competition and to increase firm value. Unlike non-common owners, common owners may lack incentives to push for firm value-enhancing actions.[452]

The conditions necessary for this scenario are very few. It does not require that the investors actively push for anti-competitive behaviour. Furthermore, it does not require that the common owners have strong anti-competitive incentives, and it does not require that the portfolio firms actively maximise industry profits, but relies on a lack of incentives. This means that it is not the active internalisation of incentives that is the mechanism, but rather the absence of incentives. Whether investors actually benefit from maximising industry profits or whether they have interests in other firms that could be harmed is irrelevant. Because they are not actively incentivised, the commonly owned firms have reduced incentives to compete.[453] This can fully explain anti-competitive effects without the need for strong active incentives to collude and without a mechanism to facilitate potential collusion.[454]

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[446] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1552 f.
[447] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1552.
[448] *Elhauge*, CPI Antitrust Chronicle, June 2017, 36, 40 f.
[449] See above Chapter 2.C.III.1.a).
[450] *Hemphill/Kahan*, Yale Law Journal 2020, 1392, 1429.
[451] *Hemphill/Kahan*, Yale Law Journal 2020, 1392, 1431, comparing Blackrock's fees for its active (0,58%) and passive (0,13%) funds.
[452] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1552.
[453] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1514.
[454] *Azar/Schmalz/Tecu*, CPI Antitrust Chronicle, June 2017, 10, 15.

Thus, the question is whether it is plausible that management will choose a less competitive strategy if it is not actively pushed to compete. Management may not compete as hard and instead "enjoy the quiet life"[455]. More generally, the question is whether management needs to be actively pushed to compete because it has a general interest in less fierce competition. A monopolist may not try hard to achieve maximum profit for the firm because "the best of all monopoly profits is a quiet life"[456]. Management that is not pushed to compete by its shareholders may behave similarly because aggressive competition requires managerial effort that it can otherwise avoid.[457]

Another variation on this theory is that it is not the presence of common ownership that causes anti-competitive effects, but the absence of undiversified concentrated owners. If this does indeed lead to less competition, the resulting question that arises is how management makes decisions in the absence of large and highly influential shareholders: In the presence of a variety of conflicting interests, management could simply resort to maximising firm value.[458] It could focus on the interests of the largest shareholder or try to identify the preferences of the majority and act accordingly. Finally, it may reduce competition since there is no pressure to compete. A key argument that a failure to push for competition is sufficient, is that increasing market share requires managerial effort, for example in the form of R&D, market research or price wars, which managers can avoid by not competing aggressively.[459]

Common owners could also use a form of "selective omission" instead of general passivity. They could urge firms to act where their interests coincide with the interests of the firm while remaining passive where the two are in conflict. This would be a targeted passive mechanism where the common owner actively chooses where to remain passive.[460]

c) Internalising Anti-Competitive Objectives

(1) Identifying the Incentives

Instead of not being pressured to compete, firms may actively choose soft competition. This second type of a passive mechanism assumes that managers proactively take into account the objectives of their owners and act accordingly.[461] It is not necessary for management to explicitly decide to collude with rivals. A passive mechanism requires only that management is aware of these interests and has reasons to take them into account in its decision making. Management is aware of its largest shareholders, as the information about shareholders is

[455] *Bertrand/Mullainathan*, Journal of Political Economy 2003, 1043.
[456] *Hicks*, Econometrica 1935, 1, 8.
[457] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1553.
[458] *Rock/Rubinfeld*, Antitrust Law Journal 2018, 221, 236.
[459] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1553.
[460] *Hemphill/Kahan*, Yale Law Journal 2020, 1392, 1427.
[461] *Fichtner/Heemskerk/Garcia-Bernardo*, Business and Politics 2017, 298, 319.

generally public above a certain threshold. In the EU, the Transparency Directive, requires a shareholder to disclose an acquisition once the 5% threshold is reached.[462] Furthermore, shareholders engage with management, as discussed in the previous chapter. Where these large shareholders are common owners, firms may recognise that it is in the interests of their largest shareholders to reduce competition.

There is doubt that managers take into account the portfolios of their shareholders and that a non-explicit way can lead to a collusive outcome.[463] As the shareholder structure is often very heterogeneous, it may be very difficult to identify the incentives of the different shareholders and to act in their interests.[464] However, it appears that in many companies, undiversified owners are rare among the largest shareholders.[465] Even if one accepts the argument that it is difficult to identify shareholders' interests, this difficulty in determining the objectives of the shareholders could also lead to a reduction of active incentives to compete – a situation similar to the first alternative.

There are several obstacles for small and dispersed owners to influence corporate behaviour. For smaller investors, it may be efficient to remain passive because they have less to gain from activist intervention. When shareholders have very small stakes in the company, they may act rationally ignorant and refrain from costly monitoring.[466] Moreover, if they had the motivation to engage in monitoring, it might be difficult. Small shareholders also have problems in coordinating their voting behaviour.[467] Thus, in a context where small shareholders have no incentive to monitor the firm, do not have enough voice to engage directly with the management or exert pressure through publicity, and are unable to coordinate their voting with other small shareholders, they are unlikely to be able to influence firm strategy. The limited influence of smaller shareholders makes it more likely that management will focus primarily on the interests of its larger shareholders.

A passive mechanism could be reinforced by various forms of active means. Although additional active support mechanisms may play a role in identifying and acting in accordance with the interests of the shareholders, there is no need for communication or control to cause anti-competitive harm. However, communication could exacerbate the problem.[468]

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[462] *Frazzani et al.*, Barriers to Competition through Common Ownership by Institutional Investors, 2020, p. 22.
[463] *Rock/Rubinfeld*, Antitrust Law Journal 2018, 221, 239.
[464] *Rock/Rubinfeld*, Antitrust Law Journal 2018, 221, 236.
[465] *Schmalz*, Annual Review of Financial Economics 2018, 413, 415 f.
[466] *Lambert/Sykuta,* Virginia Law and Business Review 2019, 213, 235.
[467] *Lambert/Sykuta,* Virginia Law and Business Review 2019, 213, 235.
[468] *Patel*, Antitrust Law Journal 2018, 279, 287.

(2) Compensation

Another way in which anti-competitive behaviour may be passively encouraged is through executive compensation. In order for the management to incorporate the incentives of the common owners, compensation may be an important factor. This theory is mainly based on the Compensation Study, which suggests that managers of commonly owned firms have an incentive to incorporate the performance of market competitors into their strategy because their pay is less sensitive to performance.[469] Other studies have found mixed results, and there is some uncertainty as to whether compensation is different under common ownership and whether it incentivises softer competition.[470] Further research could improve the understanding of the relationship between executive compensation and common ownership.

Executive compensation is a factor that cannot be clearly attributed to either of the two mechanisms. Although the design of the compensation structure and the voting on compensation packages require some activity, compensation could also be seen as an additional factor providing low incentives to compete. It could be an active mechanism in the sense that common owners actively use lower pay-for-performance incentives than non-common owners. However, the limited ability of shareholders to directly structure compensation under most national regulations suggests that common owners may passively accept less performance-sensitive compensation packages.[471] A difference in performance incentives could be explained, on the one hand, by an interest of common owners in incentivising managers to maximise industry profits. This could lead them to influence compensation. On the other hand, the same difference in less performance-sensitive compensation may be caused by the fact that common owners' have less incentive to encourage competitive firm value-maximising behaviour compared to undiversified owners in other industries.[472] Compensation may not provide sufficient incentives for managers to compete.

In summary, compensation can be a factor that changes management incentives. It is not yet clear whether common ownership significantly changes executive compensation and hence managers' incentives. The empirical evidence is inconclusive. Thus, the role of compensation in creating anti-competitive incentives is unclear.

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[469] *Antón/Ederer/Giné/Schmalz*, Journal of Political Economy 2023, 1294.

[470] See above Chapter 2.B.III.2.c)(2).

[471] For instance, in Germany, the *Aufsichtsrat*, a governing body controlling the management of the firm, sets the compensation of managers, and shareholders can only vote on whether to approve this compensation scheme without legally binding effect, § 120a AktG.

[472] *Hemphill/Kahan*, Yale Law Journal 2020, 1392, 1443.

(3) Threat of Voting

Another possible supporting mechanism is the threat of a shareholder vote against management. Investors can communicate their unwillingness to support management when a firm is trying to gain market share.[473] The threat of not being re-elected may suffice for management to internalise its investors' interests.[474] Such a scenario is not clearly a passive mechanism. Whether it is considered as "active" or "passive" depends on the investor and the means of communication. If the shareholder actively communicates his preferences, it would be an active mechanism. If the passive threat of voting against management is sufficient, active influence is not necessary. The threat of voting against management or losing the support of the shareholder base may be a factor that encourages managers to act proactively in the interests of their common owners and disciplines them.

(4) Blocking Activist Investors

An additional way of avoiding aggressive competition is the possibility of blocking investors who try to push firms towards a more competitive strategy. This could also be classified as an active mechanism since it requires more than "doing nothing". Still, blocking shareholder initiatives can be a passive defence that protects managers from external pressure to adopt a more competitive strategy without actively influencing the firm's strategy. Common owners can either actively use their influence to block activist proposals, or their presence can passively reduce the incentive for activists to target a firm that has these large, diversified owners. The latter mechanism is supported by empirical evidence that more ownership by passive investors tends to reduce hedge fund activism.[475] However, it is unclear why activist investors are deterred. Either they fear that they will not succeed, or activism may become unnecessary if the presence of passive funds improves future firm performance.[476]

(5) Other Supporting Mechanisms

Moreover, there are other supporting mechanisms that can influence management to act in the interests of large common owners.

The labour market for managers could be one way of exerting influence. If managers want to be promoted or move to another company, they will want to be in good standing with their shareholders.[477] They may also try to be seen as acting in the interests of their shareholders. In order to increase their chances of getting a job in another company, managers may try to

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473 *Posner/Scott Morton/Weyl*, Antitrust Law Journal 2017, 669, 685.
474 *Elhauge*, Ohio State Law Journal 2021, 1, 10.
475 *Appel/Gormley/Keim,* Journal of Financial Economics 2016, 111, 114.
476 *Appel/Gormley/Keim,* Journal of Financial Economics 2016, 111, 114.
477 *Elhauge*, CPI Antitrust Chronicle, June 2017, 36, 40.

have good relations with the shareholders who may decide whether they get a job in another company.[478]

Investors may also threaten to sell their shares and depress the stock price.[479] The prospect of selling shares can influence decisions. Although passive funds cannot credibly threaten to exit, most fund families have both active and passive investments that would allow at least the actively managed funds to sell their shares.

Furthermore, the Big Three's dominant position has given them "structural prominence" in corporate governance, which may amount to a "structural power" that leads firms to proactively pursue the interests of these investors.[480] Both the considerable voting power of large investors and the desire to maintain a good relationship with the firm's shareholders can make firms pay attention to the interests of their largest shareholders.[481] Accordingly, there are several supporting mechanisms that make it plausible that firms internalise the incentives of their shareholders.

d) Preliminary Results

All in all, passive mechanisms can explain the anti-competitive effects with incentives to compete less – either negative in the form of insufficient incentives to compete aggressively or as positive incentives supported by the compensation structure, the blocking of activists, or other mechanisms. These mechanisms do not require firms to communicate with investors or to collude.

Passive mechanisms are difficult to reject because they do not require a specific channel of action, but at the same time they are difficult to prove. The anti-competitive incentives of the common owners alone are sufficient to make this a possible mechanism for softening competition. As most common owners do not have incentives to push for aggressive competition, a passive mechanism is a likely channel that can lead to anti-competitive effects.

3. Comparative Review of the Mechanisms

It may not be necessary to prove a particular mechanism or behaviour of investors to establish the general harmfulness of common ownership. It could be argued that if a common owner has the incentive and ability to reduce competition, it will try to do so and find a mechanism.[482] However, it is important to understand the mechanism in order to apply the law. Some mechanisms may not be as relevant or likely as others. Finally, if a policy change is deemed

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[478] *Elhauge*, Ohio State Law Journal 2021, 1, 21.
[479] *Elhauge*, Ohio State Law Journal 2021, 1, 20.
[480] *Fichtner/Heemskerk/Garcia-Bernardo*, Business and Politics 2017, 298, 319.
[481] *Lewellen/Lewellen*, The Journal of Finance 2022, 213, 242.
[482] *Posner/Scott Morton/Weyl*, Antitrust Law Journal 2017, 669, 685.

necessary, it is crucial to understand the problem as precisely as possible.[483] Accordingly, in this section, the active and passive mechanisms will be compared in terms of their potential likelihood and harmfulness.

The previous analysis has shown that active mechanisms are possible. As shown in Chapter II.1., there is evidence that investors regularly engage with portfolio companies. Nonetheless, the extent to which these channels are used is unclear. The fact that active investor engagement carries more legal risks than passivity makes these channels less likely.[484] However, only some of the active mechanisms involve legal risks. Furthermore, it cannot be assumed that certain behaviour will not occur because it is illegal and could be detected. Similarly, a cartel could not occur because it is illegal. Whether firms or individuals take certain risks, is mainly a question of their incentives. While the illegality under competition law will be discussed later, it is clear that some of the possible active mechanisms involve common corporate governance channels that are not illegal.

As shown in Chapter II.1.b), possible active mechanisms are voice, vote, exit or information exchange. Voting could be one active mechanism used by investors. However, it is only an indirect channel, as shareholder voting cannot directly influence firm strategy. It can mainly be a supporting mechanism. The use of voice is more difficult to identify. While it is evident that large passive owners have privileged access to companies, this does not necessarily mean that they are also extremely influential. It is still uncertain what kind of influence these shareholders can exercise and how much this matters to the portfolio firm. Passive investors may publicly claim to have considerable influence, but this does not mean that they actually have this significant power and use it extensively. Institutional investors, both active and passive, have fewer incentives to encourage anti-competitive behaviour because they do not benefit as directly as a direct owner.[485] This makes it less likely that investors use an active channel, e.g., voice.

Active investors have greater incentives to influence firm behaviour because they receive a larger share of the anti-competitive profits. Moreover, they can credibly threaten to exit, which gives them more leverage. On the other hand, the possibility of exit may also be a factor that reduces the incentives to become active. Selling shares is often less costly than influencing corporate strategy with an uncertain probability of success. All in all, common ownership by

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[483] *Scott Morton,* Horizontal Shareholding, A Summary of the Argument, CPI Antitrust Chronicle, January 2018, p. 4.
[484] *Hemphill/Kahan*, Yale Law Journal 2020, 1392, 1439 f.
[485] *Hemphill/Kahan*, Yale Law Journal 2020, 1392, 1429 f.

actively managed funds theoretically has a greater potential for competitive harm than ownership by passive investors.

The widespread use of behind-the-scenes activism is a key feature of institutional investor activism today.[486] Nonetheless, this type of activism can take very different forms than in the past. When firms actively engage with their portfolio companies, they are likely to make the same market-wide proposals to all managers, rather than developing firm-specific assessments and proposals – simply because they lack the necessary resources to filter and process information.[487] This can lead to an alignment of strategies and investors can facilitate coordination between competitors. This alignment may not take the form of specific instructions, but rather a very general sense of shared objectives.

Although there are active mechanisms that investors can use, there is no immediate punishment to deter managers from adopting a different strategy. All of the potential means of influence are indirect, and investors have no direct power to forcibly change strategies or operational decisions.

As many common owners are active investors, they can influence firms to internalise externalities and take a broader view of the impact of their firms' behaviour.[488] In this context, common owners could also positively influence corporate behaviour.[489] Still, there is a discrepancy in the debate between the alleged positive impact of passive investors, particularly on corporate governance and broad goals, and the simultaneous rebuttal that the same investors can have an impact on other areas of corporate strategy, such as product pricing.[490] Either these large passive investors can influence firms which would also give them the ability to promote anti-competitive behaviour or they do not have this power in which case they could not influence corporate governance. It is contradictory to assert that passive investors can positively change firm behaviour but are not able to change firm behaviour towards a less competitive strategy. This reasoning is incoherent and unconvincing because, if investors have influence, they either have the ability to influence both objectives or neither.[491]

Much of the criticism regarding the existence of a plausible causal mechanism focuses on the active mechanisms, and most arguments wrongly assume that anti-competitive effects would necessarily require collusive behaviour between institutional investors and product market

[486] *Corradi/Tzanaki*, CPI Antitrust Chronicle, June 2017, 18, 22.
[487] *Bebchuk/Cohen/Hirst*, Journal of Economic Perspectives 2017, 89, 100 f.
[488] *Condon*, Washington Law Review 2020, 1, 79.
[489] See, for example, *Condon*, Washington Law Review 2020, 1, 18 ff. discussing the activism of investors on climate change mitigation.
[490] *Condon*, Washington Law Review 2020, 1, 50 f.
[491] *Condon*, Washington Law Review 2020, 1, 50 f.

firms. On the contrary, common ownership effects do not require active behaviour by investors. Passive mechanisms must also be taken into consideration. In the absence of large, concentrated shareholders, management may face a shareholder base that does not pressure it to compete. As some institutional investors point out, they are primarily interested in corporate governance issues.[492]

A passive mechanism may be the simplest explanation of the anti-competitive effects and is more difficult to dismiss as it does not require an active mechanism, which may be considered implausible. There are no direct legal or factual constraints limiting the effect of the passivity of the common owners. However, a passive mechanism has other limitations. It can be argued that a failure to promote competition is less worrying from a competition perspective than an active anti-competitive influence. Direct anti-competitive conduct can be much more harmful. On the other hand, passive "doing nothing" that softens competition appears at first sight to be less harmful. A purely passive, structural mechanism also makes it more difficult to formulate a convincing theory of harm. Theories of active influence could define conduct that is harmful. This could then be prohibited or may already be unlawful. In contrast, passivity is primarily a structural problem. This makes it impossible to identify a specific behaviour as the source of anti-competitive effects. It only points to a change in incentives, which is difficult to prove in a specific case, but has to be extrapolated from the general theory.

In general, competition problems are most likely to arise when diversified owners, invested in several competing companies, become larger and concentrated owners become smaller or irrelevant.[493] Passive investors have no specific interest in improving the performance of an individual share.[494] Accordingly, they have no incentive to encourage aggressive competition. This crowding out of concentrated owners and loss of incentives is a structural problem and not a matter of specific anti-competitive behaviour. Under this premise, the underlying ownership leads managers to act according in the interests of their owners and thus to behave less competitively.[495] It can therefore be seen primarily as a structural problem caused by the underlying incentives.[496] A passive mechanism may better capture the potential anti-competitive effects of common ownership as a structural problem than focusing on specific behaviour.

It is important to note that the two mechanisms are not mutually exclusive. It is likely that the actual mechanism is in fact a combination of active and passive mechanisms. Engagement

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[492] *BlackRock,* Viewpoint "Index Investing and Common Ownership Theories", March 2017, p. 8.
[493] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1518.
[494] *Appel/Gormley/Keim,* Journal of Financial Economics 2016, 111, 112.
[495] *Elhauge*, CPI Antitrust Chronicle, June 2017, 36, 37.
[496] *Schwalbe*, Journal of European Competition Law & Practice 2018, 596, 598.

with the common owners could make the management aware of their shareholders' interests without actively influencing corporate strategy. But soft competition could emerge as a quasi-natural effect because firms are not pushed to compete, and the disruptive force of activist investors is blocked by the large, diversified, long-term investors. Active mechanisms can reinforce the incentives arising from high levels of common ownership. But they are not essential. Incentives and behavioural patterns could combine, and we could see a "*continuum of practices and anticompetitive effects*"[497]. Thus, neither active nor passive mechanisms alone may lead to higher prices in markets with higher levels of common ownership. There may be a combination of several mechanisms.

Another plausible theory is that common owners engage in "selective omission", supporting proposals that are in the interests of both the individual firm and the industry, while remaining passive on strategies that would increase the value of a single firm at the expense of others.[498] This theory does not involve a conflict between investors and managers and would be the easiest to implement because the interests of common owners, non-diversified shareholders and management are aligned.

In conclusion, it is not clear which theory of harm is more convincing. Both general mechanisms are equally possible, while it could also be a combination. One could argue that one mechanism must be correct if the empirical studies have identified a causal link between ownership structure and prices.[499] However, the identification of causality is very difficult and controversial, and there is still an ongoing debate about the correct empirical approach to identify the competitive effects of common ownership. Even if all the theories of harm that rely on the investors actively engaging with firms prove to be wrong, it would still be a sufficient mechanism that investors do not push their portfolio companies to compete as hard as they would under a different ownership structure. With a passive mechanism, the harm may be less than if the common owners used an active mechanism. But this could still explain a lower level of competition and is a relevant threat to the overall competitiveness in these markets.

Although many doubts have been expressed about the plausibility of the two potential mechanisms, neither can be rejected. Active mechanisms are a fairly common theory in antitrust. A third party acts as an intermediary for collusive behaviour. The passive mechanism is a more complex theory of anti-competitive effects because it departs from the assumption that firms seek to maximise their own value. It focuses mainly on the underlying incentives of investors and managers of portfolio companies. Many have argued that this change in

[497] *Corradi/Tzanaki*, CPI Antitrust Chronicle, June 2017, 18, 21.
[498] *Hemphill/Kahan*, Yale Law Journal 2020, 1392, 1400.
[499] *Elhauge*, CPI Antitrust Chronicle, June 2017, 36, 41.

incentives is implausible and unlikely. But as the review of the research shows, a change in incentives is not certain but clearly possible in the presence of common ownership. It is difficult to dismiss the claim that in the presence of common ownership, shareholders do not push firms to compete as aggressively as in the environment of an undiversified and concentrated shareholder base. While managers may not fully incorporate the anti-competitive incentives of their shareholders, they are less likely to favour aggressive competition if they are not actively incentivised to compete.

The need to intervene does not depend on a theory proving the existence of objectionable behaviour. What matters are the anti-competitive effects. Whether these are the result of active influence or simply a consequence of structural dynamics is irrelevant – at least in theory. From a competition law perspective, it may still be necessary to establish a theory of harm and a causal mechanism. But these must not be based on active conduct. Nonetheless, there is a great deal of uncertainty about the possible theory of harm and the likelihood of anti-competitive conduct between portfolio firms and institutional investors. This may be a factor hampering the correct application and effective enforcement of the law. There is no hard evidence showing that common owners engage in activities that specifically encourage firms to compete less or to coordinate their behaviour.

Direct evidence of a mechanism could significantly improve the understanding of common ownership and its impact on competition.[500] While this would be an important step towards a better understanding of common ownership, it seems unrealistic that such direct evidence can be obtained. *First*, evidence of active mechanisms may not exist. If pure passivity causes competitive harm, there is no observable mechanism. “Direct evidence” would not exist and could never be found. Anti-competitive effects can occur regardless of the control a shareholder has or whether there is coordination between the competing firms. A passive mechanism can fully explain for anti-competitive effects. *Second,* if there is an active mechanism, it may go undetected. Since the possible channels are the same as those that are regularly used to influence firm behaviour, there need not be any irregularity or suspicious behaviour to be detected.[501]

As it has not been established that either of the potential mechanisms is the causal link, both possibilities are assessed under competition law. Again, it should be noted that it has not been established that either of these causes competitive harm. If future research shows that the empirical observations are incorrect, the basis for these theories will be weakened. But, at the

[500] *Hemphill/Kahan*, Yale Law Journal 2020, 1392, 1448.
[501] *Elhauge*, Ohio State Law Journal 2021, 1, 23 f.

moment there is a plausible theoretical and empirical background showing that common ownership can be harmful to competition.

While the basic theory of the anti-competitive effects of common ownership is fairly straightforward, there remains considerable uncertainty about the causal mechanism and about potential countervailing factors. This means that common ownership is potentially anti-competitive but there is no general rule that common ownership links necessarily cause competitive harm.

D. Conclusion – Economic Analysis

As shown in Chapter A, common ownership is a phenomenon that has grown in importance over the last decades and especially since 2008. The increase in common ownership concentration has been driven by the growth of passive investment strategies and by a higher degree of diversification among institutional investors in general. Nevertheless, common ownership concentration varies widely across different regions and markets. It is likely to increase in the future. The potential scope of the common ownership issue is therefore large.

In Chapter B, several possible measures of the extent of common ownership were introduced and empirical studies were presented. By extending the economic theory of direct minority shareholdings to common ownership, it can be shown that common ownership has the potential to negatively affect competition. Empirical studies have largely confirmed the impact of common ownership on firm strategy and the incentives of the firm. There are now several studies which suggest that it leads to anti-competitive effects. Nevertheless, the empirical evidence is not uncontroversial and there is debate about the best empirical approach. However, a focus on the validity of the empirical studies seems too narrow in view of the overall anti-competitive potential. Risks from common ownership exist regardless of empirical evidence of actual competitive harm and changes in concrete market outcomes.

In Chapter C, the two possible mechanisms by which common ownership could lead to anti-competitive effects were examined. Common owners could actively influence their portfolio firms through several channels, such as voicing their interests, using their voting power, threatening to exit or potentially exchanging information. Using their voice and communicating publicly or privately with firms is the main active mechanism that common owners can use. Voting and exit are mainly supporting mechanisms. Overall, common owners can exert influence on the management and their relative size as the largest shareholders in many firms supports their influence. Nonetheless, the specific degree of influence that common owners can exert is very difficult to quantify in the absence of control rights or minority rights that can have a legal impact on a firm's decision-making.

Passive mechanisms are also a possible way to change the incentives of portfolio firms. Even without actively influencing firms, common ownership has the potential to harm competition. Firms could either actively incorporate the interests of their shareholders, or they could have reduced incentives to compete in the absence of strong pressure to do so. Nonetheless, a passive mechanism is difficult to identify. Since the reduced incentives alone can explain anti-competitive effects, common ownership can be regarded primarily as a structural problem.

While specific conduct can be examined under the antitrust rules of Article 101 TFEU and Article 102 TFEU, a structural analysis is more closely linked to the assessment in merger control. Both approaches will be examined in the legal analysis.

Part 3 – Legal Analysis

A. Competition Law – Current Legal Situation

I. Antitrust Regulation

1. Prohibition of Cartels

a) Overview

Building on the economic analysis, it is possible to examine whether certain practices related to common ownership are prohibited as anti-competitive agreements under Article 101 TFEU or § 1 GWB[502].

The prohibition of cartels under both statutes in German and in European competition law is largely congruent. The German and European provisions prohibiting anti-competitive agreements are largely identical.[503] The prohibition of cartels under § 1 GWB in German law is largely aligned with the European Article 101 TFEU as this was the regulatory objective of the 7th Amendment to the GWB.[504] Accordingly, it can be assumed that the legal analysis is similar. Therefore, primarily the European law will be discussed. The German ban on cartels in §§ 1 to 3 GWB will only be referred to where there are significant differences.

Three types of conduct could potentially be caught by Article 101 TFEU. *First*, there could be collusive behaviour between an investor and its portfolio companies, or facilitating practices between them. *Second*, there could be coordination between common owners. *Third*, the acquisition of a minority shareholding could itself be prohibited under Article 101 TFEU without any additional communication between the parties.

However, this analysis does not claim that there is actual anti-competitive behaviour. There is no evidence that investors explicitly facilitate collusion between portfolio companies, nor that they collude. Nevertheless, it is possible to ask whether such coordination would legally be prohibited. The potentially anti-competitive conduct can be analysed to determine whether and under what circumstances it falls under Article 101 TFEU.

[502] Gesetz gegen Wettbewerbsbeschränkungen, Act against restraints of competition.

[503] *Zimmer* in: Immenga/Mestmäcker, Sixth Edition, 2020, § 1 GWB, para. 5. Two main differences are that § 1 GWB does not require an effect on trade between Member States and that it does not contain a catalogue of specific infringements. However, the latter does not lead to any differences in interpretation.

[504] *Zimmer* in: Immenga/Mestmäcker, Sixth Edition, 2020, § 1 GWB, para. 17.

b) Coordination Between Competitors

(1) Framework for the Analysis

(a) The Potential Scenarios

There are two main ways in which common ownership can be considered relevant to an infringement of Article 101 TFEU. *First*, common owners may exercise their influence directly by initiating anti-competitive conduct between competitors. *Second*, common owners may act as an intermediary by exchanging information between competitors, either general information or information on company strategy. As discussed in Chapter 2.C.III.1., there are several ways in which common owners can exert influence and communicate with portfolio firms.

As far as coordination between competitors is concerned, only the types of activities that are specific to a common ownership situation are relevant. For instance, commonly owned firms could communicate directly, explicitly collude or enter into anti-competitive agreements. Such a case does not raise specific common ownership issues if the investor is not involved, and the conduct is not in any way facilitated by the existence of common ownership links. The potentially illegal conduct could occur even in the absence of common ownership. It may be that the likelihood of tacit collusion between undertakings is potentially greater when they are commonly owned, but this is discussed in Chapter 3.II.2.b)(2).

(b) The Assumptions

In order to determine whether certain behaviour falls under Article 101(1) TFEU, it is necessary to assume that there is some form of interaction between investors and their portfolio firms. This general assumption is supported by both anecdotal evidence and statements from institutional investors. A detailed description of the channels of communication is provided in Chapter 2.C.III.1.b).

According to Article 2(1) of Regulation 1/2003, the Commission or the respective national competition authority must provide evidence of an infringement of Article 101 TFEU. As will be shown below, the legal criteria are clear in most scenarios. Thus, the difficult questions are primarily evidentiary.[505] Are investors in a specific case advising a portfolio firm to raise prices or reduce output? Are they passing on messages and/or information between their portfolio firms? While the legal requirements are fairly straightforward, whether such actions will be detected by competition authorities can only be answered on a case-by-case basis.

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[505] *Rock/Rubinfeld*, Antitrust Law Journal 2020, 201, 227.

(2) Direct Influence

(a) Possible Channels of Influence

The common investor may potentially influence its portfolio companies directly by advising them to raise prices or reduce output. If these firms compete in a product market, this may have horizontal effects and may even constitute a restriction of competition by object. Again, both the common owners and the non-common owners have an interest in above-competitive pricing,[506] as do the firms involved. The investors could use their influence, either publicly or privately, to achieve this result.

First, they could express their interests publicly. Since public statements are, by definition, open to all, they are unlikely to be used to make explicit demands for reduced competition. There is only a limited amount of evidence that common owners use public statements to force firms to reduce output.[507]

Second, the more important way of influencing portfolio firms is through private channels. Investors can instruct managers to adopt a less competitive strategy in a private meeting. While there are no legal rights to explicitly influence firm behaviour, it is possible for investors to engage and influence the behaviour of their portfolio firms. The demands of institutional investors might not simply be dismissed as irrelevant, but may be heeded by portfolio firms.[508] Nonetheless, one practical reason that makes such specific demands less likely is the need for micro-management by institutional investors. This micromanagement is unlikely to be exercised, given the small size of the corporate governance departments and the fact that the industry knowledge that these departments would need is located in other departments, namely the industry analysts.[509]

(b) Agreement

In order for these demands by common owners to be caught by Article 101 TFEU, they would first have to constitute an agreement under Article 101(1) TFEU. For an agreement to exist, at least two undertakings must have expressed their will to take a certain action. This concurrence of wills can take place in any form.[510] It does not have to constitute a contract valid under national law.[511] A unilateral demand can also amount to an agreement, especially if the

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[506] *Rock/Rubinfeld*, Antitrust Law Journal 2020, 201, 216.
[507] See Chapter 2.C.III.1.b)(1) for a discussion of possible active mechanisms; e.g. the story reported by the Wall Street Journal focusing on the fracking industry.
[508] *Rock/Rubinfeld*, Antitrust Law Journal 2020, 201, 220.
[509] *Hemphill/Kahan*, Yale Law Journal 2020, 1392, 1424.
[510] *Court of First Instance*, Judgment of 26.10.2000, Case T-41/96, ECLI:EU:T:2000:242, para. 69 – *Bayer/Commission*.
[511] *Court of First Instance*, Judgment of 26.10.2000, Case T-41/96, ECLI:EU:T:2000:242, para. 68 – *Bayer/Commission*.

recipient follows the proposed course of action and thus shows a tacit agreement.[512] Accordingly, an investor's demands for less competition from a portfolio company would itself be a unilateral conduct. Nevertheless, the agreement could be found in the behaviour of the portfolio firm. If the firm explicitly agrees with the investor's statements, this also constitutes a concurrence of wills.

(c) Restriction of Competition

If the criteria for an agreement under Article 101(1) TFEU are fulfilled, the agreement must also restrict competition. In order to identify a restriction of competition, it is important to distinguish whether an instruction to limit output or raise prices would constitute a restriction by object or a restriction by effect. In the case of a restriction by object, the effects would not have to be assessed.[513] In the typical case of horizontal price fixing – a restriction by object[514] – the parties to the agreement are competitors. In the case of vertical restraints, the parties are vertically related as buyer and seller.

In the case of common ownership, the parties are not competitors and the agreement is therefore not a typical horizontal agreement. However, it is not a typical vertical restraint either. The two parties – the common owner and the portfolio firm – are not linked as buyer and seller. Since the setting of a minimum resale price by the seller (resale price maintenance, RPM) is considered to be a restriction by object,[515] the agreement may ultimately also be considered to be a restriction of competition by object, as the common owner would require the price to be set at a certain level. Thus, there is a restriction of competition in the form of either a vertical restraint or a horizontal restraint.

A restriction by object also follows from the general rules on restrictions of competition by object. Restrictions that are very likely to have negative effects on price, output, or quality fall under this category.[516] Thus, the objective likelihood of anti-competitive effects is the decisive factor. Still, the purpose of an agreement can also be relevant to this assessment and can be

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[512] *European Court of Justice*, Judgment of 6.1.2004, Case C-2/01 P, ECLI:EU:C:2004:2, para. 100 – *Bayer/Commission.*

[513] *European Court of Justice*, Judgment of 11.9.2014, Case C-67/13 P, ECLI:EU:C:2014:2204, para. 49 – *Cartes Bancaires.*

[514] *European Court of Justice,* Judgment of 30.1.1985, Case C-123/83, ECLI:EU:C:1985:33, para. 22 – *BNIC/Guy Clair*; Judgment of 11.9.2014, Case C-67/13 P, ECLI:EU:C:2014:2204, para. 51 – *Cartes Bancaires.*

[515] Notice on agreements of minor importance which do not appreciably restrict competition under Article 101(1) of the Treaty on the Functioning of the European Union (De Minimis Notice), (2014/C 291/01), para. 13; Article 4 lit. a VBER.

[516] See *European Court of Justice*, Judgment of 11.9.2014, Case C-67/13 P, ECLI:EU:C:2014:2204, para. 51 – *Cartes Bancaires,* stating that „*certain collusive behaviour […] may be considered so likely to have negative effects, in particular on the price, quantity or quality of the goods and services, that it may be considered redundant, for the purposes of applying Article 81(1) EC, to prove that they have actual effects on the market*".

an indicator that the agreement is objectively likely to have negative effects.[517] In the case of price-fixing or output restrictions, the likelihood of negative effects is very high, and the purpose of restricting competition is clear, making an individual assessment unnecessary. Such instructions by investors could be regarded as detrimental to competition as such. Therefore, they are likely to be restrictions by object.

In conclusion, if common owners make demands to raise prices or reduce output, this is likely to constitute an infringement of Article 101 TFEU. From a practical point of view, while it is possible that common ownership could lead to actions that infringe Article 101 TFEU, it is unlikely overall. The relevant communications would have to focus directly on product markets and specific strategies. The debate on common ownership and its impact on product market competition may make institutional investors more aware of the risks of antitrust action.

(3) Information Exchange

(a) The Ability to Exchange Information

As shown above, one channel of influence is direct engagement and communication with the management of portfolio firms. It is possible that this channel can be used not only to give instructions but also to exchange information. Investors may have access to restricted, firm-specific information through both official and informal channels.[518] This information could be shared by investors between competitors to facilitate coordination between firms. A common owner may also have information about a firm's strategy through direct contact with management. For example, a firm's CEO might say that "price stability" is a key strategy of the firm, and the common owner could pass this information on to its other portfolio firms in the same market.[519] Given the incentives of long-term investors with diversified portfolios, this exchange of information can at least be considered possible.[520]

The reason why common owners are particularly well placed to facilitate a horizontal agreement is their credibility as an honest broker.[521] The incentives of common owners make their influence credible, as they have no reason to give conflicting information to two firms or to strategically provide incorrect information. Therefore, they are likely to be seen as a more credible voice than other owners.[522] However, while it is possible that information could be shared between competitors by one or more investors if they are in a position to do so, there

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[517] *European Court of Justice*, Judgment of 6.4.2006, Case C-551/03 P, ECLI:EU:C:2006:229, para. 77 f. – *General Motors BV;* Judgment of 14.3.2013, Case C-32/11, ECLI:EU:C:2013:160, para. 37 – *Allianz Hungária Biztosító;* Judgment of 11.9.2014, Case C-67/13 P, ECLI:EU:C:2014:2204, para. 54 – *Cartes Bancaires*.
[518] *OECD*, Minority Shareholdings – Background Note, 2008, p. 30.
[519] *Rock/Rubinfeld*, Antitrust Law Journal 2020, 201, 229.
[520] *Corradi/Tzanaki*, CPI Antitrust Chronicle, June 2017, 18, 22.
[521] *Rock/Rubinfeld*, Antitrust Law Journal 2020, 201, 217.
[522] *Rock/Rubinfeld*, Antitrust Law Journal 2020, 201, 226.

is no evidence that an information exchange actually occurs in any particular case or that it occurs frequently.

(b) Legal Constraints

Apart from a possible breach of competition law, the exchange of information between common owners and portfolio firms is also relevant from of a capital market law perspective, as the shareholders are considered insiders.[523] Insider laws could potentially already make any exchange of sensitive information illegal. Sensitive information that has only been made available to a limited group of shareholders would have to be disclosed.[524] Hence, there are legal limits to the private exchange of sensitive firm information. Nevertheless, institutional investors could factually exchange information between competitors, albeit with legal risks.

(c) The Legality of Information Exchange Under Article 101 TFEU

Given the possibility that information may be exchanged by a common owner, it is possible to examine the conditions under which such behaviour may be caught by Article 101 TFEU.

First, for an information exchange to fall under Article 101 TFEU, there must be an agreement or a concerted practice. In general, an information exchange does not prima facie constitute an agreement or a concerted practice. The ECJ does not make a clear distinction between a concerted practice and a restriction of competition, but reaffirms the general principle that a concerted practice exists when practical cooperation is knowingly substituted for the risks of competition.[525] Accordingly, the question of a concerted practice cannot be strictly separated from the question of whether there is a restriction of competition.

Second, as regards a restriction of competition under Article 101 TFEU, the relevant criterion is that the information exchange reduces or eliminates the degree of uncertainty between competitors.[526] Accordingly, the Commissions Guidelines state that the central concern about an information exchange is that it enables companies to become aware of their competitor's market strategies.[527] This can be achieved by exchanging a variety of different types of information that provide indications of future market behaviour. It is not necessary that information about prices is exchanged, but it is necessary that strategic uncertainty about the

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[523] *Monopolkommission*, Wettbewerb 2018, Hauptgutachten No. 22, 2018, para. 466.

[524] See Chapter 2.C.III.1.c)(3).

[525] *European Court of Justice*, Judgement of 4.6.2009, Case C-8/08, ECLI:EU:C:2009:343, para. 26 – *T-Mobile Netherlands*; Judgment of 16.12.1975, Case C-40/73, ECLI:EU:C:1975:174, para. 26 – *Suiker Unie.*

[526] *European Court of Justice*, Judgement of 28.5.1998, Case C-7/95 P, ECLI:EU:C:1998:256, para. 90 – *John Deere*; Judgment of 2.10.2003, Case C-194/99, ECLI:EU:C:2003:527, para. 81 – *Thyssen Stahl*; Judgment of 23.11.2006, Case C-238/05, ECLI:EU:C:2006:734, para. 51 – *Asnef-Equifax.*

[527] *Commission*, Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements, 2011/C 11/01, para. 58.

future behaviour of the competitors is removed. A wide variety of strategic data can be relevant, such as prices, customer lists, production costs, quantities, turnovers, sales, capacities, qualities, marketing plans, risks, investments, technologies and R&D programmes.[528] Another important characteristic of the data is whether it is aggregated or individualised, and whether it is historical or indicative of future behaviour.[529]

As regards causality between the exchange of information and the conduct of the undertakings, the ECJ held that there is a presumption that an undertaking uses the information it receives.[530] Since a company is presumed to have used information, it must provide evidence that it disregarded the information and acted independently.[531]

(d) A-B-C-Information Exchange

As the Commission's guidelines make clear, an exchange of information can take place not only through a direct exchange but also indirectly via a third party.[532] In this scenario, a competitor A provides information to a third party B, who is then passing on this information to A's competitor C. This type of indirect information exchange can be interpreted as a hub-and-spoke agreement and is sometimes also referred to as an A-B-C information exchange.[533]

In the normal hub-and-spoke constellation, the hub is typically a retailer or a supplier, i.e., a vertically related company.[534] In contrast to this typical hub-and-spoke collusion, in the case of common ownership, there is no direct market contact between the common owner and its portfolio company. There is neither a horizontal nor a vertical relationship between the two companies. The type of information exchanged may also be different. Whereas a vertically related company will usually exchange information on prices with a supplier or a customer, a common owner might rather exchange more general information on the strategy of a firm.

However, these characteristics do not define an A-B-C information exchange. The situation where an investor facilitates the collusion by providing information is similar to a hub-and-spoke collusion and as such can also be considered an A-B-C information exchange. Ultimately, the general criteria described above apply to an information exchange involving

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[528] *Commission*, Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements, 2011/C 11/01, para. 86.
[529] *Commission*, Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements, 2011/C 11/01, para. 89 f.
[530] *European Court of Justice*, Judgment of 8.7.1999, Case C-49/92 P, ECLI:EU:C:1999:356, para. 121 – *Anic*.
[531] *European Court of Justice*, Judgment of 8.7.1999, Case C-49/92 P, ECLI:EU:C:1999:356, para. 126 – *Anic*.
[532] *Commission*, Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements, 2011/C 11/01, para. 55.
[533] *Odudu*, European Competition Journal 2011, 205, 207.
[534] *Odudu*, European Competition Journal 2011, 205, 208.

common owners. The specific conduct has to be assessed individually according to the above criteria for the type of information exchanged.

c) Coordination Between Investors

Investors with aligned incentives – like common owners – could potentially coordinate their own activities in relation to engagement with portfolio companies. Passive investors meet regularly with each other and discuss approaches to corporate governance.[535] This can lead to coordination among common owners and a convergence of voting patterns. Furthermore, institutional investors could agree to act together to promote a common strategy or to engage with a company.

It is questionable whether Article 101 TFEU applies in this scenario. The interaction between different investors is difficult to assess under competition law, as this interaction does not directly involve market behaviour. The issue in this situation is not that the firms agree on the pricing of their investment products or something similar, but that there may be an interaction in terms of how they communicate with their portfolio companies or how they vote. Therefore, the alleged conduct does not directly concern a market for goods or services. Accordingly, it could be argued that institutional investors coordinating their voting and engagement is not directly related to competition.[536] On the other hand, the wording of Article 101 TFEU is very broad. If the cooperation results in anti-competitive behaviour, it could also be interpreted as an agreement or a concerted practice that may restrict competition.[537] However, if this very broad interpretation were to be followed, the individual agreements must have at least an indirect link to market behaviour. Since these questions are very speculative, it is not necessary to give a definitive answer.

Cooperation between investors in relation to their engagement with portfolio companies may also constitute an "acting in concert". This would be subject to disclosure obligations under the Transparency Directive and the Takeover Bids Directive.[538] Synchronised voting by institutional investors would probably constitute an "acting in concert" and would have legal consequences. Institutional investors are likely to seek to avoid these obligations.

In conclusion, it is unclear whether Article 101 TFEU could apply to agreements between investors. Such coordination would at least have to amount to some concrete instructions regarding the market behaviour of the firms and not just general guidelines. Moreover, any

[535] *Griffin*, Maryland Law Review 2020, 954, 965.
[536] *Seitz*, Common Ownership im Wettbewerbsrecht, 2020, p. 145.
[537] *Frazzani et al.*, Barriers to Competition through Common Ownership by Institutional Investors, 2020, p. 25.
[538] *Frazzani et al.*, Barriers to Competition through Common Ownership by Institutional Investors, 2020, p. 25.

such concrete coordination with respect to individual firms is likely to constitute an "acting in concert" and have other legal effects.

d) Acquisition of Shares

The acquisition of shares by common owners could also in itself constitute a violation of Article 101 TFEU. Accordingly, the following part does not focus on any specific anti-competitive conduct, but on the acquisition of shares as a potential violation of Article 101 TFEU. This issue was already relevant before the introduction of the European Merger Regulation, as structural changes were not regulated in a coherent way. After the introduction of the EUMR, the question has been raised whether the application of Article 101 TFEU could be a way to partially fill the enforcement gap with regard to the anti-competitive effects of minority shareholdings, which are not subject to merger control.[539]

Elhauge argues that Article 101 TFEU would be applicable to acquisitions of shareholdings and could be used to prevent negative effects of common ownership.[540] In order to provide a viable option to control the acquisition of non-controlling minority shareholdings Article 101 TFEU would have to be applicable, and its conditions would have to be met.

Article 101 TFEU is generally applicable to the purchase of shares as it is primary law and cannot be overridden by the existence of a merger control regime.[541] The acquisition of shares in a portfolio firm by an investor could be an anti-competitive agreement. It would have to constitute an agreement and have as its object or effect the restriction of competition. There are some cases where Article 101 TFEU has been applied to the acquisition of minority interests.[542] The most important case is the ECJ decision in *Philip Morris*.[543]

First, regarding an agreement, there must be a concurrence of wills.[544] In the case of a direct acquisition of shares by a competitor, this is relatively clear as there is a contract for the purchase of shares.[545] In contrast, if an investor buys shares on the stock exchange, it is

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539 *Commission*, White Paper – Towards more effective EU merger control, 9.7.2014, COM(2014) 449 final, para. 39.

540 *Elhauge,* New Evidence, Proofs, and Legal Theories on Horizontal Shareholding, January 2018, p. 36, available at: https://ssrn.com/abstract=3096812.

541 *European Court of Justice*, Judgment of 17.11.1978, Joined Cases C-142/84, C-156/84, ECLI:EU:C:1987:490, para. 37 – *BAT and Reynolds*; Judgment of 16.3.2023, Case C-449/21, ECLI:EU:C:2023:207, para. 43 f. – *Towercast*; Opinion of Advocate General Kokott, 13.10.2022, C-449/21, ECLI:EU:C:2022:777, para. 29 ff. – *Towercast*.

542 *Commission*, Decision of 27.7.1994 in Case No. IV/34.857 – *BT/MCI*; Decision of 12.12.1984 in Case No. IV/30.666 – *Mecaniver-PPG*.

543 *European Court of Justice*, Judgment of 17.11.1978, Joined Cases C-142/84, C-156/84, ECLI:EU:C:1987:490 – *BAT and Reynolds*.

544 *Court of First Instance*, Judgment of 26.10.2000, Case T-41/96, ECLI:EU:T:2000:242, para. 69 – *Bayer/Commission*.

545 *European Court of Justice*, Judgment of 17.11.1978, Joined Cases C-142/84, C-156/84, ECLI:EU:C:1987:490, para. 31 – *BAT and Reynolds*.

problematic whether this can be regarded as a concurrence of wills between the investor and the portfolio firm.[546] The case law is not clear since in *Philip Morris* the shares were strategically acquired as an agreement between two competitors.[547] Accordingly, it is unclear whether the acquisition of shares through a stock exchange would constitute an agreement under Article 101 TFEU.[548] It could be argued that if an investor buys shares from a third party, this is purely unilateral behaviour.[549] Nonetheless, it is at least possible that the broad interpretation of agreements and concerted practices could cover the purchase of shares through a stock exchange by adopting a broad teleological interpretation of agreements and concerted practices.[550]

Second, the agreement must have as its object or effect the restriction of competition. In *Philip Morris*, the ECJ held that the acquisition itself cannot be a conduct that restricts competition but only an instrument to influence the behaviour of a company.[551] This would be the case, in particular, where "*the investing company obtains […] control of the commercial conduct of the other company or where the agreement provides for commercial cooperation between the companies or creates a structure likely to be used for such cooperation*"[552]. As the acquisition of control is already covered by the EUMR, the creation of a structure that could be used for commercial cooperation is the important option. Accordingly, the Commission has taken the view that Article 101 TFEU does not generally apply to a share purchase agreement as such, but only if it influences or coordinates the competitive behaviour of the parties.[553] This can be interpreted as meaning that acquisitions which give rise to coordinated effects between the acquirer and the target are caught by Article 101 TFEU.[554] In contrast, unilateral effects resulting from the share purchase agreement may not fall under Article 101 TFEU.[555]

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546 *Burnside/Kidane*, Journal of Antitrust Enforcement 2020, 456, 494.

547 *European Court of Justice*, Judgment of 17.11.1978, Joined Cases C-142/84, C-156/84, ECLI:EU:C:1987:490, para. 3 – *BAT and Reynolds*.

548 *Commission*, White Paper – Towards more effective EU merger control, 9.7.2014, COM(2014) 449 final, para. 40; *Kühn*, Nicht kontrollierende Minderheitsbeteiligungen in der EU-Fusionskontrolle, 2017, pp. 169 ff.

549 *Caronna*, European Law Review 2004, 485, 496.

550 *Rusu*, World Competition 2014, 487, 504.

551 *European Court of Justice*, Judgment of 17.11.1978, Joined Cases C-142/84, C-156/84, ECLI:EU:C:1987:490, para. 37 – *BAT and Reynolds*: "*Although the acquisition by one company of an equity interest in a competitor does not in itself constitute conduct restricting competition, such an acquisition may nevertheless serve as an instrument for influencing the commercial conduct of the companies in question so as to restrict or distort competition on the market on which they carry on business*".

552 *European Court of Justice*, Judgment of 17.11.1978, Joined Cases C-142/84, C-156/84, ECLI:EU:C:1987:490, para. 38 – *BAT and Reynolds.*

553 *Commission*, Decision of 27.7.1994 in Case No. IV/34.857 – *BT/MCI*, para 44.

554 *Gassler*, World Competition 2018, 3, 8.

555 *Ezrachi/Gilo*, Oxford Journal of Legal Studies 2006, 327, 341.

It is therefore problematic whether the judgement can be interpreted to cover unilateral effects, as the Court did not elaborate on these potential effects of minority shareholdings.[556] A narrow interpretation of *Philip Morris* is also plausible. In this view, the meaning of the judgement would be limited to clear coordination and to control scenarios.[557] However, the wording that a "*structure likely used to such cooperation*"[558] also falls under Article 101 TFEU is an important argument that a shareholding does not have to reach the level of control. Yet, it is still problematic whether unilateral effects can fall under Article 101 TFEU. The ECJ held that it is also necessary to consider whether the shareholding requires the undertaking to take into account the interests of the other party when determining its commercial policy.[559] This is very similar to the notion of unilateral effects, as these are financial incentives.[560] Thus, it is possible that unilateral effects may be caught by Article 101 TFEU.

In summary, it is possible, but unlikely, that the acquisition of shares in a common ownership context could itself be caught by Article 101 TFEU. It is problematic if the purchase of shares can amount to an agreement. Furthermore, since common ownership effects are based on non-controlling shareholdings, unilateral effects may not be captured by *Philip Morris*. In this respect, the judgement is very vague.[561] Therefore, if the potential common ownership effects are an extension of the theory of passive investment leading to unilateral effects, Article 101 TFEU may not be applicable.

e) Practicability

As regards the acquisition of shares on the stock exchange, there is also a practical problem. In the case of a share purchase on the stock exchange, it is unclear which acquisition would be considered as the agreement or whether all purchases could be illegal under Article 101 TFEU.[562] Accordingly, if the Commission were to apply Article 101 TFEU to the acquisition of shares by common owners, it would be unclear which acquisitions would be illegal and invalid, leading to significant uncertainty in share trading.

Companies do not know whether their acquisitions are legally valid, and any intervention by competition agencies would take place after the shares have been bought. This could result in investors having to sell shares long after they have bought them. However, it is easier for

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[556] *Ezrachi/Gilo*, Oxford Journal of Legal Studies 2006, 327, 340.
[557] *Ezrachi/Gilo*, Oxford Journal of Legal Studies 2006, 327, 340.
[558] *European Court of Justice*, Judgment of 17.11.1978, Joined Cases C-142/84, C-156/84, ECLI:EU:C:1987:490, para. 38 – *BAT and Reynolds.*
[559] *European Court of Justice*, Judgment of 17.11.1978, Joined Cases C-142/84, C-156/84, ECLI:EU:C:1987:490, para. 48 – *BAT and Reynolds*.
[560] *Kühn*, Nicht kontrollierende Minderheitsbeteiligungen in der EU-Fusionskontrolle, 2017, p. 178.
[561] *Ezrachi/Gilo*, Oxford Journal of Legal Studies 2006, 327, 341.
[562] *Commission*, White Paper – Towards more effective EU merger control, 9.7.2014, COM(2014) 449 final, para. 40.

investment funds to divest shares than for a company to end a strategic investment with possible economic links between two companies.[563] Nevertheless, it is still a burden, especially for passive investors, to sell shares and to actively monitor acquisitions and their legality from a competition law perspective. It follows from these practical observations that a concise and clear regulation of minority shareholdings or an *ex-ante* assessment through merger control is generally preferable to an *ex-post* application of Article 101 TFEU.

2. Prohibition of Abusive Practices

a) Acquisition of Shares

Another way to control and limit common ownership concentration could be the application of Article 102 TFEU.[564] *First*, the acquisition of shares by a common owner could in itself constitute an abusive practice falling under Article 102 TFEU. *Second*, the pricing by commonly owned firms could be excessive and violate Article 102 lit. a) TFEU.

With regard to the acquisition of shares – the first potential application – Article 102 TFEU would have to be applicable, the common owners would have to have a dominant position, and the acquisition itself would have to constitute an abusive practice.

Article 102 TFEU would have to be applicable to concentrations. Like Article 101 TFEU, Article 102 TFEU is primarily an instrument to control the conduct of firms. However, there are certain situations where it can also be applied to structural changes. The EUMR does not limit the applicability of Article 102 TFEU to concentrations. As the latter is directly applicable as primary law, its scope cannot be limited by Article 21(1) EUMR.[565] Article 102 TFEU is, however, generally not applicable if a concentration has already been reviewed under the merger control rules, following the principle of *lex specialis derogat legi generali*.[566] According to the *Continental Can* decision, Article 102 TFEU can be applied to structural changes if the effective competition structure is harmed.[567] Therefore, Article 102 TFEU is generally

[563] *Seitz*, Common Ownership im Wettbewerbsrecht, 2020, p. 216.

[564] *Elhauge,* New Evidence, Proofs, and Legal Theories on Horizontal Shareholding, January 2018, pp. 36 f., available at: https://ssrn.com/abstract=3096812; *Fadiga*, European Competition Law Review 2019, 157, 162 f.

[565] *European Court of Justice*, Judgment of 16.03.2023, Case C-449/21, ECLI:EU:C:2023:207, para. 53 – *Towercast*; Opinion of Advocate General Kokott, 13.10.2022, C-449/21, ECLI:EU:C:2022:777, para. 39 – *Towercast*.

[566] *European Court of Justice*, Judgment of 16.03.2023, Case C-449/21, ECLI:EU:C:2023:207, paras. 40 f. – *Towercast*; Opinion of Advocate General Kokott, 13.10.2022, Case C-449/21, ECLI:EU:C:2022:777, paras. 58 f. – *Towercast.*

[567] *European Court of Justice*, Judgment of 21.2.1973, Case C-6/72, ECLI:EU:C:1973:22, para. 26 – *Continental Can*: "*Abuse may therefore occur if an undertaking in a dominant position strengthens such position in such a way that the degree of dominance reached substantially fetters competition, i.e. that only undertakings remain in the market whose behaviour depends on the dominant one*."

applicable to concentrations that do not fall under the merger control rules and, accordingly, also to an *ex-post* assessment of common ownership.[568]

Nonetheless, Article 102 TFEU only applies if the acquiring firm is in a dominant position. In the case of common ownership, the issue is that the firms buying the shares are investors and not firms active in product markets. The acquiring firm is typically an institutional investor. This investor is not active in the product market of the portfolio firm. Accordingly, Article 102 TFEU is generally not applicable to common owners as they are not firms with a dominant position in the relevant market.[569]

In conclusion, although Article 102 TFEU is generally applicable to acquisitions of shares, the acquirer is unlikely to have a dominant position in the relevant market.

b) Excessive Pricing

Another option is to use Article 102 TFEU to challenge excessive pricing by commonly owned firms.[570] If common ownership does have anti-competitive effects, prices will be higher in markets with higher common ownership concentration. If the oligopolistic firms that are indirectly linked by common ownership hold a collective dominant position, their excessive pricing would be prohibited under Article 102 lit. a) TFEU. This argument would require the fulfilment of two criteria: The firms linked by common ownership must (i) have a collective dominant position and (ii) their pricing must be excessive.

A collective dominant position exists where a group of undertakings in the relevant market is able to adopt a common policy on the market and to act to an appreciable extent, independently of competitors, customers and also of consumers.[571] The criteria for identifying a collective dominant position in the context of merger control also apply to the definition in Article 102 TFEU.[572] Furthermore, the definition of collective dominance is largely congruent with the definition of coordinated effects in merger control.[573] The relevant criteria were mainly set out in the *Airtours* judgement.[574] Since the criteria for establishing collective dominance are

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[568] *Frazzani et al.*, Barriers to Competition through Common Ownership by Institutional Investors, 2020, p. 81.

[569] *Elhauge,* New Evidence, Proofs, and Legal Theories on Horizontal Shareholding, January 2018, p. 38, available at: https://ssrn.com/abstract=3096812.

[570] *Fadiga*, European Competition Law Review 2019, 157, 165; *Elhauge*, Harvard Business Law Review 2020, 207, 278.

[571] *European Court of Justice*, Judgment of 31.3.1998, Joined Cases C-68/94 and C-30/95, ECLI:EU:C:1998:148, para. 221 – *Kali und Salz*.

[572] *Thompson/Brown/Gibson* in: Bellamy & Child, Eighth Edition, 2018, para. 10.056; see also, for example, *Court of First Instance*, Judgment of 30.9.2003, Case T-191/98, ECLI:EU:T:2003:245, para. 652 - *Atlantic Container Line,* referencing *Kali und Salz* and *Airtours* when interpreting Article 102 TFEU.

[573] *Boyce/Lyle-Smith* in: Bellamy & Child, Eighth Edition, 2018, para. 8.239.

[574] *Court of First Instance*, Judgment of 6.6.2002, Case T-342/99, ECLI:EU:T:2002:146 – *Airtours*.

the same for merger control and Article 102 TFEU, a detailed analysis of the *Airtours* criteria will be made in the context of merger control.[575] While the criteria for a collective dominant position may be fulfilled in an individual case, firms linked by common ownership are not per se in a collective dominant position.[576] For the purposes of this chapter, it is sufficient to conclude that common ownership may affect the assessment of collective dominance and that it is possible for commonly owned oligopolistic firms to be in a collective dominant position.

The collectively dominant firms would also have to charge excessive prices. It could be argued that common ownership reduces competition and raises prices, in violation of Article 102 lit. a) TFEU.[577] However, the competition authorities have to prove that the prices charged are excessive and also that the prices are unfair per se or when compared to competing products.[578] Accordingly, the Commission rarely prosecutes unfair pricing because the threshold for proving excessive pricing is very high.[579] It is not sufficient to rely on an economic theory to prove that prices are excessive. Thus, a general anti-competitive effect of common ownership does not suffice to prove excessive pricing in a particular case. There is no indication that it is easier to prove excessive pricing in the context of common ownership than in other cases. Structural links like common ownership leading to a collective dominant position are not equivalent to proof of abuse through excessive pricing.[580]

c) Practicability

It is theoretically possible that the acquisition of shares by a common owner could infringe Article 102 TFEU. However, it is very unlikely that the acquiring common owner has a dominant position in the relevant market. Challenging excessive pricing by commonly owned firms falling under Article 102 lit. a) TFEU is a theoretically plausible approach.

Addressing common ownership effects indirectly as excessive pricing under Article 102 TFEU has some advantages over merger control. There would be no additional notification requirements as in the case of an extension of merger control, so there would be no additional burden on businesses and enforcers. Furthermore, there is a flexibility in enforcement for competition authorities and there is no direct impact on investment strategies.[581] In contrast to

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[575] See Chapter 3.A.II.2.b)(2)(c).
[576] *Fadiga*, European Competition Law Review 2019, 157, 163.
[577] *Elhauge*, Harvard Business Law Review 2020, 207, 279; *Fadiga*, European Competition Law Review 2019, 157, 162.
[578] *European Court of Justice*, Judgment of 14.02.1978, Case C-27/76, ECLI:EU:C:1978:22, para. 252 – *United Brands*.
[579] *Frazzani et al.*, Barriers to Competition through Common Ownership by Institutional Investors, 2020, p. 83.
[580] *Frazzani et al.*, Barriers to Competition through Common Ownership by Institutional Investors, 2020, p. 83.
[581] *Fadiga*, European Competition Law Review 2019, 157, 164.

Article 101 TFEU, a main advantage is that it is not necessary to find any illegal conduct between firms. Instead, it would suffice to observe the market conduct.

Nonetheless, tackling excessive pricing by commonly owned firms through Article 102 TFEU also has a major drawback: Identifying excessive pricing. The European Commission pursues very few excessive pricing cases.[582] It could be argued that common ownership provides a new route to enforcement.[583] Still, one cannot ignore the current case law holding that Article 102 TFEU only applies to proven price effects and cannot be used when there is only an economic theory predicting a price effect.[584] Even if one were to conclude that there is a general lack of enforcement of Article 102 lit. a) TFEU,[585] this would not change the high legal standard for establishing the unfairness of prices.

3. Preliminary Results

Article 101 TFEU can theoretically be a tool to pursue antitrust infringements which are facilitated through common ownership. If common owners make demands on prices or output or exchange sensitive information, this may fall under Article 101 TFEU. Coordination between common owners will likely not infringe Article 101 TFEU, although there is little case law or literature on this situation. With regard to the acquisition of shares, it is questionable whether Article 101 TFEU applies, as its scope is unclear with regard to acquisitions of shares and possible unilateral effects.

Article 102 TFEU can address excessive pricing, although there are significant practical difficulties. For Article 102 TFEU to apply, the acquirer must have a dominant position. This considerably limits its applicability.[586]

Accordingly, the Commission considers that Articles 101 and 102 TFEU are insufficient to address the competitive effects of non-controlling minority shareholdings.[587] Recital 7 of the EUMR likewise characterises Articles 101 and 102 TFEU as inadequate for the efficient control of all concentrations that could potentially distort competition. Even if these instruments were applicable, certain practical difficulties have to be recognised and cannot be disregarded. They would create legal uncertainty as to their applicability. In practice, competition authorities could amend and clarify their enforcement priorities to mitigate these

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[582] *Whish/Bailey*, Competition Law, Tenth Edition, 2021, p. 763.
[583] *Elhauge*, Harvard Business Law Review 2020, 207, 279.
[584] *European Court of Justice*, Judgment of 14.2.1978, Case C-27/76, ECLI:EU:C:1978:22, para. 264 – *United Brands*.
[585] See *Elhauge*, Harvard Business Law Review 2020, 207, 279, who argues that the provision is effectively read out of the Treaty.
[586] *Commission*, White Paper – Towards more effective EU merger control, 9.7.2014, COM(2014) 449 final, para. 40.
[587] *Commission*, White Paper – Towards more effective EU merger control, 9.7.2014, COM(2014) 449 final, para. 39.

practical difficulties.[588] Nevertheless, if Articles 101 and 102 TFEU were applicable, the acquisition of shares by common owners would be illegal and invalid, leading to enormous legal uncertainty.[589] In conclusion, Articles 101 and 102 TFEU should not be used to fill the gap for the control of minority shareholdings. The same arguments that apply to ordinary minority shareholdings also apply to common ownership.

Moreover, the European Commission considers that the effects of minority shareholdings are similar to those of acquisitions of control.[590] Therefore, a clear solution would be to include the acquisition of minority shareholdings in the merger regulation instead of relying on an uncertain, case-specific and ill-defined test under Articles 101 and 102 TFEU. This has already been discussed in the Commission`s White Paper[591] and this solution will be further discussed in the context of other legislative proposals.

Overall, Articles 101 and 102 TFEU have limitations and cannot sufficiently control all potentially anti-competitive concentrations. Theoretically, there is the possibility that the acquisition of shares by a common owner could infringe Article 101 TFEU or Article 102 TFEU. However, as in the case of direct cross-ownership, these provisions do not comprehensively regulate the acquisition of shares by common owners in a market and may only partially fill the gap. As Article 102 TFEU is unlikely to apply to situations of common ownership and the main competitive harm arises from unilateral effects, and Article 101 TFEU is impractical to deal with a bundle of individual share acquisitions and gives rise to considerable legal uncertainty, Articles 101 and 102 TFEU are not viable options to control common shareholdings. The application of Articles 101 and 102 TFEU to situations of common ownership would be a step back from the established system of merger control. Common ownership should primarily be treated as a structural issue. Thus, from a systematic point of view, merger control is the more appropriate instrument to regulate common ownership.[592]

II. Merger Control Regulation

1. Merger Scenarios

Merger control can also potentially be used to address the anti-competitive effects of common ownership, as it is an option to prevent a harmful market structure. If it can sufficiently capture harmful concentrations, this approach would not necessarily require additional specific

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[588] *Rusu*, World Competition 2014, 487, 504.
[589] *Struijlaart*, World Competition 2002, 173, 202.
[590] *Commission*, White Paper – Towards more effective EU merger control, 9.7.2014, COM(2014) 449 final, para. 41.
[591] *Commission*, White Paper – Towards more effective EU merger control, 9.7.2014, COM(2014) 449 final.
[592] *Fadiga*, European Competition Law Review 2019, 157, 159.

regulation. Therefore, it is important to assess whether the European and German merger control regimes can deal with the effects of common ownership.

Three different merger scenarios can be identified in which merger control may be relevant in a situation of common ownership. *First*, there is a regular merger between two competitors (Chapter II.2.). *Second*, there could be a merger between two common owners, which could also give rise to competition concerns (Chapter II.3). *Third*, the acquisition of shares by an institutional investor could potentially be reviewed by the competition authorities (Chapter II.4). Because all three scenarios may raise different challenges, they will be discussed separately.

In general, merger control is particularly relevant when the potential effects are not caused by explicit coordination between firms. In particular, the underlying theories of anti-competitive effects and the potential mechanisms that may cause them are relevant to the substantive appraisal of mergers. The assessment of the legal issues in merger control is thus linked to the causal mechanisms. The empirical literature alone can only be of limited help in assessing specific cases, as the empirical evidence of anti-competitive effects in one market cannot simply be extrapolated to other markets.[593]

In the legal analysis, much of the debate on the anti-competitive effects of common ownership focuses on the acquisition of shares.[594] However, focusing only on the acquisition of shares and the existence of common ownership positions may be considered too narrow. It is important to emphasise that – although the minority shareholdings are the source of the potential problem – common ownership effects may also be relevant in a regular merger scenario. If there is already a notifiable concentration, the anti-competitive effects of common ownership may potentially also be taken into account in the substantive assessment.

2. Merger Between Competitors

a) Overview

As a first option, common ownership could be relevant in an ordinary merger case. In this scenario, it is assumed that there is a notifiable concentration between two firms which are competitors. Thus, indirect links between the parties are irrelevant to the question of whether a case has to be notified, as they do not directly alter the change of control between two companies as defined in Article 3(2) EUMR or § 37(1) No. 2 GWB. Since it is assumed that all jurisdictional and formal requirements are met, the focus will be on the substantive analysis under Article 2(3) EUMR and § 36(1) GWB respectively.

[593] *Wambach/Weche*, Wirtschaftsdienst 2019, 575, 579.

[594] See e.g. *Posner/Scott Morton/Weyl*, Antitrust Law Journal 2017, 669; *Rock/Rubinfeld*, Antitrust Law Journal 2018, 221.

The presumption is that there is some level of common ownership between the competitors – i.e. between some or all of the competing firms, not necessarily between the two merging parties. There are many factors relevant to the substantive assessment of a merger, and it is unlikely that a merger will be challenged solely on the basis of common ownership links, irrespective of the other circumstances. Many aspects that are relevant to the substantive assessment of a merger are unrelated to common ownership. However, some theories of harm may be supported by the existence of such links. It will be analysed how common ownership may be relevant to the assessment of a concentration, either as a single theory of harm or as a contributing factor.

It is a challenge to integrate the potential anti-competitive effects of common ownership into the existing framework, which has been built around a specific set of cases. In many respects the problem of common ownership differs from the familiar cases and it is therefore not easily reconciled with the existing analytical framework.[595] It has some similarities with direct minority shareholdings, but the theories of harm and the potential effects are different. Nevertheless, it is helpful to start with the assessment of direct minority shareholdings because there is already an established economic theory for these cases. In general, the SIEC test in European merger control under Article 2(3) EUMR provides a very flexible wording to include all potential competitive harm in the assessment. Since German competition law has adopted the SIEC test into law, there are no major differences between the substantive analysis under German and European competition law.

In the case of a single dominant position post-merger, common ownership is irrelevant. The theory of harm in relation to indirect structural links is not straightforwardly applicable to the case of single dominance. This is because, in the case of common ownership, the anti-competitive harm arises from the lower level of competition, either due to coordinated behaviour or as an effect of unilateral action by the competing firms. In contrast, in the case of single dominance, the possible harm is not based on the links between the competitors.

b) SIEC Test

(1) Unilateral Effects

(a) Overview

In general, unilateral effects refer to the increased incentive of a merged firm to raise prices unilaterally as a result of reduced competitive pressure following the merger.[596] This incentive

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[595] *Corradi/Tzanaki*, CPI Antitrust Chronicle, June 2017, 18, 21.

[596] *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, ("Horizontal Merger Guidelines"), para. 22; *U.S. Department of Justice/Federal Trade Commission*, Horizontal Merger Guidelines, 2010, pp. 20 ff.

to raise prices does not depend on the actions of others, but is profitable for each firm in isolation. Unlike coordinated effects, the analysis of unilateral effects does not require collusion between firms. It focuses primarily on the unilateral incentives of firms.

Unilateral effects occur when a merger removes an important competitive constraint.[597] In the case of unilateral effects in oligopolistic markets, the Horizontal Merger Guidelines describe that "*concentrations involving the elimination of important competitive constraints that the merging parties had exerted upon each other, as well as a reduction of competitive pressure on the remaining competitors, may […] result in a significant impediment to effective competition.*"[598]

There are different ways in which common ownership could affect the assessment of unilateral effects of a horizontal merger. On the one hand, high common ownership concentration could itself constitute a distinct theory of harm. On the other hand, common ownership could support another theory of harm in the overall assessment of a merger. For example, common ownership may be relevant to the market structure.

(b) The Economic Theory of Minority Shareholdings

The unilateral effects of minority shareholdings are the starting point for an understanding of the unilateral effects of common ownership. The unilateral effects of common ownership can be understood as an extension of direct minority shareholdings between competitors. These cross-shareholdings can harm competition in two ways: they can lead to unilateral action by a firm by changing its incentives, or they can allow the acquirer to influence the strategy of the acquired firm.[599]

The DOJ's Horizontal Merger Guidelines also identify these two sources of competitive harm: *First*, a minority interest could grant the acquiring firm rights that give it leverage over the acquired firm, which it could then use to reduce competition, such as voting rights or the appointment of board members. *Second,* the acquiring firm may have reduced incentives to compete because of its financial interest in the acquired firm.[600]

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[597] *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, ("Horizontal Merger Guidelines"), para. 22.

[598] *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, ("Horizontal Merger Guidelines"), para. 25.

[599] Cross-ownership between competitors may also increase the likelihood of collusion, which will be discussed in Chapter 3.A.II.2.b)(2).

[600] *U.S. Department of Justice/Federal Trade Commission*, Horizontal Merger Guidelines, 2010, pp. 33 f. In addition, the acquiring firm may also gain access to sensitive information, which could make it easier for the two firms to coordinate their behaviour and could lead to coordinated effects; see Chapter 3.A.II.2.b)(2).

The economic theory of the unilateral effects of direct minority shareholdings is well developed. *O'Brien/Salop*[601], building on the work of *Reynolds/Snapp*[602] and *Bresnahan/Salop*[603], analyse the effects of partial ownership and develop methods to quantify the competitive effects: the MHHI and the Price Pressure Indices. They identify two factors that impact a firm's decisions when considering partial acquisitions: Financial interest and corporate control. A financial interest in another firm can change the behaviour of the acquiring firm because the acquiring firm now factors in the effect on its financial interest in the other firm. If a firm has a financial interest in a competitor, this increases the unilateral incentive to raise prices. Corporate control is the ability to influence another company's decisions.

A fully passive minority shareholding merely provides one company with a financial interest in a competitor, without any further means of influencing the behaviour of the other firm. Accordingly, it can only change the market behaviour of the acquiring firm. Assuming that the firm maximises its own profits, a price increase generally has two effects. Some sales are lost because consumers switch to other suppliers, but the remaining sales generate higher profits.[604] In the case of a minority stake in a competitor, some of the lost sales that were previously diverted to competing firms are now recaptured because the acquiring firm shares in the lost sales.[605] A price increase that was previously unprofitable may become profitable if one firm partially owns one or more competitors. This leads to a change in incentives. Part of the lost revenue goes to the rival and is partly recaptured by the firm because of its ownership interest.[606] This price increase does not depend on influence or collusion between the competitors. It results only from the minority shareholding and the financial interest of the acquiring firm.

This is illustrated by the idea that a full merger is a special case of partial ownership. In this case, one firm now owns 100% of both companies. Whereas a price increase may have been unprofitable before, the acquirer will now recoup 100% of the sales diverted to the acquired firm.[607] When there is a partial ownership link between competitors, the acquiring firm still has an incentive to raise prices unilaterally because it can recoup part of the lost sales. Some of the lost customers will switch to the rival firm. With a minority shareholding, the acquiring firm will not recover 100% of its lost profits, but only a fraction. The acquiring firm has an incentive to raise prices unilaterally because it can partly recoup the lost demand through its

[601] *O'Brien/Salop*, Antitrust Law Journal 2000, 559.
[602] *Reynolds/Snapp,* International Journal of Industrial Organization 1986, 141.
[603] *Bresnahan/Salop*, International Journal of Industrial Organisation 1986, 155.
[604] *O'Brien/Salop*, Antitrust Law Journal 2000, 559, 572.
[605] *Posner/Scott Morton/Weyl*, Antitrust Law Journal 2017, 669, 682; *O'Brien/Salop*, Antitrust Law Journal 2000, 559, 575.
[606] *O'Brien/Salop*, Antitrust Law Journal 2000, 559, 575.
[607] *O'Brien/Salop*, Antitrust Law Journal 2000, 559, 573 f.

shareholding in a competitor. Since this incentive exists only for the acquiring firm, there is no need for control over the target firm.

The situation is different if the minority shareholding involves some degree of control over the acquired firm. In this case, the acquiring firm can use its influence to pressure the acquired firm to behave less competitively. The forms and the intensity of control can vary considerably. While control is generally not proportional to the financial interest, a higher financial interest is usually followed by greater control.[608] *O'Brien and Salop* distinguish between several forms of control.[609] The extremes are total control and no control, with the latter describing a purely financial interest with no ability to influence the other company. Between these extremes, there are several alternatives of partial control scenarios.

In summary, the distinction between controlling and non-controlling minority shareholdings is very important. The theory of harm differs depending on whether the minority shareholding is active or passive, i.e., whether it is combined with control. A financial interest affects the incentives of the acquiring firm, whereas corporate control changes the incentives of the acquired firm.[610] If a firm has a financial interest in a rival firm, it has a unilateral incentive to raise prices, because some of the lost sales will be offset by the increased sales of the partly-owned competitor. Control of the acquired firm opens up the possibility of changing the other firm's market behaviour. These two scenarios are unilateral effects because they only change the behaviour of a single firm and do not require cooperation between competitors.

(c) Extension to Common Ownership

Common ownership could theoretically be interpreted as an extension of the theory of direct minority shareholdings.[611] In the case of common ownership, the structural links between competitors are indirect. Accordingly, the application of the theory of harm of direct minority shareholdings is not straightforward. Most importantly, the extension of the theory relies on the incentive to take into account the profits of the competitor. In the case of direct minority shareholdings, the incentives are relatively obvious. The theory of direct minority shareholdings can easily explain unilateral effects under the premise of strict own-profit maximisation. Assuming that the firms only follow their own interests, they directly gain from a rival's profits because they participate in those profits through their direct link.

However, this is much more complex in the case of common ownership. The incentive to maximise profits for the common owners is only indirect. The common ownership hypothesis

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[608] *O'Brien/Salop*, Antitrust Law Journal 2000, 559, 577.
[609] *O'Brien/Salop*, Antitrust Law Journal 2000, 559, 579 ff.
[610] *O'Brien/Salop*, Antitrust Law Journal 2000, 559, 568.
[611] *Patel*, Antitrust Law Journal 2018, 279, 288; *O'Brien/Waehrer*, Antitrust Law Journal 2017, 729, 730.

requires firms to consider the interests of their rivals when they have common owners. In this case, a rival's profits do not go directly to the firm - only the rival's shareholders benefit. These shareholders may partially overlap, so that in the end it is the shareholders of the firm who benefit. In this scenario, the firm that raises prices is acting in the interests of its common owners, but not in its own interests. Accordingly, this theory needs to plausibly show that the commonly owned firm incorporates the incentives of its common owners, and that its main goal is not to maximise its own profit but to work for its diversified shareholders – possibly even at the expense of its own firm's profit. The influence of the common owners is important because it can change the incentives of the competitors. This is a question of the theory of harm and the underlying causal mechanisms which have been discussed above.[612]

From a legal perspective, what is important is the mechanism that causes a firm to act in the interests of its shareholders. It may not be strictly necessary to prove a specific mechanism to oppose a merger, as the standard is effects-based and does not require proof of specific future conduct.[613] Nonetheless, it does require a prediction of future market behaviour. The Commission must demonstrate that there is a strong probability of a significant impediment to effective competition.[614] To do so, it has to provide economic evidence that is logical and not contradictory.[615] The Court of Justice held that the quality of the evidence provided by the Commission is important in order to prove the plausibility of a future economic development where there are several possible chains of events.[616] Although this judgement mainly related to the facts of the case, it is not limited to empirical data. Instead, the wording includes economic evidence which also includes economic theory.[617] A further interpretation of the ECJ case law is that in merger cases, where the theory of harm is not as widely accepted and the causal link is not clearly established, the economic evidence must meet stricter requirements.[618] A consistent theory of harm, which may even be supported by past behaviour

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612 See Chapter 2.C.

613 *Scott Morton/Hovenkamp*, The Yale Law Journal 2018, 2026, 2034.

614 *General Court*, Judgment of 28.5.2020, Case T-399/16, ECLI:EU:T:2020:217, para. 118 – *CK Telecoms UK Investments/Commission*.

615 *European Court of Justice*, Judgment of 10.7.2008, Case C-413/06 P, ECLI:EU:C:2008:392, para. 169 – *Bertelsmann and Sony Corporation of America/Impala*.

616 *European Court of Justice*, Judgment of 15.2.2005, Case C-12/03 P, ECLI:EU:C:2005:87, para. 44 – *Tetra Laval*: *"The analysis of a 'conglomerate-type' concentration is a prospective analysis in which, first, the consideration of a lengthy period of time in the future and, secondly, the leveraging necessary to give rise to a significant impediment to effective competition mean that the chains of cause and effect are dimly discernible, uncertain and difficult to establish. That being so, the quality of the evidence produced by the Commission in order to establish that it is necessary to adopt a decision declaring the concentration incompatible with the common market is particularly important, since that evidence must support the Commission's conclusion that, if such a decision were not adopted, the economic development envisaged by it would be plausible."*

617 *Burnside/Kidane*, Journal of Antitrust Enforcement 2020, 456, 508.

618 *General Court*, Judgment of 28.5.2020, Case T-399/16, ECLI:EU:T:2020:217, para. 111 – *CK Telecoms UK Investments/Commission*: *"In other words, the more a theory of harm advanced in support of a significant impediment to effective competition put forward with regard to a*

in the relevant market, is therefore necessary. The likelihood of anti-competitive effects is higher and easier to prove if it is supported by a plausible theory how these effects came about. This is particularly important since the common owners usually do not have the legal rights to directly control a firm's strategy. Nonetheless, the Commission has a margin of discretion in economic matters.[619] In addition, the MHHI and the PPI can provide means to quantify the effects of common ownership.[620] Still, these measures are not yet accepted as the empirical standard.[621]

Under the assumption that firms take the interests of their shareholders into account, the theory of direct minority shareholdings can be extended to the case of common ownership. The clear difference between the two scenarios is that the traditional recapture model for direct minority shareholdings operates on the assumption of own-firm profit maximisation. In contrast, a recapture scenario for indirect minority shareholdings requires firms to maximise shareholder value in the sense that they maximise the value of their shareholders' assets. In the case of common ownership, this could amount to sacrificing some of the firms' own profits in order to increase their rivals' profits. Although the Commission has a margin of discretion, it is uncertain whether the legal threshold of a significant impediment to effective competition under Article 2(3) EUMR is met, since the magnitude of the effects is neither sufficiently clear nor measurable.

(d) Common Ownership as an "Element of Context"

Common ownership cannot only be assessed in isolation, but can also be a factor to be analysed as an additional element in merger review: an "element of context". The European Commission adopted this approach in its *Dow/DuPont*[622] and *Bayer/Monsanto*[623] decisions.

In the case of a horizontal merger, common ownership is likely to be only an additional factor in the analysis, as the direct increase in market concentration remains the main issue for the substantive analysis. Nevertheless, it can be an aspect in the review of a merger. The Commission has found that market shares or the HHI are likely to underestimate market

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concentration is complex or uncertain, or stems from a cause-and-effect relationship which is difficult to establish, the more demanding the Courts of the European Union must be as regards the specific examination of the evidence submitted by the Commission in this respect."

[619] *European Court of Justice*, Judgment of 15.2.2005, Case C-12/03 P, ECLI:EU:C:2005:87, para. 39 – *Tetra Laval*

[620] See Chapter 2.B.I.

[621] *Scott Morton/Hovenkamp*, The Yale Law Journal 2018, 2026, 2032.

[622] *Commission*, Decision of 27.3.2017 in Case No. M.7932 – *Dow/DuPont*.

[623] *Commission*, Decision of 21.3.2018 in Case No. M.8084 – *Bayer/Monsanto*, para. 229.

concentration and market power and that common ownership is therefore relevant as an element of context.[624]

Although, the Commission's *Dow/DuPont* decision does not explicitly link common ownership to unilateral or coordinated effects, it regards it as an "element of context" that is relevant to market concentration.[625] Overall, the Commission assesses common ownership as an important factor in the overall market structure without specifying how it relates to a particular theory of harm. In an annex to its decision, the Commission does not attribute any particular role to the existence of a high level of common ownership. The only case-specific assessment is the calculation of the MHHI which the Commission considers to be important as a measure of market concentration. Ultimately, it did not base its decision on the high common ownership concentration and did not calculate a specific MHHI in this case because it could not reliably determine the control share. More generally, the Commission only found that the HHI levels tend to underestimate the real level of concentration and that the MHHI may be a more accurate measure.[626]

Furthermore, the Commission applied the theory of harm of common ownership to innovation competition.[627] Nevertheless, from a theoretical perspective, common ownership can have both positive and negative effects on innovation competition.[628] Empirical studies point to common ownership as a potentially positive factor for innovation when there are large spillovers between firms and they are not close product market competitors.[629]

In the *Bayer/Monsanto* case, the Commission focused on common ownership as one of several elements of the market structure and integrated it into its decision.[630] It concluded that the high degree of common ownership between firms increases the level of market concentration.

One might ask whether the additional analysis of common ownership in these cases adds any new insights. One potential criticism is that in a market where there is already a high degree of common ownership before the merger, the additional effects of the merger may be lower than in the absence of common ownership. This is because the pre-merger level of competition

[624] *Commission*, Decision of 21.3.2018 in Case No. M.8084 – *Bayer/Monsanto*, para. 228; Decision of 27.3.2017 in Case No. M.7932 – *Dow/DuPont*, Annex 5, paras. 4, 60, 79.
[625] *Commission*, Decision of 27.3.2017 in Case No. M.7932 – *Dow/DuPont*, Annex 5, para. 81.
[626] *Commission*, Decision of 27.3.2017 in Case No. M.7932 – *Dow/DuPont*, Annex 5, para. 79.
[627] *Commission*, Decision of 27.3.2017 in Case No. M.7932 – *Dow/DuPont*, para. 2350.
[628] See Chapter 2.B.II.3.a).
[629] *Antón/Ederer/Giné/Schmalz*, Innovation: The Bright Side of Common Ownership?, May 2021, available at: https://ssrn.com/abstract=3099578.
[630] *Commission*, Decision of 21.3.2018 in Case No. M.8084 – *Bayer/Monsanto*, para. 229.

was already low before the merger. Thus, the incremental price effect of a merger would be lower than without common ownership.

Overall, common ownership is relevant as an element of context because it adds to the analysis of the market structure and points to levels of market concentration that may be underestimated – both before and after the merger. According to the common ownership hypothesis, it is a factor that affects the nature of competition. It is, therefore, correct to recognise this feature of the market structure. Additionally, measuring and analysing common ownership parameters could lead to a more balanced assessment of potential anti-competitive effects in merger control cases. While the debate on common ownership is still ongoing, it is also understandable that the Commission does not give it a central role in its decisions. This may change in the future as the mechanisms and the measures for taking for common ownership into account are more clearly defined.

(e) A Special Case: The Maverick

Another scenario in which common ownership could be an important element of context is the elimination of a "maverick", a competitor that is significantly more aggressive than the other competing firms and has a history of preventing or disrupting coordination.[631] There are several indicators to identify an aggressive competitor. The Commission regularly examines the past competitive behaviour in terms of, for example, price, quality, choice, and innovation.[632]

The elimination of a maverick can lead to both coordinated and unilateral effects. In the case of unilateral effects, the loss of an important competitor can reduce overall competitive pressure and increase incentives to raise prices.[633] In the context of coordinated effects, the removal of the maverick can drastically change the basis for coordination between firms.[634] The following analysis applies equally to an assessment under either a coordinated or a unilateral effects theory.

The scenario is best exemplified by a merger between a commonly owned firm and a firm without common owners. An example illustrates the situation: Suppose firms A, B and C have a large shareholder overlap and firm D is owned by a single controlling shareholder. If C now buys D, there may be a question as to whether firm D is an aggressive competitor.[635]

[631] *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, ("Horizontal Merger Guidelines"), para. 42.
[632] *Commission*, Decision of 1.9.2016 in Case No. M.7758 – *Hutchison3G Italy/Wind/JV*, para. 432.
[633] See, for example, *Commission*, Decision of 26.4.2006 in Case No. COMP/M.3916 – *T-Mobile Austria/tele.ring*, paras. 40 ff.
[634] *Schwalbe/Zimmer*, Law and Economics in European Merger Control, 2009, p. 187.
[635] See also *Rock/Rubinfeld*, Antitrust Law Journal 2020, 201, 247 f. discussing a similar scenario.

Whereas previously only A, B, and C were commonly owned, D is now also indirectly linked to its competitors. Accordingly, in the above scenario, the merger would lead to a significant increase in common ownership. Nonetheless, it is often possible to identify a maverick without considering the common ownership context.[636] The identification of a maverick is unlikely to be based solely on the shareholder situation. If there is evidence that a firm is an aggressive competitive force, assessing the common ownership situation may provide little additional insight. Still, it may provide further evidence that the maverick is not part of the commonly owned group and can support the analysis that the firm is an "outsider" with more incentives to compete aggressively. The probability that a firm is an industry maverick and exerts competitive constraints on its competitors increases when it does not share the same shareholders. In addition, the elimination of a non-commonly owned firm will increase the MHHI,[637] and upward pricing pressure.[638] Measures of common ownership can therefore track the competitive effects.

However, it is very uncertain whether being a non-commonly owned firm is sufficient to establish a firm as a maverick. Such an analysis is likely to overstate the impact of common ownership. A common ownership analysis cannot and should not replace a thorough merger analysis. Nevertheless, it provides a new perspective and adds an element of context to the merger review.

(f) Preliminary Results

Common ownership can contribute additional insight into the merger analysis. The SIEC test is very flexible and can cover various forms of potential harm. Thus, it is generally capable of capturing the anti-competitive effects of common ownership. A key issue is the standard of proof. Since the common ownership hypothesis requires firms to maximise shareholder value, the most important question is whether there is a consistent theory of harm that supports a high probability of negative effects and identifies factors that can be tested to prove their likelihood. While there are several plausible mechanisms, the conduct of market participants and common owners is often unclear. Case law requires that the Commission provides evidence that a certain chain of events is very probable.[639] However, it is often difficult to predict a certain future behaviour. It is much easier to identify a general framework within which effects are likely to occur. The MHHI may be one factor that can become relevant. It has already been

[636] *Rock/Rubinfeld*, Antitrust Law Journal 2020, 201, 249.
[637] *Rock/Rubinfeld*, Antitrust Law Journal 2020, 201, 249 f.
[638] *Inderst/Thomas,* World Competition 2019, 551, 564 f.
[639] *General Court*, Judgment of 28.5.2020, Case T-399/16, ECLI:EU:T:2020:217, para 118 – *CK Telecoms UK Investments/Commission*.

used by the European Commission.[640] However, it is not sufficient to rely on concentration measures alone. A full analysis of the merger will always be necessary. The assessment of a merger must show the likelihood of unilateral effects. Therefore, while it is not necessary to prove a particular mechanism, establishing its plausibility is very important to explain the incentives of managers. Still, it is not necessary to prove the direct influence of the institutional investor if the incentives of the firms change and these incentives can negatively affect the market outcome.[641]

Common ownership can potentially cause anti-competitive effects even in the absence of shareholder influence.[642] However, anti-competitive effects are less likely in the absence of any active measures. Efforts towards a long-term maximisation of industry value are more likely if competitors at least implicitly agree on this strategy. It is unlikely that sustained anti-competitive behaviour is possible in the absence of some form of coordination between the competing firms.[643]

(2) Coordinated Effects

(a) Overview

Coordinated effects refer to the possibility that a merger increases the likelihood that firms will tacitly coordinate their behaviour and raise prices.[644] The European Commission defines coordinated effects as a situation where the market structure "*may be such that firms would consider it possible, economically rational, and hence preferable, to adopt on a sustainable basis a course of action on the market aimed at selling at increased prices*".[645] According to the *Airtours*[646] judgement of the European Court of First Instance, there are three accepted criteria for coordinated effects. The firms have to be (i) able to reach a stable collusive outcome, (ii) there must be mechanisms to detect and sanction deviations, and (iii) the collusion must not be threatened by third parties, potential competitors especially.

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[640] *Commission*, Decision of 29.9.1999 in Case No. IV/M.1383 – *Exxon/Mobil*; Decision of 27.3.2017 in Case No. M.7932 – *Dow/DuPont*.
[641] *Elhauge*, Ohio State Law Journal 2021, 1, 24.
[642] *Patel*, Antitrust Law Journal 2018, 279, 287.
[643] *Monopolkommission*, Wettbewerb 2018, Hauptgutachten No. 22, 2018, paras. 463, 469.
[644] *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, ("Horizontal Merger Guidelines"), para. 39.
[645] *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, ("Horizontal Merger Guidelines"), para. 39.
[646] *Court of First Instance*, Judgment of 6.6.2002, Case T-342/99, ECLI:EU:T:2002:146 – *Airtours.*

A merger between two competing firms may lead to coordinated effects, i.e., that the remaining firms being more likely to coordinate their behaviour after the merger.[647] Prior to the introduction of the SIEC test, these effects were assessed under the terminology of a collective dominance. However, the substantive legal criteria have not changed and the terms are interchangeable in the legal literature. The relevant phenomenon described by both terms is the same.[648] Nonetheless, from an economic perspective, coordinated effects are not synonymous with a collective dominant position.[649] While collective dominance leads to a static view of a given market structure, the term coordinated effects implies a dynamic approach that takes into account changes.[650] In general, predicting whether coordinated effects will occur and assessing their likelihood is a difficult task, as economic theory does not provide sufficient insights to draw sound conclusions.[651] In order to predict coordinated effects, it can only be established that the necessary conditions for collusion are present in the relevant market and that there are objective incentives to collude.[652] At the very least, a more concentrated market makes collusion easier to sustain.[653] It is therefore necessary to look more closely at the different criteria for coordinated effects and how they may be affected by common ownership.

(b) Legal Basis

(i) The Airtours Criteria

According to the *Airtours* judgement of the CFI, three conditions must be met in order to establish the creation or strengthening of a collective dominant position or coordinated effects respectively. These conditions have also been adopted by the Commission in its Horizontal Merger Guidelines[654], and are based on economic theory.[655] They have also been accepted by the ECJ, although it has stressed that the criteria should not be applied as a checklist but that *"it is necessary to avoid a mechanical approach involving the separate verification of each of those criteria in isolation, while taking no account of the overall economic mechanism of a hypothetical tacit coordination"*[656]. There is some uncertainty as to whether the criteria can be established indirectly or whether it is necessary to prove a precise mechanism. The General

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647 *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, ("Horizontal Merger Guidelines"), para. 22.
648 *Boyce/Lyle-Smith* in: Bellamy & Child, Eighth Edition, 2018, para. 8.239.
649 *Schwalbe/Zimmer*, Law and Economics in European Merger Control, 2009, p. 284.
650 *Schwalbe/Zimmer*, Law and Economics in European Merger Control, 2009, p. 284.
651 *Schwalbe/Zimmer*, Law and Economics in European Merger Control, 2009, pp. 306 ff.
652 *Schwalbe/Zimmer*, Law and Economics in European Merger Control, 2009, p. 306.
653 *Posner/Scott Morton/Weyl*, Antitrust Law Journal 2017, 669, 689.
654 *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, ("Horizontal Merger Guidelines"), para. 41.
655 *Schwalbe/Zimmer*, Law and Economics in European Merger Control, 2009, p. 282.
656 *European Court of Justice*, Judgment of 10.7.2008, Case C-413/06 P, ECLI:EU:C:2008:392, paras. 124 f. – *Bertelsmann and Sony Corporation of America/Impala.*

Court accepted that it is possible to establish the three necessary conditions indirectly by providing "*a very mixed series of indicia and items of evidence relating to the signs, manifestations and phenomena inherent in the presence of a collective dominant position*"[657]. If a continuing price parallelism, in particular above the competitive level, cannot be explained except by collusion, this must suffice.[658] The requirement of a full economic analysis of all the criteria is not necessary in this case.[659]

First, companies must be able to coordinate.[660] Several factors can be examined to assess whether coordination is possible. It is essential that firms interact repeatedly.[661] Market transparency is also an important aspect, as it allows firms to monitor the conduct of competitors and adjust their behaviour accordingly.[662] A stable economic environment is another factor that makes it easier to agree on the terms of coordination.[663] *Second*, there must be deterrent mechanisms that allow the other competitors to punish a firm if it deviates from the terms of coordination.[664] Punishment is also facilitated if the information about such deviations is more transparent. Market transparency has a dual function: it enables and stabilises collusion.[665] *Third*, the stability of coordination must not be threatened by the actions of non-coordinating firms or potential competitors.[666] Competition from outsiders must not sufficiently constrain the collectively dominant oligopoly.

Overall, the market structure is a very important starting point for assessing the likelihood of coordinated effects. There are several characteristics that can facilitate tacit collusion.[667] For instance, the number of competitors is an important factor. It is easier to coordinate when there

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[657] *Court of First Instance*, Judgment of 13.7.2006, Case T-464/04, ECLI:EU:T:2006:216, para. 251 – *Impala/Commission*.
[658] *Boyce/Lyle-Smith* in: Bellamy & Child, Eighth Edition, 2018, para. 8.244.
[659] *Käseberg*, Common Market Law Review 2009, 255, 264 f.
[660] *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, ("Horizontal Merger Guidelines"), paras. 44-48.
[661] *Schwalbe/Zimmer*, Law and Economics in European Merger Control, 2009, p. 228.
[662] *Court of First Instance*, Judgment of 6.6.2002, Case T-342/99, ECLI:EU:T:2002:146, para. 62 – *Airtours.*
[663] *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, ("Horizontal Merger Guidelines"), para. 44.
[664] *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, ("Horizontal Merger Guidelines"), paras. 52-55.
[665] *Schwalbe/Zimmer*, Law and Economics in European Merger Control, 2009, p. 237.
[666] *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, ("Horizontal Merger Guidelines"), paras. 56 f.; *Court of First Instance*, Judgment of 6.6.2002, Case T-342/99, ECLI:EU:T:2002:146, para. 62 – *Airtours.*
[667] *Ivaldi et al.*, The Economics of Tacit Collusion, 2003, pp. 11 ff.

are fewer parties involved.[668] Symmetry in an oligopoly may also be relevant. Although symmetry in market shares does not necessarily allow for collusion, asymmetry between competitors may indicate underlying differences in cost structure or product range between the companies which may make coordination more difficult.[669]

Common ownership may be relevant to the likelihood of coordinated effects because it can affect the market characteristics. Common ownership links may be relevant for some of the three conditions for coordinated effects. Nonetheless, common ownership links are not sufficient to give rise to coordinated effects independently of the general market characteristics and other factors. The existence of common ownership links between companies can be a factor that strengthens the case for coordinated effects. Nonetheless, it is important to note that coordinated effects are only likely in markets that already have characteristics that favour coordination.[670]

On the one hand, common ownership may increase transparency and enable firms to monitor deviations from the collusive agreement, but on the other hand it may also make it harder to punish deviations.[671] These potentially conflicting effects are discussed in more detail in the context of each criterion.

(ii) The Case Law

(aa) Airtours

There is little guidance in the case law on the role of common owners and their impact on the assessment of coordinated effects. In the *Airtours* judgement, the Court of First Instance assessed the Commission's findings in relation to common institutional investors and their role in the finding of collective dominance.[672] The alleged effect was very similar to that found in the Airline Study.[673] Still, in the *Airtours* case, the level of common ownership was higher than is observed in many markets today. The Commission found large overlaps in the shareholdings of the competitors Airtours, First Choice and Thomson with 30-40% of the shares held by the same group of institutional investors.[674] In its decision, the Commission stated:

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[668] *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, ("Horizontal Merger Guidelines"), para. 45.

[669] *Ivaldi et al.*, The Economics of Tacit Collusion, 2003, pp. 14 ff.

[670] *Monopolkommission*, Wettbewerb 2018, Hauptgutachten No. 22, 2018, para. 476.

[671] *Patel*, Antitrust Law Journal 2018, 279, 322.

[672] *Court of First Instance*, Judgment of 6.6.2002, Case T-342/99, ECLI:EU:T:2002:146, para. 91 – *Airtours.*

[673] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513.

[674] *Commission*, Decision of 22.9.1999 in Case No. IV/M.1524 – *Airtours/First Choice*, para. 137.

"[…] the Commission finds it likely that the stock market, and these institutional investors in particular, will have a disciplinary effect on the growth ambitions of any management to the extent that these ambitions may lead to capacity additions, which could depress prices, profitability and share prices. Institutional investors in the sector appear to recognise that attempts by any of the major operators to grow by seeking to add capacity and take sales from their competitors will result in lower profits for all the major operators, and they have no interest in that happening."[675]

This argument echoes the concerns raised by the current level of common ownership. Common ownership between competitors may have a disciplinary effect on the firms, as competitive behaviour is not in the interest of the common institutional investors. The Commission assumes that these incentives of the investors will be reflected in management decisions. It does not explicitly state whether it believes that these shareholders will actively use their influence or whether their presence alone is sufficient to trigger this effect. Accordingly, no distinction is made between an active and a passive mechanism.

The Court of First Instance took a relatively restrictive view on the inclusion of common ownership links in the assessment of coordinated effects. The mere existence of overlapping shareholders was not accepted as evidence of a tendency towards collective dominance. Furthermore, the CFI found that the Commission did not contend that investors created a constraint on capacity expansion.[676] For the Court, the identification of the potentially anti-competitive incentives was not sufficient to prove a disciplinary effect. It pointed out that the Commission had not shown (i) that the institutional investors formed a united body controlling the companies, (ii) that the common ownership provided a mechanism for the exchange of information or (iii) that the common institutional investors were actively involved in the management of the companies.[677]

Accordingly, it can be inferred from this judgement that it is not sufficient to show a high level of common ownership in itself. Instead, it is necessary to demonstrate that the institutional investors form a group with a common interest, enable the firms to exchange information or otherwise facilitate collusive behaviour in another way. It needs to be established that investors are a force that can exert some degree of influence. It will probably be necessary to provide a mechanism that can affect one of the conditions for coordinated effects.[678]

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[675] *Commission*, Decision of 22.9.1999 in Case No. IV/M.1524 – *Airtours/First Choice*, para. 137.
[676] *Court of First Instance*, Judgment of 6.6.2002, Case T-342/99, ECLI:EU:T:2002:146, para. 91 – *Airtours.*
[677] *Court of First Instance*, Judgment of 6.6.2002, Case T-342/99, ECLI:EU:T:2002:146, para. 91 – *Airtours.*
[678] *Lindsay/Berridge*, The EC Merger Regulation – Substantive Issues, Third Edition, 2009, p. 373.

It is possible that the courts will change their view in the light of a stronger economic underpinning of the effect of common ownership links and relax the requirements for the necessary evidence. The Court of First Instance did not hold that common ownership should be disregarded altogether, but narrowed the criteria for establishing that it contributes to coordinated effects. Although not explicitly stated, one criterion that may support the argument of a change in incentives is the influence of shareholders. If there is evidence that common owners can influence managerial decision making, this may implicitly point to a disciplinary effect. However, if common ownership merely changes incentives, it may be more difficult to prove that the shareholder's interests as such influence managerial decisions.

(bb) Sony BMG/Impala

In *Sony/BMG*, the ECJ emphasised that a mechanical approach of verifying each criterion in isolation must be avoided, but that an overall hypothetical mechanism and theory must be taken into account.[679] Instead, a full economic analysis of the circumstances and the possibilities to monitor deviations is necessary.[680] In addition to the condition of a non-mechanical approach, it is necessary to provide plausible coordination strategies and to test these hypotheses.[681] Accordingly, a theory of harm must be presented and tested that plausibly provides a channel for the competing firms to coordinate their behaviour.[682] With regard to common ownership, the case did not provide any additional insights.

(cc) European Commission Case Law

The cases which were considered by the *European Commission* involved partial ownership between competitors or by a third competing firm. The Commission generally looks at structural links because they can make coordinated effects more likely. However, they are not a necessary condition for coordinated effects.[683] These general structural links tend to increase transparency, provide opportunities to punish deviations and create a common commercial interest.[684] In the following section, it will be discussed whether the same is true for common ownership links.

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679 *European Court of Justice*, Judgment of 10.7.2008, Case C-413/06 P, ECLI:EU:C:2008:392, paras. 125, 130 – *Bertelsmann and Sony Corporation of America/Impala*.

680 *European Court of Justice*, Judgment of 10.7.2008, Case C-413/06 P, ECLI:EU:C:2008:392, para. 129 – *Bertelsmann and Sony Corporation of America/Impala.*

681 *European Court of Justice*, Judgment of 10.7.2008, Case C-413/06 P, ECLI:EU:C:2008:392, para. 129 – *Bertelsmann and Sony Corporation of America/Impala.*

682 *Bishop/Walker,* The Economics of EC Competition Law, 2010, para. 7-75.

683 *Court of First Instance*, Judgment of 25.3.1999, Case T-102/96, ECLI:EU:T:1999:65, para. 275 – *Gencor/Commission*.

684 *Schwalbe/Zimmer*, Law and Economics in European Merger Control, 2009, pp. 253 ff.

(c) Application to Common Ownership

(i) Overview

Common ownership may be one relevant factor facilitating coordination. Common owners might increase the likelihood of tacit collusion by their behaviour or by their mere presence. Nonetheless, it should be stressed that common ownership as a single causal factor is unlikely to lead to coordinated effects. The specific shareholder structure cannot by itself enable collusion, irrespective of the market structure and other circumstances. There are several conditions for the emergence of coordinated effects, and indirect structural links may be relevant for some of these conditions, but are not in themselves a prerequisite. In this respect there are similarities with direct minority shareholdings, which may also increase the likelihood of coordinated effects, but are not in themselves sufficient to conclude that collusion is likely.[685]

Structural links between oligopolistic firms are not a necessary condition for coordinated effects.[686] Similarly, firms do not necessarily need common ownership links to coordinate their market behaviour. Moreover, competitors generally have incentives to coordinate, not only when there are indirect structural links.[687] In the following section, it will be analysed how common ownership can affect the different criteria for coordinated effects.

(ii) Airtours Criteria

(aa) Ability to Coordinate

Firms must be able to coordinate and monitor deviations. Therefore, it is relevant whether firms have the means to coordinate, i.e., whether there are certain facilitating factors present in the market.[688] In order to examine whether common ownership can provide additional means to coordinate, it is helpful to first examine direct minority shareholdings. On this basis, it can then be discussed whether common ownership provides similar channels or whether there are certain characteristics in a common ownership context that provide additional means to coordinate and monitor deviations.

Market transparency is an important factor that allows competitors both to coordinate their behaviour and to monitor deviations. Direct structural links can provide mechanisms that increase transparency.[689] They can increase market transparency because the acquiring firm may have access to firm-specific information.[690] In addition, minority shareholdings can

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[685] *OECD*, Minority Shareholdings – Background Note, 2008, p. 29.
[686] *Court of First Instance*, Judgment of 25.3.1999, Case T-102/96, ECLI:EU:T:1999:65, paras. 276 ff. – *Gencor/Commission*.
[687] *Monopolkommission*, Wettbewerb 2018, Hauptgutachten No. 22, 2018, para. 465.
[688] *Schwalbe/Zimmer*, Law and Economics in European Merger Control, 2009, p. 307.
[689] *Commission*, Decision of 29.9.1999 in Case No. IV/M.1383 – *Exxon/Mobil,* para. 480*;* *Lindsay/Berridge*, The EC Merger Regulation – Substantive Issues, Third Edition, 2009, p. 373.
[690] *OECD*, Minority Shareholdings – Background Note, 2008, p. 30.

increase transparency if they are reciprocal, and allow several competitors to gather information about each other.[691] The Commission has also considered facilitating practices and past behaviour that increase the likelihood of coordination between firms.[692] It has found that potential channels for an information exchange or facilitating practices can complement existing sources of information on market conduct and make it easier to reach terms of coordination.[693] In *Norddeutsche Affinerie/Cumerio*, the European Commission considered whether a competitor's shareholding could facilitate an information flow that would in turn enable the companies to monitor deviations.[694]

The findings on minority shareholdings may be partially transferable to common ownership links. Common ownership could equally be a facilitating factor in achieving coordination. There are several ways in which the presence of common owners could increase transparency and facilitate coordination.

One or more shareholders may have significant holdings in several firms. This could give them privileged access to information about the competing firms even in the case of a completely passive investment.[695] This information could potentially be shared and exchanged. However, if the shareholding is very small, the shareholder may not be in a better position to access and share information.[696] Nonetheless, common owners are often among the largest shareholders and have privileged access to the management and the firm.[697] Hypothetically, they could act as an intermediary to observe and share information about firms, thereby increasing transparency.

An exchange of information may violate Article 101 TFEU, as well as insider trading rules.[698] Nevertheless, this does not in itself change the assessment that common ownership links make these channels more accessible. It does, however, make it less likely that these channels will be used because they violate competition law. Therefore, due to the legal restrictions on the exchange of information, this channel may be less likely to be used than other channels.[699]

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[691] *Commission*, Annex to the Commission Staff Working Document – Towards more effective EU merger control, 25.6.2013, SWD(2013)239 final, para. 47.

[692] *Commission*, Decision of 1.9.2016 in Case No. M.7758 – *Hutchison3G Italy/Wind/JV*, paras. 1187-1207.

[693] *Commission*, Decision of 1.9.2016 in Case No. M.7758 – *Hutchison3G Italy/Wind/JV*, para. 1207.

[694] Commission, Decision of 23.1.2008 in Case No. COMP/M.4781 – *Norddeutsche Affinerie/Cumerio*, para. 187.

[695] *OECD*, Minority Shareholdings – Background Note, 2008, p. 30.

[696] *Patel*, Antitrust Law Journal 2018, 279, 320 f.

[697] *Monopolkommission*, Wettbewerb 2018, Hauptgutachten No. 22, 2018, para. 451.

[698] See Chapters 2.C.III.1.c)(3) and 3.A.I.1.b)(3).

[699] *Monopolkommission*, Wettbewerb 2018, Hauptgutachten No. 22, 2018, para. 466; *Hemphill/Kahan*, Yale Law Journal 2020, 1392, 1438.

Public statements can be used by firms to communicate to their competitors what the firms consider to be appropriate future market behaviour, such as price-setting or expansion plans.[700] Similarly, investors could communicate their preferences regarding future pricing or strategy. Such communication could make it easier for oligopolistic firms to reach a common understanding about future market behaviour.[701]

Additionally, similar communications could be part of private meetings. The Commission considered the regular meetings of high-level officials as an indicator of facilitation of coordination, even though there was no evidence that these managers discussed pricing or exchanged sensitive information; but, they provided an opportunity for coordination.[702] In the case of common ownership, while there is evidence of direct contact, it is difficult to provide any evidence that the firms use these meetings as a channel for coordination. This is different from public statements which can be directly observed.

The question remains, however, whether such public or private statements could simply be regarded as irrelevant "cheap talk": A rational competitor will ignore any information that does not align with the incentives of the disclosing firm.[703] This is where common ownership can play a role. The position of the common investors, with ownership interests in several competing firms, can make these messages more credible. Because the common owner is a shareholder in each of the firms, it does not benefit from making false statements.[704] This makes any message more credible and harder to dismiss as cheap talk.

Public disclosure can also increase market transparency.[705] Commonly owned firms could use public disclosure as a channel to coordinate and monitor their behaviour. Empirical studies suggest that public disclosure could act as a communication channel for firms. Two studies found that voluntary disclosure increases with common ownership.[706] It may help managers of commonly owned firms to coordinate and monitor their behaviour, thus, acknowledging their owners' interest in reduced competition.[707]

In conclusion, increased market transparency, which allows coordination and detection of deviations and reduces incentives to compete, can be the result not only of direct structural

[700] *European Economics*, Study on the Assessment of Oligopolies in Merger Control, 2001, p. 38.
[701] *European Economics*, Study on the Assessment of Oligopolies in Merger Control, 2001, pp. 38 ff.
[702] *Commission*, Decision of 1.9.2016 in Case No. M.7758 – *Hutchison3G Italy/Wind/JV*, para. 1202.
[703] *OECD*, Unilateral Disclosure of Information with Anticompetitive Effects – Background Paper, 2012, p. 26.
[704] *Rock/Rubinfeld*, Antitrust Law Journal 2020, 201, 220.
[705] *OECD*, Unilateral Disclosure of Information with Anticompetitive Effects – Background Paper, 2012, p. 19.
[706] *Park/Sani/Shroff/White*, Journal of Accounting & Economics 2019, 387; *Pawliczek/Skinner/Zechman*, Journal of Accounting Research 2022, 1651.
[707] *Pawliczek/Skinner/Zechman*, Journal of Accounting Research 2022, 1651, 1654 ff.

links but also of common ownership. The reasoning for direct structural links can generally be applied to common ownership.[708] Information exchange, public and private statements and public disclosure facilitate coordination. Since they are more likely to occur with common ownership, the ability to coordinate is likely to increase in the presence of common ownership.

(bb) Deterrence Mechanisms

Common ownership could also have an impact on the existence of deterrent mechanisms and the ability to punish deviations from the collusive equilibrium. In the *Airtours* case, the Court of First Instance stated that "*there must be adequate deterrents to ensure that there is long-term incentive in not departing from the common policy*"[709]. Direct structural links and multi-market contacts can have a disciplinary effect on the oligopolists by facilitating retaliation in other markets, thus making it more costly to deviate from the collusive outcome.[710] In the case of direct structural links, the risks of retaliation are relatively clear. If competitors have more contacts and cooperate in other markets, the possibilities for retaliation increase, e.g. if firms cooperate in a joint venture, this cooperation could be terminated or the investment in the joint venture could be reduced.[711] Structural links like joint ventures, R&D cooperation or strategic alliances can make the competitors aware of each other's strategy, provide means to punish deviations and may generally align firm's interests to some extent.[712] They also increase the possible channels for retaliation.[713] Accordingly, the likelihood of collusion increases.

The same mechanisms could potentially apply to common ownership links. However, it is less obvious how a punitive mechanism would work, as there has been little research. Common ownership links are different from the direct structural links. They do not provide a channel of direct contact between the competing firms and, therefore, do not provide a direct opportunity for coordination. If they do facilitate coordination, it can only be indirect, through the common investor as a third party. Nonetheless, common owners may be in a better position to identify and communicate deviations from the collusive agreement with their portfolio firms.[714] In line with this, the Commission claimed in its *Airtours* decision that the institutional investors "*exert a watchdog influence*"[715].

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[708] *Schwalbe/Zimmer*, Kartellrecht und Ökonomie, 2021, p. 496, fn. 779.

[709] *Court of First Instance*, Judgment of 6.6.2002, Case T-342/99, ECLI:EU:T:2002:146, para. 62 – *Airtours.*

[710] *Commission*, Decision of 24.4.1996 in Case No. IV/M.619 – *Gencor/Lonrho*, para. 158.

[711] *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, ("Horizontal Merger Guidelines"), para. 55; *Ivaldi et al.*, The Economics of Tacit Collusion, 2003, p. 53.

[712] *Commission*, Decision of 29.9.1999 in Case No. IV/M.1383 – *Exxon/Mobil*, para. 480.

[713] *Court of First Instance*, Judgment of 25.3.1999, Case T-102/96, ECLI:EU:T:1999:65, para. 281 – *Gencor/Commission.*

[714] *Patel*, Antitrust Law Journal 2018, 279, 320 f.

[715] *Commission*, Decision of 22.9.1999 in Case No. IV/M.1524 – *Airtours/First Choice*, para. 137.

(cc) Stability Against Competition by Outsiders

The third criterion is that the stability of the collusive outcome must not be constrained by the competitive pressure from firms outside the oligopoly.[716] These firms can be actual or potential competitors. If a market is perfectly contestable, collusion becomes unprofitable.[717] Entry barriers are an important criterion for the stability of tacit collusion.[718]

The existence of links between competitors does not alter the potential of outsiders and non-coordinating firms to threaten the success of the collusive behaviour. Accordingly, common ownership does not directly affect the potential competition from outsiders. Nevertheless, common ownership may affect market entry and thus the external stability of the coordination. This effect has not been studied theoretically, but there are empirical studies that link common ownership to reduced market entry.

Common ownership does not create hard barriers to entry. However, it may affect the incentives of outsiders to compete. Common ownership may play a role if potential competitors are also commonly owned by a third party. In such a case, the potential competitors may have less incentive to enter the market and therefore do not threaten the stability of the collusion.

Studies in the pharmaceutical sector have found that the greater the level of common ownership between the firm and the potential entrant, the less likely it is that the firm will enter the market.[719] The pharmaceutical sector is an example, but reduced incentives to enter could theoretically be relevant in other sectors as well. In the case of common ownership, entry may appear profitable to the individual firm in isolation. However, from the perspective of the common owners, market entry may not be profitable, as they weigh the benefits to the new entrant against the potential losses to the firm that is already active in the market. Common owners do not necessarily benefit from market entry because it reduces the profits of the firm(s) already active in the market.[720] Accordingly, the entry of a new firm will not have a positive effect on the overall portfolio of the common owner.

There are several mechanisms by which common ownership between potential market entrants and firms already active in the market may affect the potential for entry. Both active

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[716] *Court of First Instance*, Judgment of 6.6.2002, Case T-342/99, ECLI:EU:T:2002:146, para. 62 – *Airtours*.

[717] *European Economics*, Study on the Assessment of Oligopolies in Merger Control, 2001, p. 29.

[718] *European Economics*, Study on the Assessment of Oligopolies in Merger Control, 2001, pp. 22 f.; *Bundeskartellamt*, Leitfaden zur Marktbeherrschung in der Fusionskontrolle, March 2012, paras. 113 ff.

[719] *Newham/Seldeslachts/Banal-Estanol*, Common Ownership and Market Entry: Evidence from the Pharmaceutical Industry, June 2018, DIW Berlin Discussion Paper No. 1738; *Xie/Gerakos*, AEA Papers and Proceedings 2020, 569.

[720] *Newham/Seldeslachts/Banal-Estanol*, Common Ownership and Market Entry: Evidence from the Pharmaceutical Industry, June 2018, DIW Berlin Discussion Paper No. 1738, p. 34.

and passive mechanisms are possible. Managers could either directly incorporate the incentives of their shareholder base, or common owners could communicate with these firms or exert pressure on them to refrain from entry. Another possibility is that firms are not forced to compete and lack the incentives to actively expand into new markets, a passive mechanism.

(iii) Additional Criteria

(aa) Incentives to Coordinate

The Commission also considers the parties' incentives to coordinate.[721] Certain factors, such as market structure and minority shareholdings, affect the incentives of competitors to coordinate. The market structure may lead to an alignment of incentives.[722] Minority shareholdings may increase the incentives to collude.[723] Common ownership links between competitors could potentially have a similar effect by providing an additional common incentive not to compete. Common ownership gives the parties more certainty about the future behaviour of their competitors. For instance, if firms know that their shareholders communicate with all their competitors and share the same strategies, this may increase the knowledge that the other firms will also choose to collude. Although the case of a direct minority shareholding is different from common ownership, the underlying incentives may be partly transferable. Common ownership may directly increase the incentives to collude.[724]

(bb) Lessened Incentive to Deviate from the Collusive Outcome

Additionally, there is the possibility that firms linked by common ownership do not have as strong incentives to deviate from a collusive outcome as would be assumed for independent firms. This aspect has not been widely discussed in the literature. A change in incentives towards less aggressive competition due to increased similarity and transparency between rivals has already been addressed by the European Commission in the context of direct structural links.[725] It has also been considered as a reason to investigate coordinated effects.[726]

In the case of direct structural links between competitors, there are fewer incentives to deviate from a collusive outcome because the firm partly shares in with the losses of its competitors, thus reducing the gains that firms obtain from undercutting their competitors are.[727] The

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[721] *Commission*, Decision of 23.1.2008 in Case No. COMP/M.4781 – *Norddeutsche Affinerie/Cumerio*, paras. 183 ff.; *Commission*, Decision of 1.9.2016 in Case No. M.7758 – *Hutchison3G Italy/Wind/JV*, paras. 962 ff.
[722] *Commission*, Decision of 1.9.2016 in Case No. M.7758 – *Hutchison3G Italy/Wind/JV*, para. 1011.
[723] *OECD*, Minority Shareholdings – Background Note, 2008, p. 31.
[724] *Monopolkommission*, Wettbewerb 2018, Hauptgutachten No. 22, 2018, para. 472.
[725] *European Economics*, Study on the Assessment of Oligopolies in Merger Control, 2001, p. 41.
[726] *Commission*, Decision of 23.1.2008 in Case No. COMP/M.4781 – *Norddeutsche Affinerie/Cumerio*, para. 183.
[727] *Ivaldi et al.*, The Economics of Tacit Collusion, 2003, p. 53; *European Economics*, Study on the Assessment of Oligopolies in Merger Control, 2001, p. 41.

deviating firm does not benefit as much from cheating as it would in the absence of minority shareholdings.

In a common ownership situation, the compensation structure may reduce the incentives to deviate from a collusive outcome. If compensation is indeed less sensitive to one's own firm's profits own, as some empirical studies have found, management may have less incentive to deviate from the collusive outcome and the coordination would be more stable.[728] However, this has to be analysed on a case-by-case basis, as the compensation structure may vary. It is difficult to establish a direct effect of the compensation on firm behaviour. The compensation may change over time and it is difficult to analyse how a particular compensation scheme directly affects competition.

However, common ownership may also increase the incentives to deviate from the collusive outcome. The total gains from deviating depend on the profit that a firm's makes from deviating until all market participants react to the deviation and the profit after that point in time.[729] Common ownership links may affect this incentive model. If there are already unilateral effects from common ownership, the market prices are above the competitive level.[730] This means that the gains from deviating are higher if there was a price above the competitive level before the collusion. Hence, if there are already strong unilateral effects, coordinated effects are less likely because the gains from deviating are higher due to the previous supra-competitive price level.[731]

In conclusion, the effect of common ownership on a firm's incentive to deviate from a collusive outcome is unclear.

(d) Preliminary Results

The assessment of coordinated effects requires a thorough analysis of a number of factors. Common ownership links are not an isolated factor giving rise to coordinated effects on their own. They are one factor that can be analysed in the context of the substantive assessment and integrated into the conditions for coordinated effects set out in *Airtours* and grounded in economic theory. In the case of a merger between two competitors, common ownership may be a structural factor affecting the assessment of coordinated effects. It may be an additional factor facilitating collusion in circumstances where coordinated effects are already likely.[732] In this respect, common ownership can contribute to the analysis, rather than just being an

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[728] *Rock/Rubinfeld*, Antitrust Law Journal 2020, 201, 238 f.
[729] *Commission*, Annex to the Commission Staff Working Document – Towards more effective EU merger control, 25.6.2013, SWD(2013)239 final, para. 49.
[730] *Patel*, Antitrust Law Journal 2018, 279, 321 f.
[731] *Monopolkommission*, Wettbewerb 2018, Hauptgutachten No. 22, 2018, para. 469.
[732] *Monopolkommission*, Wettbewerb 2018, Hauptgutachten No. 22, 2018, para. 476.

"element of context"[733]. Nonetheless, it does not directly cause coordinated effects, irrespective of the market structure and other circumstances.

In particular, common ownership can increase market transparency. It could either facilitate the exchange of information, increase public disclosure, or encourage public or private statements as a means of coordinating and allowing to monitor firm behaviour. Common ownership could also affect deterrent mechanisms. Similar to direct structural links, it could potentially provide ways for retaliation. Nonetheless, these potential channels are not yet clear, and it is uncertain whether common ownership links may make it easier or harder to punish deviations from a collusive outcome. The stability of collusion may also be affected by the reduced risks of market entry. Commonly owned firms may be less likely to enter into a market with another commonly owned firm. In addition, common ownership links can change a firms' incentives. In terms of the incentives to deviate, the connection between common ownership and coordinated effects can be ambiguous and may vary from case to case.[734]

Overall, common ownership links can facilitate tacit collusion and increase the likelihood of coordinated effects. This is the case irrespective of whether there is evidence of a direct means of influencing firm behaviour. Common ownership is a structural factor that can and should be taken into account in the analysis of coordinated effects and their conditions. Common ownership can facilitate tacit collusion. Still, the exact mechanisms are not yet clear.

It follows from the case law that common ownership links can and should be included in the substantive merger analysis. Nonetheless, the *Airtours* case shows that the identification of common ownership links between competitors alone is unlikely to be sufficient to strengthen the case for coordinated effects. Rather, competition authorities will need to develop a coherent theory of harm as to the likelihood of tacit collusion in a particular case. They need to present a sound theory of how common ownership links can facilitate coordination and increase the incentives to coordinate. The Commission may have implicitly recognised this problem in the *Dow/DuPont* case, where it did not directly use common ownership as a basis for its theory of harm but only made general statements about market concentration.[735]

(3) Unilateral vs. Coordinated Effects Analysis

While the above analysis has shown that common ownership can lead to both unilateral and coordinated effects, it is possible to discuss whether one of the two effects is more likely or more relevant in a common ownership situation. While analytically unilateral and coordinated effects are mutually exclusive, competition authorities often assess both and are generally not

[733] *Commission*, Decision of 27.3.2017 in Case No. M.7932 – *Dow/DuPont*, Annex 5, para. 81.
[734] *Patel*, Antitrust Law Journal 2018, 279, 322.
[735] *Commission*, Decision of 27.3.2017 in Case No. M.7932 – *Dow/DuPont*, Annex 5.

precluded from analysing both.[736] The existing literature on common ownership focuses predominantly on possible unilateral effects. One reason for this lack of discussion may be that the economic theory of the relationship between common ownership and coordinated effects is underdeveloped.[737] Furthermore, the empirical studies focus on the incentives of the firms. Nonetheless, common ownership links between the remaining competitors in the market can also affect the assessment of coordinated effects. Some authors are critical of a unilateral effects theory of harm, but nevertheless see a potential for coordinated effects.[738] They interpret the currently discussed potential mechanisms to imply facilitation of coordination between commonly owned firms. Accordingly, a focus on unilateral effects alone unduly restricts the analysis of the potential anti-competitive effects of common ownership.[739]

The possible causal mechanism is another reason to analyse coordinated effects. Under common ownership, all firms have incentives to raise prices or reduce capacity.[740] The Airline Study found that an increase in common ownership leads to an increase in prices in the affected markets.[741] This implies that firms have unilateral incentives to pursue this strategy. However, it also means that the effect is not caused by the unilateral behaviour of a single firm, but by the sum of their incentives. The indirectly connected firms may not accept a loss of sales due to their unilateral price increase, but act in the knowledge that their competitors are also likely to raise prices. Although each firm may act unilaterally, such behaviour is at the same time dependent on the behaviour of the competing firms. Coordinated effects also depend on the other rivals not competing effectively, making it profitable to raise prices or restrict output.[742] The conduct of commonly owned firms could therefore also be characterised as a form of coordinated behaviour.

It is questionable whether managers would sacrifice some of their own firm's profits to promote the interests of competing firms.[743] For such an effect to occur, institutional investors would probably have to exert influence and dissuade firms from maximising their own profits. However, if the effect is the result of coordination, common ownership does not lead to reduced profits, but is beneficial to all firms and all shareholders. It is easier to facilitate coordination because it is likely to be in the self-interest of the firm, management and different groups of shareholders. Accordingly, commonly owned firms have incentives to pursue higher levels of

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[736] *European Economics*, Study on the Assessment of Oligopolies in Merger Control, 2001, pp. 121 f.
[737] *Patel*, Antitrust Law Journal 2018, 279, 319 f.; see also Chapter 3.A.II.2.b)(2)(a) on the difficulties of predicting coordinated effects.
[738] *Rock/Rubinfeld*, Antitrust Law Journal 2020, 201, 203.
[739] *Monopolkommission*, Wettbewerb 2018, Hauptgutachten No. 22, 2018, para. 460.
[740] *Schmalz*, Annual Review of Financial Economics 2018, 413, 421.
[741] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1558 f.
[742] *Bishop/Walker,* The Economics of EC Competition Law, 2010, p. 390.
[743] *Rock/Rubinfeld*, Antitrust Law Journal 2018, 221, 239.

profit without fear of their rival's countervailing strategies, which is tantamount to tacit collusion.[744] Consequently, it may take a joint effort to increase industry profits, not just unilateral behaviour. Reduced competition increases the profits for all firms in the market.[745] If it is understood that less aggressive competitive behaviour is only in the interest of the firm if other competitors behave in a similar way, it is necessary that the firms at least implicitly coordinate.[746]

One argument for assessing the anti-competitive effects of common ownership as unilateral effects is that the underlying studies rely on the MHHI, a function that measures the incentives of the firms.[747] It focuses on unilateral effects in the form of individual incentives of the competitors. However, an important reason why much of the empirical research focuses on unilateral effects could have practical reasons. Economists do not have good tools to measure coordinated effects.[748]

If only the incentives of the commonly owned firms are relevant, a unilateral effects analysis is the appropriate framework. The investor may influence the firm to compete less. This reasoning is similar to a theory of unilateral effects. It only differs in the degree of ownership and control.[749]

The theory of unilateral effects is based on the incentives of the firm's shareholders. If common owners are able to influence the strategy and behaviour of firms, this could lead to each commonly owned firm individually raising prices or restricting output in order to maximise overall shareholder value. This is inconsistent with maximising shareholder value alone. If one firm were to unilaterally raise prices or reduce output, this would directly harm the acting firm and benefit the other competitors. If this behaviour is purely unilateral, with no change in the other market participants, it may be positive for the horizontally diversified investor. It is clearly detrimental to the acting firm and would not maximise its own firm value. It is very uncertain whether the influence of the common owners is strong enough to implement strategies that conflict with the interests of the own firm. Accordingly, a key difference between the two theories is that there is a different objective of the firm. There is still some doubt that firms would regularly integrate the interests of other competitors into their own strategy. It is more

[744] *Torshizi/Clapp*, The Antitrust Bulletin 2021, 39, 50.
[745] *Schwalbe*, Journal of European Competition Law & Practice 2018, 596, 597.
[746] *Monopolkommission*, Wettbewerb 2018, Hauptgutachten No. 22, 2018, paras. 469, 475.
[747] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1522.
[748] *Boller/Scott Morton*, Testing the Theory of Common Stock Ownership, NBER Working Paper Series, July 2020, Working Paper 27515, p. 9.
[749] *Kennedy/O'Brien/Song/Waehrer,* The Competitive Effects of Common Ownership: Economic Foundations and Empirical Evidence, July 2017, p. 2, available at: https://ssrn.com/abstract=3008331.

likely that firms choose strategies that are beneficial to both themselves and their competitors. This would point to a theory of coordinated effects as opposed to unilateral effects.

In conclusion, anti-competitive effects can lead to both unilateral and coordinated effects. The main argument for classifying them as coordinated effects is that a unilateral price increase is not positive for one firm in isolation. Only a coordinated price increase makes sense in an oligopolistic market. A unilateral effect only makes sense if firms actively sacrifice revenue for the benefit of the common owners.

c) Efficiency Defence

(1) General Principles

If the substantive assessment of the merger shows that there is in principle a significant impediment to effective competition, there is still the possibility that efficiencies can be a countervailing factor that outweighs the anti-competitive effects. The legal basis for the inclusion of efficiencies in the merger assessment is Article 2 No. 1) lit. b) EUMR which, inter alia, considers "*the development of technical and economic progress"* as a relevant factor for the assessment of a concentration, *"provided that it is to consumers' advantage and does not form an obstacle to competition"*. The efficiency defence can be interpreted as already being implicit in the SIEC test.[750] The existence of an efficiency defence is further clarified by recital 29 of the EUMR: "…*it is appropriate to take account of any substantiated and likely efficiencies*…". However, there are several criteria that limit the application of an efficiency defence which are set out in the Horizontal Merger Guidelines. Efficiency defences have been overwhelmingly unsuccessful in merger cases and have only played a limited role in the EUMR.[751] In the context of merger analysis, the efficiency defences are difficult to substantiate. According to the Horizontal Merger Guidelines, efficiency gains resulting from a merger must substantially benefit the consumers in the same relevant market, be merger-specific and verifiable.[752]

First, the efficiencies must occur in the same relevant market and must be substantial.[753] The Commission states as a general standard that "*consumers should not be worse off because*

[750] *Zimmer*, Zeitschrift für Wettbewerbsrecht 2004, 250, 262 f.
[751] *Thomas*, Journal of Competition Law & Economics 2017, 346, 350.
[752] *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, ("Horizontal Merger Guidelines"), paras. 79-88.
[753] *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, ("Horizontal Merger Guidelines"), para. 79.

of the merger"[754]. *Second*, the claimed efficiency must be merger-specific, i.e., be a direct result of the merger.[755] Efficiencies are not relevant if they could have been achieved by other means. *Third*, efficiencies must be verifiable. In this regard, the burden of proof is on the notifying parties to demonstrate the existence of efficiencies and that consumers will ultimately benefit and to provide information and evidence in support of their efficiency claim.[756] This is one of the main challenges for the notifying parties, as it requires them to persuasively predict the existence of efficiencies in the future.[757]

(2) Potential Efficiencies

(a) Overview

In general, a merger may give rise to efficiencies between the merging parties. These can include, inter alia, lower costs due to increased returns to scale, economies of scope and an increase in the potential for R&D.[758] These efficiencies may be present in a merger with a common ownership element, as in any merger case. However, they are not specific to common ownership. Nonetheless, several possible welfare enhancing effects of common ownership have been identified. An efficiency defence specific to common ownership could potentially include improvements in the corporate governance of the portfolio companies, as well as benefits to investors and financial markets, and increased R&D activity.

(b) Corporate Governance

Common ownership may indirectly improve corporate governance. Many common owners tend to have significant stakes in their portfolio companies and are often long-term investors. Therefore, they have the ability and incentive to monitor the management.[759] This increased monitoring and engagement is arguably positive for companies. Whether and to what extent this is actually the case is not clear. It is doubtful whether passive investors actually have sufficient incentives to monitor management and whether they have a positive impact on corporate governance.[760]

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[754] *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, ("Horizontal Merger Guidelines"), para. 79.
[755] *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, ("Horizontal Merger Guidelines"), para. 85.
[756] *Rosenthal/Thomas*, European Merger Control, 2010, pp. 223 f.; *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, ("Horizontal Merger Guidelines"), para. 87.
[757] *Rabus*, Die Behandlung von Effizienzvorteilen in der europäischen Fusionskontrolle und in Art. 81 Abs. 3 EG, 2008, p. 113.
[758] *Schwalbe/Zimmer*, Law and Economics in European Merger Control, 2009, pp. 318 ff.
[759] *Baker*, Harvard Law Review Forum 2015-2016, 212, 227.
[760] *Bebchuk/Cohen/Hirst*, Journal of Economic Perspectives 2017, 89, 100 f.

Improvements in corporate governance can be positive and welfare enhancing for both the individual firm and the economy. However, these effects benefit the economy only indirectly, while the direct beneficiaries are only the shareholders. If firms become more efficient as a result of better corporate governance, consumers may only benefit indirectly. Therefore, the efficiency gains do not benefit the same consumers who may be harmed by the existence of common ownership. The potential improvement in corporate governance directly benefits shareholders and not consumers in the relevant market.[761]

The shortcomings of this efficiency defence are compounded by the fact that the efficiencies must be verifiable.[762] The positive effects of corporate governance improvements are difficult to quantify. In its guidelines, the Commission also considers whether the efficiencies are merger-specific or whether they can also be achieved without the merger.[763] With less common ownership, large institutional investors may still have large individual shareholdings, but in fewer firms. In such circumstances, their incentive to monitor the management may remain the same or even increase.[764] Positive effects on corporate governance can thus be achieved without the need for common ownership. Accordingly, common ownership is not necessary to improve corporate governance of firms, and improvements can also be achieved if investors are not diversified but hold large stakes in fewer firms. In conclusion, the claim that there are improvements in corporate governance is unlikely to be convincing.[765] It is a possible general welfare enhancing mechanism that is not a valid efficiency defence.

(c) Benefits for Investors and Financial Markets

Common ownership may benefit individual investors and financial markets in general. Passive investment strategies facilitate diversification and allow retail investors to enjoy the benefits of a diversified portfolio that were previously available only to large investors.[766] Furthermore, passive investment reduces the cost of investment.[767] This is another advantage that ultimately benefits individual investors, particularly retail investors, who can diversify their portfolios at low cost.

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[761] *Patel*, Antitrust Law Journal 2018, 279, 323 f.

[762] *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, (“Horizontal Merger Guidelines”), para. 86.

[763] *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, (“Horizontal Merger Guidelines”), para. 85.

[764] *Baker*, Harvard Law Review Forum 2015-2016, 212, 227 f.

[765] *Baker*, Harvard Law Review Forum 2015-2016, 212, 227.

[766] *Baker*, Harvard Law Review Forum 2015-2016, 212, 228.

[767] *Baker*, Harvard Law Review Forum 2015-2016, 212, 228.

However, this is not a direct effect of common ownership, but an indirect effect caused by the increase in passive investment. These general benefits to investors are not caused by a specific acquisition and are not merger-specific, as they exist prior to the acquisition of shares and are not related to a specific investment or merger.

Moreover, for efficiencies to be relevant under the EUMR, they would have to benefit the same consumers that are harmed by the anti-competitive effects of a merger. Efficiencies in investment strategies are positive for individual investors. These may also partially overlap with the relevant consumer base. However, this overlap is only partial and not sufficiently large. For example, half of U.S. households own no stock assets at all.[768] In the EU, the number of households owning shares is even lower. For example, in Germany, only 15.7% of the population owns stock assets either directly or indirectly through investment funds.[769] Therefore, potential efficiencies do not benefit the same consumers that are harmed by the anti-competitive effects of the merger and are not relevant efficiencies under the EUMR.

In addition, it is questionable whether positive effects on investors' profits of can generally be regarded as efficiencies. If common ownership increases shareholder value, this is a positive effect for shareholders which is achieved at the expense of consumers.[770] Finally, it is difficult in practice to weigh the gains from additional diversification for investors in mutual funds against the losses for consumers who pay higher prices in product markets.[771]

In conclusion, positive effects for investors or financial markets are neither merger-specific nor do they occur in the same relevant market.

(d) Innovation

Increased innovation is a typical efficiency in merger cases. The Horizontal Merger Guidelines specifically address potential efficiency gains in the area of innovation.[772] Common ownership may also increase R&D efforts and could, under certain conditions, be welfare enhancing. It could have a similar positive effect on innovation like cross-ownership between competitors.[773] However, this effect is subject to narrow conditions and diminishes with market concentration.[774] In addition, spillovers are very difficult to quantify even in regular merger

[768] *Scott Morton/Hovenkamp*, The Yale Law Journal 2018, 2026, 2040.
[769] *Deutsches Aktieninstitut*, Aktionärszahlen des Deutschen Aktieninstituts 2017, p. 5.
[770] *Scott Morton/Hovenkamp*, The Yale Law Journal 2018, 2026, 2038 point out that "*a private gain resulting from collusion is hardly a qualifying merger efficiency but only an anticompetitive wealth transfer".*
[771] *Scott Morton/Hovenkamp*, The Yale Law Journal 2018, 2026, 2039.
[772] *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, ("Horizontal Merger Guidelines"), para. 81.
[773] *López/Vives*, Journal of Political Economy 2019, 2394.
[774] *López/Vives*, Journal of Political Economy 2019, 2394, 2432.

cases.[775] Accordingly, it may be even more difficult to verify such effects in the case of common ownership.

(e) Preliminary Results

The potential efficiency defences, with the exception of increased innovation, do not occur in the same market that is affected by the merger, and do not qualify under the traditional efficiency defence.[776] They fail the criterion that the efficiencies must occur in the same relevant market as the one affected by the merger. The positive effect on innovation is the only possible efficiency defence.

More generally, the efficiency defence addressed by the EUMR and the Commission's Horizontal Merger Guidelines is the improved efficiency and productivity of the newly merged entity.[777] The possible efficiencies of common ownership are of a very different nature. The fact that a company is owned by several investment funds does not lead to the cost reductions or quality improvements that a traditional merger can bring about.[778]

In particular, increased diversification for retail investors and other effects on capital markets may be too complex and uncertain to be taken into account and evaluated in the substantive assessment of the concentration.[779] Furthermore, they are not sufficiently linked to a merger between competing undertakings. In addition, it would be difficult to gather convincing evidence and the notifying parties are obliged to provide the underlying information. In summary, it is reasonable to conclude that the possible efficiency defences are weak from a merger control perspective.[780]

Thus, the claimed efficiencies and general positive effects of common ownership cannot be incorporated into the merger analysis under EU competition law. If effects that are not specific to the relevant market could be valid efficiency defences, the assessment of the merger would become extremely difficult. It would be very hard for competition authorities to assess the magnitude of these effects as they are general in nature and difficult to calculate.

However, the potential efficiency gains in the asset management industry may be relevant to the design of new policies and the assessment of regulatory proposals. When attempting to regulate, it is important to consider the effects on the economy as a whole, not just in terms of

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[775] *Schwalbe/Zimmer*, Law and Economics in European Merger Control, 2009, p. 346.
[776] *Zimmer*, Wirtschaft und Wettbewerb 2019, 1.
[777] *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, ("Horizontal Merger Guidelines"), para. 77.
[778] *Scott Morton/Hovenkamp*, The Yale Law Journal 2018, 2026, 2038.
[779] *Baker*, Harvard Law Review Forum 2015-2016, 212, 230.
[780] *Posner/Scott Morton/Weyl*, Antitrust Law Journal 2017, 669, 691.

competition. Still, the potential positive economic effects are not efficiencies in the context of competition law. They cannot counteract negative effects in the relevant markets, but are general positive effects.

3. Merger Between Common Owners

If there is a merger between two investors that have common shareholdings, this could indirectly affect common ownership concentration between product market competitors. Common ownership may affect the assessment of these mergers. Most of the literature focuses on shareholdings by common owners or the acquisition of shares. However, there is little discussion of the assessment of a merger between institutional investors, and the following discussion is intended to highlight some potential areas for consideration without offering a definitive solution.

Although the potential common ownership effects of a merger between common owners are only indirect, it is a possible event that may lead to a one-off increase in common ownership concentration. As there is nothing common ownership-specific in the assessment of whether there is a concentration between common owners falling under Article 3 EUMR, the following analysis focuses on the substantive assessment under Article 2 EUMR.

As in any merger case, competition agencies will normally concentrate on the markets in which the merging parties are active and assess whether there will be a significant impediment to effective competition in those markets. This is not a new approach and does not raise any issues specific to common ownership. The first step is to identify the relevant markets. Accordingly, the European Commission will consider the impact on the markets for investment vehicles and the impact on consumers of investment products. For example, in the *Barclays Global Investors UK Holdings/BlackRock* case, the Commission identified the markets for asset management, transition management services, securities lending and cash management as the relevant product markets.[781]

More importantly, the investors may have shareholdings that lead to an increase in common ownership in many different product markets. According to the common ownership hypothesis, this could then lead to reduced competition between the portfolio companies that now have stronger common ownership links. Two examples may illustrate this situation. In example 1, two investors A and B each own shares in all competitors in a market. If each holds 10% of both competitors, their combined holdings will be 20%. After the merger, instead of two investors each owning 10%, there would be one common owner with a shareholding of 20%.

[781] *Commission*, Decision of 22.9.2009 in Case No. COMP/M.5580 – *BlackRock/Barclays Global Investors UK Holdings*.

Thus, there would be an increase in common ownership concentration. In example 2, investor A owns 20% of firm X and investor B owns 20% of competitor Y. After the merger between A and B, there is an even greater increase in common ownership. There is now a single investor holding 20% in two competitors and creating a common ownership link that did not exist before.

This increase in common ownership concentration is also reflected in the calculation of the MHHI in these cases. In the example 1, it is assumed that the two firms X and Y each have a market share of 50%, that the shares grant proportional voting rights and that there is another undiversified owner. In this scenario, the initial MHHI would originally be 5151.5, with a base HHI of 5000 and an additional MHHI delta of 151.5. After the merger, the MHHI would be 5294.1, an increase of about 142 points. Since the HHI remains unchanged, the difference in MHHI is only due to the increase in common ownership concentration. In example 2, using the same assumptions, the MHHI increases from 5000, with an MHHI delta of 0, to 5294.1.

It follows that when two institutional investors with diversified investment portfolios merge, the degree of common ownership in various product markets increases. This increase in common ownership may then affect product prices. This is supported by the Airline Study, which estimates that the merger of BlackRock and Barclays Global Investors led to a 0.5% increase in price on the average U.S. airline route.[782] Accordingly, a merger between horizontally diversified institutional investors may be relevant to the substantive assessment of such a merger.

One question is whether the indirectly affected markets are also subject to review under merger control. When an investor acquires control of a company, it forms one economic unit with its portfolio company. In this case, the effects on the relevant market of the portfolio company are also examined, since it is part of the merging entity. However, given the current levels of common ownership, this is very unlikely. Although it is possible that shareholdings of less than 50% can confer control, the current shareholdings of institutional investors almost never amount to decisive influence.[783]

A simple reading of the text could lead to the conclusion that all competitive effects of a merger are included in the substantive assessment. Article 3(2) and (3) EUMR states that the relevant criterion is a significant impediment to effective competition. It does not specify that only certain effects related to the business activities of the merging parties are relevant, nor does it specify in which market the anti-competitive effect must occur. Competitive harms can arise in markets directly affected by the merger as well as in markets where only an indirect effect may be

[782] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1541.
[783] See Chapter 2.A.III. for an analysis of the current levels of common ownership.

observed. Consequently, there is no obvious reason why indirect effects in other markets should be excluded from merger review. Therefore, it seems reasonable to include all potentially harmful effects in the assessment, including effects in the product markets of the portfolio firms.

However, the impediment to competition must also be significant. Stronger common ownership links could increase firms' incentives to compete less and to trade off their own profits against those of their rivals. A merger that only marginally harms competition may be cleared even in an already highly concentrated market.[784] This is in line with the Horizontal Merger Guidelines, which do not raise competition concerns if there is only a small increase in market concentration.[785] As the merger only leads to a small increase in common ownership concentration, it could be concluded that there is no significant impediment to effective competition. Besides, it is also difficult to establish a threshold above which anti-competitive effects are likely to occur. The MHHI could be a way of measuring the effects and the guidelines could set out thresholds. However, as with the current guidelines, this would only be a safe-harbour rule.[786] The fact that merger control is an *ex-ante* review also makes it difficult to specify the concrete effects.

In addition, the case of a merger between institutional investors with many minority shareholdings raises a practical problem: If competition authorities were to assess all possible effects, this investigation were to cover many different markets, as large institutional investors tend to be highly diversified.[787] This means that a merger could potentially affect a large number of different markets, leading to an extensive merger review process with only limited time available.

The authors of the Airline Study suggest that their findings should be considered when assessing mergers in the asset management industry.[788] They go on to say that "*the potential benefits to shareholders need to be weighed against the potential loss of consumer surplus – not just for consumers of asset management products, but also for the consumers of the products offered by portfolio firms*"[789]. It is a reasonable conclusion from the research that

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[784] *Zimmer*, Zeitschrift für Wettbewerbsrecht 2004, 250, 261.
[785] *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, ("Horizontal Merger Guidelines"), para. 20.
[786] *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, ("Horizontal Merger Guidelines"), paras. 19 ff.; see also Chapter 3.B.II.2.b)(5) for a discussion of MHHI thresholds.
[787] See Chapter 2.A.II. for an analysis of the types of institutional investors and the degree of diversification.
[788] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1560.
[789] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1560.

consolidation in the asset management industry should be scrutinised more closely. However, the benefits for shareholders are not weighed against the losses for consumers in German and European merger control. In this context, there is no weighting of benefits and losses, but only an assessment of whether there is a significant impediment to effective competition. Furthermore, the interests of shareholders in diversified investments are not relevant efficiencies from a competition law perspective.[790] However, the statement can be interpreted as a general suggestion for future policy. In conclusion, it is appropriate to take a closer look at mergers between common owners.

4. Acquisition of Shares

a) Overview

The merger scenarios analysed show that common ownership can, in theory, be indirectly controlled. The common ownership hypothesis can influence the analysis of a regular concentration or a merger between institutional investors. This chapter focuses on the question whether common ownership links can also be controlled directly. Possibly, the acquisition of shares by a common owner and the subsequent increase in common ownership can be considered. As German and European law have different thresholds for notifiable scenarios leading to a substantive analysis, both will be considered separately. As far as the substantive analysis is concerned, the criteria largely overlap.

As under European competition law, the change of control is also a notifiable concentration under German merger control pursuant to § 37(1) No. 1 GWB. Although there are some differences and specifications, for the purpose of capturing common ownership acquisitions, the requirements are very similar under both European and German law. *First*, European competition law provides a reference point for the concept of control, which reduces the potential differences.[791] *Second,* under German merger control, any acquisition which grants a "material competitive influence" must be notified § 37(1) No. 4 GWB. Therefore, the interpretation of control is not decisive for the question of whether common ownership is subject to merger control. Even if the term "control" were interpreted differently, acquisitions of influence which do not meet the control threshold may still have to be notified under § 37(1) No. 4 GWB. Therefore, the key question is whether the threshold of a "material competitive influence" is capable of capturing potentially harmful acquisitions of horizontal shareholdings.

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[790] See Chapter 3.A.II.2.c).

[791] *Wenz*, Der Begriff der Kontrolle im europäischen und deutschen Fusionskontrollrecht, 2007, p. 280.

b) Formal Requirements

(1) Control

(a) Legal Basis

In order to answer the question of whether a partial acquisition of an undertaking by a diversified investor can constitute a concentration under the EUMR, it is helpful to outline some basic elements of the concept of concentration and its context in European merger control. According to recital 20 of the EUMR, the concept of concentration is intended to cover all changes in market structure on a lasting basis. The EUMR applies only to lasting changes in market structure, not to simple possible concentrations or theoretically possible conduct.[792]

According to Article 3(2) EUMR, control is acquired when there is the possibility of exercising a decisive influence over an undertaking. The change of control must be of a lasting nature.[793] This influence can be positive: an undertaking can actively determine the strategy. Or it may be negative: the controlling undertaking is able to block the proposals of other owners.[794] Furthermore, control can be exercised on a *de jure* or *de facto* basis.[795] In the case of common ownership, control is likely to be acquired on a *de facto* basis only. The existence of common ownership links does not provide a single, conclusive legal basis for controlling the strategy of a firm but only an underlying condition for the investor's influence. It is merely a factor that facilitates the *de facto* exercise of influence.[796] Additionally, control can be exercised either by a single common owner or by a group of shareholders, as discussed next.

(b) Sole Control

The acquisition of a common ownership interest could be notifiable if it is a controlling interest within the meaning of Article 3 (2) lit. b) EUMR. In theory, a common owner could acquire sole control. If an investor were to acquire more than 50% of the shares, this would clearly be a case of sole control. However, such a case is no different in the case of common ownership than in other circumstances. To reiterate, at the time of writing, common owners hold around 5% to 7% of the shares with a maximum of around 10%.[797] In the current environment, common owners do not normally acquire larger shareholdings. This may change in the future.

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[792] *Wenz*, Der Begriff der Kontrolle im europäischen und deutschen Fusionskontrollrecht, 2007, p. 37.
[793] *Commission*, Commission Consolidated Jurisdictional Notice under Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings, 2008/C 95/01, paras. 28 ff.
[794] *Ulshöfer,* Kontrollerwerb in der Fusionskontrolle, 2003, pp. 25 f.
[795] *Commission*, Commission Consolidated Jurisdictional Notice under Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings, 2008/C 95/01, para. 16.
[796] *Elhauge,* New Evidence, Proofs, and Legal Theories on Horizontal Shareholding, January 2018, p. 35, available at: https://ssrn.com/abstract=3096812.
[797] See above Chapter 2.A.III.

However, even a minority shareholding may confer decisive influence if it is unlikely that many shareholders will be present at shareholder meetings.[798] In this case, the acquirer will have a *de facto* majority at shareholder meetings. In order to determine this influence over strategic decisions, it is necessary to assess the presence of the shareholders in previous years and the likelihood that this attendance pattern will continue in future years.[799] In practice, a 25% - 30% shareholding in the target company sufficed to establish sole control.[800] It is almost impossible for a 10% shareholding to confer control, as the shareholder presence would have to represent less than 20% of the shares. It is highly unlikely that such a low presence of shareholders is stable over several years.

The *MAN/Scania* case can be considered as one that comes close to the scenario of a single minority investor with a small but comparatively large share of the voting rights. VW held 21.6% of the voting rights, while no other investor controlled more than 5% of the votes.[801] In the absence of any other rights that could give VW exceptional influence, it had to be assessed whether VW would obtain a majority of the votes on the basis of regular shareholder attendance. The Commission expected that 50% - 60% of the voting rights would be represented at future AGMs and therefore concluded that VW would not obtain a majority at shareholder meetings.[802] This large shareholding did not give VW de facto control because it was not in a position to control the majority of votes.

A common issue in the presence of common ownership is that the largest investor is a horizontally diversified investor. The fact that common owners are the largest investors is important for anti-competitive effects.[803] In the Airline Study it became clear that the effect of the largest shareholders being horizontally diversified has a large impact on prices – especially when the two largest shareholders are common owners.[804] Because of the relatively large size of these investors' holdings, firms may be proactively taking into account the interests of their investors. Firms may also be particularly open to suggestions and engagement with their largest shareholder. It is reasonable to assume that the largest shareholder also has the most influence. Nonetheless, this does not mean that the largest shareholders can automatically control a company. The legal criterion under Article 3 EUMR is the ability to control the company. It not sufficient to have some degree of influence. The influence must be "decisive".

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[798] *Bengtsson/Carpi Badia/Kadar* in: Faull/Nikpay, Third Edition, 2014, para. 5.80.
[799] *Commission*, Commission Consolidated Jurisdictional Notice under Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings, 2008/C 95/01, para. 59.
[800] *Bengtsson/Carpi Badia/Kadar* in: Faull/Nikpay, Third Edition, 2014, para. 5.42, referencing various cases.
[801] *Commission*, Decision of 20.12.2006 in Case No. COMP/M.4336 – *MAN/Scania*, para. 7.
[802] *Commission*, Decision of 20.12.2006 in Case No. COMP/M.4336 – *MAN/Scania*, para. 9.
[803] *Elhauge*, Ohio State Law Journal 2021, 1, 66.
[804] *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1545.

The relevant shareholdings of less than 10% give some influence but not decisive influence to control a firm's strategy.[805] Nor do they grant veto rights that allow a shareholder to block proposals. Nor do the institutional investors send representatives to the board of directors. Hence, the fact that common owners are regularly the largest investor and therefore more powerful than other investors does not in itself amount to a decisive influence.

All in all, the acquisition of sole control by common owners is highly unlikely. The relatively strong position of an institutional investor may allow it to exercise some influence. However, decisive influence requires the ability to determine strategy, not just some limited degree of influence. With a minority shareholding, the acquisition of control is not very likely. There must be supporting factors that accompany the shareholding and give the shareholder more rights and more opportunities to influence the behaviour of the firm. These may be present, but do not necessarily arise from the fact that an investor is a common owner. In conclusion, the institutional investors who are relevant common owners do not have a decisive level of influence and therefore do not control their portfolio companies. Still, a group of common owners may be able to collectively influence corporate behaviour through joint control.

(c) Joint Control

If institutional investors collectively hold a relatively large proportion of shares, they could jointly control a company. This may be particularly relevant if these shareholders share the same incentives and are also common owners of other competitors. Again, it is unlikely that the same group of institutional investors will hold a majority of the shares of a company, as individual shareholdings will be below 10%. Although the Commission defines joint control as a situation in which several undertakings "*have the possibility of exercising a decisive influence over another undertaking*"[806], this definition is not as broad as it might appear.

First, the shareholders as a group must have a decisive influence. The interpretation is broadly similar to the situation of sole control discussed above.[807] Decisive influence over business strategy would be possible if the shares confer significant factual influence, because of a low proportion of votes cast at general meetings and a dispersed ownership base.[808]

Second, the shareholders must exercise their decisive influence jointly. The minority shareholders must be forced to cooperate. There must be a possibility of deadlock between

[805] *Monopolkommission*, Wettbewerb 2018, Hauptgutachten No. 22, 2018, paras. 431 f.; *Corradi/Tzanaki*, CPI Antitrust Chronicle, June 2017, 18, 22.

[806] *Commission*, Commission Consolidated Jurisdictional Notice under Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings, 2008/C 95/01, para. 62.

[807] See Chapter 3.A.II.4.b)(1)(b).

[808] *Commission*, Commission Consolidated Jurisdictional Notice under Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings, 2008/C 95/01, para. 59.

two or more companies, as each could veto strategic proposals.[809] Joint control can either exist on a *de jure* or a *de facto* basis. *De jure* control requires a legally binding agreement or another provision that requires the undertakings to reach an agreement on major decisions.[810] As there is no legally binding agreement between the institutional investors, a joint influence can only exist on a *de facto* basis.

One possible scenario is that the shareholders act together when exercising their voting rights.[811] The Commission notes that, in very exceptional circumstances, strong common interests between shareholders who would not vote against each other may lead to joint control.[812] Moreover, this group of common owners must be linked by a strong common interest.[813] Common owners may have a common interest in reduced competition and parallel conduct of their portfolio companies.[814] This could be interpreted to mean that a group of common owners who together hold significant minority shareholdings and have influence over the business strategy would have joint control.[815] However, it has to be assessed whether such a general commonality of interests amounts to a "strong common interest", which is necessary to establish joint control. The greater the number of parent companies involved, the less likely it is that such a situation will arise.[816]

The case law is of limited help in assessing whether common owners could be united by strong common interests. In the *Hutchison/RCPM/ECT* case, the two largest shareholders, Hutchison and RCPM, each held 35% of the shares. A third shareholder, ABN, held 28%. In this situation, each of the three main shareholders could jointly reach a majority with another shareholder.[817] The European Commission argued that only Hutchison and RCPM jointly controlled ECT and sought to establish that Hutchison and RCPM were linked by strong common interests. Hutchison and RCPM were strategic investors, whereas ABN was only a financial investor supporting the strategic investors. Furthermore, they had a high degree of interdependence, and both had given a guarantee to remain invested in ECT for the long-term.[818] The third

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[809] *Commission*, Commission Consolidated Jurisdictional Notice under Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings, 2008/C 95/01, para. 62
[810] *Commission*, Commission Consolidated Jurisdictional Notice under Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings, 2008/C 95/01, paras. 63, 74.
[811] *Commission*, Commission Consolidated Jurisdictional Notice under Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings, 2008/C 95/01, para. 74.
[812] *Commission*, Commission Consolidated Jurisdictional Notice under Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings, 2008/C 95/01, para. 76.
[813] *Commission*, Commission Consolidated Jurisdictional Notice under Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings, 2008/C 95/01, para. 76.
[814] *Monopolkommission*, Wettbewerb 2016, Hauptgutachten No. 21, 2016, para. 667.
[815] *Elhauge*, Harvard Business Law Review 2020, 207, 274.
[816] *Commission*, Commission Consolidated Jurisdictional Notice under Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings, 2008/C 95/01, para. 76.
[817] *Commission*, Decision of 3.7.2001 in Case No. COMP/JV.55 – *Hutchison/RCPM/ECT*, para. 15.
[818] *Commission*, Decision of 3.7.2001 in Case No. COMP/JV.55 – *Hutchison/RCPM/ECT*, para. 15.

shareholder, ABN, is described as a purely financial investor without strategic objectives and willing to reduce its shareholding as soon as possible.[819] The Commission went to great lengths to show that Hutchison and RCPM were strategic investors with clear incentives to act together.

In contrast to the above case, in the case of common ownership the institutional investors are mostly financial investors without a clear strategic objective. Therefore, in this case there is no indication that the common owners have a “strong common interest” as interpreted by the Commission. The only argument that could be made is that a long-term interest, which is often present in the case of passive investors, creates a certain common interest between them.

In the *Philips/Grundig*[820] case, there were three banks as minority shareholders and another owner, Philips, each of which could separately appoint a managing director. These two directors could then only represent the holding company together. This meant that the three banks could block any proposals. Furthermore, the banks had to agree on their common managing director. The Commission underlines that the banks have no experience in the field and therefore have to rely heavily on an agreement with their managing director and will follow their appointed director.[821]

In the *NEC/Bull/PBN* case, NEC and Bull themselves stated that they both had a long-term interest in PBN as external investors. Despite this, the Commission found that a concerted voting in the future was a mere assumption, not supported by stronger legal or factual elements.[822] This means that the Commission requires certain indications that a stable voting pattern will emerge. This is the case notwithstanding a possible or even probable commonality of interests, as indicated by the notifying parties. In other words, it must be shown that the common interest is overall stable and inherent in the ownership structure or linked by a binding shareholders’ agreement. Similarly, in the *Coop Norden* case, the Commission rejected joint control because the three parent companies did not have legally binding veto rights and it could not be excluded that they would vote differently.[823]

The case law of the Commission mainly argues against strong common interests of common owners. In the case of common ownership, the common interests of diversified shareholders are typically not specific to a business and its strategy. Therefore, it is difficult to interpret them as a “strong common interest”. There is the general possibility of changing majorities which is

[819] *Commission*, Decision of 3.7.2001 in Case No. COMP/JV.55 – *Hutchison/RCPM/ECT*, para. 15.
[820] *Commission*, Decision of 3.12.1993 in Case No. IV/M.382 – *Philips/Grundig*.
[821] *Commission*, Decision of 3.12.1993 in Case No. IV/M.382 – *Philips/Grundig,* para. 5.
[822] *Commission*, Decision of 6.2.1998 in Case No. IV/M.1095 – *NEC/Bull/PBN*, para. 5.
[823] *Commission*, Decision of 26.7.2001 in Case No COMP/M.2425 – *Coop Norden*, paras. 8 f.

incompatible with joint control. There are no legal or factual obstacles preventing the parties from voting inconsistently and with different preferences on any issue.

In summary, it is unlikely that the common owners would jointly obtain a majority at shareholders' meetings. Even if they were to acquire such *de facto* control, the link between the investors and their possible common interests would probably not be sufficient to establish joint control.

(d) Preliminary Results

The merger threshold "acquisition of control" does not capture the low level of shareholdings of common owners. The current level of shareholdings of each common owner does not lead to sole control. Nor is there any indication that the common owners form a group acquiring joint control. Accordingly, the acquisition of shares by common owners is not notifiable under the current EUMR – at least given the current level of common ownership.

(2) Material Competitive Influence

(a) Overview

Compared to EU law, German merger control covers a wider range of concentrations that trigger the obligation to notify. According to § 37(1) No. 3 GWB, an acquisition of more than 25% or 50% of the shares must be notified to the *Bundeskartellamt*. In the case of common ownership, it is highly unlikely that an investor will hold more than 25% of the shares. Accordingly, this option will typically not capture acquisitions by common owners.

Most importantly, German merger control also requires notification under § 37(1) No. 4 GWB if an undertaking acquires a material competitive influence over another firm. Since such a material competitive influence may exist even below the 25%-threshold of § 37(1) No. 3 GWB, this opens up the possibility of reviewing non-controlling minority shareholdings that do not fall under the control threshold in EU law. In order to assess whether common owners meet this threshold, it is important to discuss the scope of the material competitive influence.

Case law has structured the material competitive influence into different elements. Typically, there are three conditions: An influence that (i) is based on a corporate link, (ii) is substantial and stable, and (iii) is relevant to competition. Several undertakings may also have a joint material competitive influence. In the past, the significance of the possible influence was linked to a horizontal competitor-relationship between the parties, or at least to a vertical relationship between the acquirer and the acquired firm. Hence, there is currently no case law on an acquisition by a third party that could potentially have an impact on competition. Consequently, the three conditions set out above are transferred to the case of common ownership and discussed in the following section.

(b) The Relevant Link

First, there must be a relevant link between two firms that has a basis in corporate law, which is generally interpreted very broadly.[824] In the case of common ownership, the shareholding provides that link. Theoretically, there could be other forms of links under corporate law. However, these cases are not relevant in a common ownership scenario. The necessary corporate link is already clearly established if there is a minority shareholding. What is more important is whether this shareholding also confers a substantial influence on the acquired firm.

(c) Material Influence

Second, the shareholding must give the acquirer material influence. Material influence exists when the two firms cease to act independently on the market.[825] Typically, there must be additional factors that provide the shareholder with more rights than those normally associated with the shareholding alone.[826] Historically, the notification threshold has been designed to catch acquisitions that circumvent the 25% threshold of § 37 (1) No. 3 lit. b) GWB by acquiring a stake below 25% coupled with special rights in relation to the target firm.[827] More generally, it is essential that the acquirer can exercise a strategic influence over the portfolio firm.[828] Therefore, it is important to determine the circumstances in which such strategic influence exists.

With regard to common ownership, there is no indication that additional factors are regularly present. This is because the channels of influence available to institutional investors are exactly the same as those available to any shareholder, and common owners typically have no additional formal rights. They also rarely seek board representation, which may be one factor that distinguishes them from other regular shareholders. One additional factor often considered important is the knowledge and experience of the relevant market.[829] Institutional

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[824] See, for example, *Bundesgerichtshof*, Decision of 21.11.2000, Case KVR 16/99 – *Minderheitsbeteiligung im Zeitschriftenhandel* – juris, para. 27: „*Seiner Funktion nach bringt das Merkmal mithin lediglich zum Ausdruck, dass die Möglichkeit der Einwirkung auf ein anderes Unternehmen ihre Grundlage in einer gesellschaftsrechtlichen oder einer dieser vergleichbaren rechtlichen Beziehung finden muss*."

[825] Begründung zum Regierungsentwurf 5. GWB-Novelle, Bundestag-Drucksache 11/4610, p. 20: „*wenn aufgrund des zwischen den Unternehmen bestehenden gesamten Beziehungsgeflechts zu erwarten ist, daß der Wettbewerb zwischen den beteiligten Unternehmen so wesentlich eingeschränkt wird, daß die Unternehmen nicht mehr unabhängig am Markt auftreten.*"

[826] *Thomas* in: Immenga/Mestmäcker, Sixth Edition, 2020, § 37 GWB, para. 234; Begründung zum Regierungsentwurf, 5. GWB-Novelle, Bundestag-Drucksache 11/4610, p. 20.

[827] Begründung zum Regierungsentwurf 5. GWB-Novelle, Bundestag-Drucksache 11/4610, p. 20.

[828] *Bundesgerichtshof*, Decision of 21.12.2004, Case KVR 26/03 – *Deutsche Post/trans-o-flex* – juris, para. 10; *OECD*, Hearing on Common Ownership by Institutional Investors and its Impact on Competition – Note by Germany, 2017, para. 5.

[829] *Bundesgerichtshof*, Decision of 21.12.2004, Case KVR 26/03 – *Deutsche Post/trans-o-flex* – juris, paras. 11, 16.

investors, as third parties, usually lack this knowledge and hold the shares for investment purposes only. Very large investment firms may have industry experts, but the overall level of in-depth knowledge of how specific industries operate is low, or at least no higher than that of other financial investors.

One possible way in which there could be a material competitive influence is if a common owner is in a position to block corporate decisions.[830] This depends on several factors, like the presence at the annual general meeting. A position with the power to block decisions cannot generally be established for common owners due to their small absolute number of shares.

In general, it is crucial that the acquirer has the possibility to strategically influence the target firm.[831] This could be interpreted to mean that the de facto influence of common owners – if it can be proven – suffices to establish a stable influence. However, the case law shows that so far only additional legal rights have been accepted as relevant plus-factors.

There is no absolute threshold for the number of voting rights that guarantees strategic influence. A case where a small shareholding was sufficient to establish a material competitive influence was the *A-TEC* decision.[832] In this case, A-TEC acquired a 13.75% minority shareholding in its competitor Norddeutsche Affinerie, together with three seats on the board. Its shareholding alone was sufficient to give A-TEC a material competitive influence.[833] While it did not give A-TEC the power to block important decisions, the fact that it was by far the largest investor and the only shareholder with in-depth knowledge of the relevant market led the Court to conclude that it could exercise a substantial influence.

Contrary to the *A-TEC* decision, in a more recent case the Court found that a 9.15% shareholding combined with a seat on the board did not give rise to a material competitive influence.[834] There are two important differences between these two cases in terms of the overall distribution of the shares and the potentially advantageous market knowledge. A-TEC was by far the largest single shareholder.[835] In contrast, the 9.15% stake was only the third largest investment. Furthermore, in the latter case, the claim that the acquirer had superior market and operational knowledge was not substantiated.[836]

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[830] *Thomas* in: Immenga/Mestmäcker, Sixth Edition, 2020, § 37 GWB, para. 238.
[831] *Bundesgerichtshof*, Decision of 21.12.2004, Case KVR 26/03 – *Deutsche Post/trans-o-flex* – juris, para. 10.
[832] *Oberlandesgericht Düsseldorf*, Decision of 12.11.2008, Case VI-Kart 5/08 (V) – *A-TEC*.
[833] *Oberlandesgericht Düsseldorf*, Decision of 12.11.2008, Case VI-Kart 5/08 (V) – *A-TEC* – juris, para. 44.
[834] *Oberlandesgericht Düsseldorf*, Decision of 26.8.2019, Case VI-W (Kart) 5/19.
[835] *Oberlandesgericht Düsseldorf*, Decision of 12.11.2008, Case VI-Kart 5/08 (V) – *A-TEC* – juris, para. 53.
[836] *Oberlandesgericht Düsseldorf*, Decision of 26.8.2019, Case VI-W (Kart) 5/19 – juris, paras. 22 ff.

The largest shareholder can play a decisive role as an owner. This has been recognised by case law, particularly where the shareholding in question far exceeds that of the other shareholders.[837] Nonetheless, the fact that an investor holds the most shares is not always decisive. That investor may have either a small or a large absolute holding in the relevant firm. The fact that a shareholder is relatively large compared to other investors does not lead to a decisive influence, because the degree of influence is not necessarily high. It can only be one factor that increases an investor's influence. Similarly, the Commission stated that the largest shareholder can have privileged access to the management of a firm.[838] With regard to the absolute size of the shareholding, the case law on § 37(1) No. 4 GWB can also be interpreted as meaning that the necessary evidence of influence must be stronger for smaller shareholding, in particular for shareholdings of less than 10%.[839]

(d) Influence on Competitive Behaviour

Third, the influence must affect the competitive behaviour of the target firm. In order to define this criterion, courts have held that it is necessary that the majority shareholder takes into account the interests of the relevant minority shareholder.[840] However, in the case of common ownership, there is typically no majority shareholder. One or more common owners are the largest investors and there is no rivalry between a majority and a minority owner. Accordingly, this definition is not directly applicable in the case of common ownership.

Therefore, the question is whether the management will take the interests of these minority shareholders into account. In many cases, the courts have held that the acquired firm must actively or passively take into account the interests of the minority shareholder.[841] Competitive influence is significant if the acquirer's investment can be used to further its own interests.[842] It is questionable whether the normal channels of corporate control can be used by financial investors in this way.

It is also important to consider whether § 37(1) No. 4 GWB covers minority shareholdings of third parties who are neither direct competitors nor vertically related to the firm. Common

[837] *Oberlandesgericht Düsseldorf*, Decision of 12.11.2008, Case VI-Kart 5/08 (V) – *A-TEC* – juris, para. 53.

[838] *Commission*, Decision of 27.3.2017 in Case No. M.7932 – *Dow/DuPont*, Annex 5, para. 21.

[839] *Thomas* in: Immenga/Mestmäcker, Sixth Edition, 2020, § 37 GWB, para. 236.

[840] *Bundesgerichtshof*, Decision of 21.12.2004, Case KVR 26/03 – *Deutsche Post/trans-o-flex* – juris, para. 10: […] „*wenn nach Art der Vertragsgestaltung und der wirtschaftlichen Verhältnisse zu erwarten ist, dass der Mehrheitsgesellschafter auf die Vorstellungen des Erwerbers Rücksicht nimmt oder diesem freien Raum lässt, auch wenn das nur geschieht, soweit es seinen eigenen Interessen nicht zuwiderläuft*".

[841] *Bundesgerichtshof*, Decision of 21.12.2004, Case KVR 26/03– *Deutsche Post/trans-o-flex* – juris, para. 10; *Bundesgerichtshof*, Decision of 21.11.2000, Case KVR 16/99 – *Minderheitsbeteiligung im Zeitschriftenhandel* – juris, para. 20.

[842] *Bundesgerichtshof*, Decision of 21.12.2004, Case KVR 26/03– *Deutsche Post/trans-o-flex* – juris, para. 10.

ownership is fundamentally different from the scenarios that have traditionally been relevant in the case law. The typical scenario is a direct minority shareholding where the potential harm lies in the reduction of competition between the acquirer and the target firm. The acquirer and the target firm are in either a horizontal or a vertical relationship. In the past, harms caused by indirect minority shareholdings of third parties were not taken into account in the substantive assessment and were therefore not relevant for the interpretation of § 37(1) No. 4 GWB. Instead, they were traditionally regarded as irrelevant. Acquisitions were considered less problematic if the acquirer had no previous experience on the relevant product market. Financial investors without specific knowledge of the industry were regarded as a group that would not be able to counter the influence of an investor with in-depth knowledge of the market and the industry, who would be better able to promote his own interests.[843] The German Federal Court has even explicitly stated that merger control is not intended to cover acquisitions for purely financial and non-strategic reasons.[844] Similarly, in the case of common ownership, the investor does not have a clear strategic interest in the portfolio company. On the contrary, the mere pursuit of a financial return without a strategic agenda has been considered as a factor that weighs against a material competitive influence.[845] For example, financial investors lack the knowledge and expertise in the relevant market, which is an important criterion. There is typically no cooperation with financial investors on operational decisions.

Existing case law could potentially be interpreted to cover only acquirers that are competitors or vertically related.[846] It is unclear whether cases where the acquirer is neither horizontally nor vertically related to the target firm can fall under § 37(1) No. 4 GWB. Traditionally, the main concern has been that a competitor uses its influence as an acquirer to reduce competition with the target firm. The definition that a firm may use its influence to promote its own interests at least partially illustrates this concern.[847] It presupposes that there is a divergence of interests between the acquirer and the target firm.

In conclusion, the current interpretations and case law are of limited use in assessing whether acquisitions of common owners may fall under § 37(1) No. 4 GWB. There are significant obstacles to the application of existing case law to common ownership links. It could be argued

[843] *Bundesgerichtshof*, Decision of 21.12.2004, Case KVR 26/03– *Deutsche Post/trans-o-flex* – juris, para. 16.
[844] *Bundesgerichtshof*, Decision of 21.11.2000, Case KVR 16/99 – *Minderheitsbeteiligung im Zeitschriftenhandel* – juris, para. 17.
[845] *Bundesgerichtshof*, Decision of 21.11.2000, Case KVR 16/99 – *Minderheitsbeteiligung im Zeitschriftenhandel* – juris, para. 17.
[846] *Weitbrecht/Weidenbach*, Wirtschaft und Wettbewerb 2008, 788, 791.
[847] *Bundesgerichtshof*, Decision of 21.12.2004, Case KVR 26/03– *Deutsche Post/trans-o-flex* – juris, para. 10.

that in a common ownership scenario the burden of proof to establish a potentially significant acquisition of shares could be higher. Moreover, it may be more difficult to provide sufficient evidence that the investor has the ability to influence the strategic decisions of the portfolio firm. However, it could also be argued that the law was not traditionally intended to cover this type of acquisition and therefore does not apply to common ownership links. As the application of § 37(1) No. 4 GWB would require a completely new interpretation of the concept of material competitive influence, it is discussed below in the context of other possible solutions.

(e) Joint Material Competitive Influence

There can also be a joint material competitive influence. The criteria are similar to those for joint control.[848] As common owners are unlikely to form a group that is considered to act as a single entity, they are unlikely to be interpreted as a group with joint influence over its portfolio companies.

(f) Preliminary Results

In conclusion, German competition law does not provide a practical means of directly challenging potentially anti-competitive share acquisitions by common owners. With regard to financial investments by third parties, the scope of the threshold of material competitive influence has not been defined by the courts. Thus, German competition law is only marginally better equipped to directly challenge the acquisition of common ownership positions.

c) Substantive Analysis

(1) Overview

If the acquisition of minority shareholdings were subject to notification and control by the competition authorities, it would have to be examined whether there is a significant impediment to competition pursuant to Article 2(3) EUMR or § 36(1) GWB respectively. However, this substantive analysis is largely hypothetical, as there are no means in European merger control to directly challenge the acquisition of non-controlling minority shareholdings. Furthermore, it is unlikely that typical share acquisitions by common owners can be reviewed under German merger control.

In addition, there are uncertainties as to the relevant link between the acquisition of a small number of shares and the question whether a specific acquisition causes significant harm. A causal link would have to be established between the acquisition of shares and the negative effects on competition. The Commission compares the competitive conditions with and without

[848] *Riesenkampff/Steinbarth* in: Loewenheim et al., Fourth Edition, 2020, § 37 GWB, para. 32.

the concentration.[849] Given the different causal mechanisms and the potential for both coordinated and unilateral effects, it is possible that a detailed analysis will show that an increase in common ownership concentration leads to a decrease in competition. Nonetheless, the standard of proof is important in substantiating the concrete effects of a merger.[850]

(2) Classification

For the substantive assessment of the merger, one question is whether the acquisition of shares can be categorised into one of the different groups of mergers: horizontal, vertical or conglomerate. In general, the analysis of potential unilateral or coordinated effects is not predetermined by their classification but has to be carried out on a case-by-case basis. The classification as a horizontal, vertical or conglomerate merger is most relevant for the typical cases.[851]

In the case of an acquisition of shares by a common owner, the parties to the concentration – in this case a portfolio company and an investor – are not active in the same markets. This would normally make the merger conglomerate, as there is no horizontal or vertical relationship. Nevertheless, the main effects of the share acquisition are horizontal in nature. There is the potential for reduced competition between competitors. The relevant harm is not a possible effect between the investor and the portfolio company. Accordingly, the acquisition of shares by a common owner would constitute a horizontal merger.[852] Furthermore, horizontal mergers are generally considered to be more harmful than non-horizontal mergers.[853] Non-horizontal mergers also generate more efficiencies. The absence of relevant efficiencies in the case of common ownership is also an argument in favour of applying the horizontal merger framework.[854] Hence, the acquisition of minority shareholdings by a common owner should be analysed under the criteria for horizontal mergers.

(3) Significance

The relevant acquisition of shares would also have to *significantly* impede effective competition. It may be reasonable to assume that some degree of common ownership is detrimental to competition – the empirical studies provide evidence of this effect and there is also a plausible theoretical link. However, this does not lead to the conclusion that any particular acquisition of shares is significantly impeding competition. In particular, the level at

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[849] *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, (“Horizontal Merger Guidelines”), para. 9.
[850] See Chapter 3.A.II.2.b)(1)(c).
[851] *Seitz*, Common Ownership im Wettbewerbsrecht, 2020, p. 129.
[852] *Scott Morton/Hovenkamp*, The Yale Law Journal 2018, 2026, 2036 f.
[853] *Commission*, Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2008/C 265/07, para. 11.
[854] *Scott Morton/Hovenkamp*, The Yale Law Journal 2018, 2026, 2036 ff.

which a common shareholding is said to have a significant effect may seem arbitrary. If an institutional investor buys 0.1% of a company's shares, it seems unlikely that this small increase in investment will cause harm to competition. The relevance of this 0.1% increase is small, whether the previous shareholding was 1% or 8%. It is reasonable to assume that a very small increase in common shareholding will have only an insignificant effect on the level of competition. However, it should also be noted that in EU competition law *significance* has not been treated as a criterion in its own right.[855]

Furthermore, the problem remains that no notification threshold is reached at current levels of common ownership. For example, if the acquisition of shares were considered to result in a material competitive influence, the substantive analysis would take into account the entire shareholding and the level of common ownership, and not only the most recent share acquisition. In this context, several acquisitions can be aggregated and treated as a single concentration as no prior assessment has been made. Accordingly, the question whether a small acquisition of shares may not lead to a significant impediment to effective competition remains largely hypothetical.

(4) Efficiencies

Common ownership can also generate efficiencies. These may be similar to merger efficiencies. For example, common ownership may help to coordinate R&D efforts and enable product market collaboration.[856] Common ownership efficiencies are different from efficiencies associated with direct minority shareholdings.[857] As discussed above, the magnitude of efficiencies resulting from common ownership is significantly smaller than in the case of a merger and the likelihood of these efficiencies is also more uncertain than in the case of direct minority shareholdings.[858] Therefore, it is unlikely that common ownership can lead to relevant efficiencies that outweigh the competitive harm and can be included in the merger analysis.

d) Preliminary Results

Small shareholdings by common owners do not confer control. Furthermore, common owners do not typically form a group that jointly controls firms, although this is theoretically possible. At the current level of shareholdings by common owners, the acquisition of additional shares does not have to be notified under either Article 3 EUMR or § 37 (1) No. 1 GWB.

Acquisitions by common owners are also unlikely to result in a material competitive influence under § 37(1) No. 4 GWB. The German competition law is only slightly better equipped than

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[855] *Thomas* in: Immenga/Mestmäcker, Sixth Edition, 2020, § 36 GWB, para. 573.
[856] *He/Huang,* The Review of Financial Studies 2017, 2674.
[857] *OECD*, Common Ownership by Institutional Investors and its Impact on Competition – Background Note by the Secretariat, 2017, para. 88.
[858] See Chapter 3.A.II.2.c).

its European counterpart to control minority shareholdings of common owners. The "material competitive influence"-criterion is unlikely to cover even a small number of common ownership links. The criteria that are required for a material influence are unlikely to be met by common owners unless their shareholdings increase significantly. Institutional investors may be more influential than the size of their shareholdings alone would suggest. However, this does not amount to a level that is comparable to a 25% shareholding, and which would give these shareholders clear minority rights.

As a result, the acquisition of minority shareholdings is not directly challengeable under European merger control, and it is unlikely to be reviewed under German merger control either. This is at least the case at the current level of common ownership. If the level of common ownership were to increase further, German merger control might capture a small number of cases while there would still be no notifications under the EUMR.

Accordingly, the substantive analysis of the acquisition of shares by a common owner is largely hypothetical. The acquisition of minority shareholdings should be analysed under the criteria for horizontal mergers, as it has the potential to reduce competition between competitors. While it is generally possible that common ownership has the potential for unilateral or coordinated effects, the main issue is that any acquisition must *significantly* impede effective competition. Still, if a concentration threshold were reached, the overall effects of the common ownership links would be assessed and not just the latest incremental increase. Thus, the question whether a small acquisition of shares leads to a significant effect is less important.

B. Potential Solutions

I. Overview

There are some direct measures that could be taken under existing competition law to address the perceived shortcomings regarding the anti-competitive effects of common ownership. Existing antitrust rules could potentially be applied either to the acquisition of shares or to specific conduct (see II.1.). Also, under the current merger regulation, enforcement practices could also be modified to address the anti-competitive effects of common ownership (see II.2.a). In addition, the merger regulation could be extended to cover the acquisition of minority shareholdings by common owners (see II.2.b).

There are a number of proposals which would not be directly incorporated into competition law, but which could address common ownership outside of competition law. These mainly focus on either directly limiting the level of horizontal shareholdings (see III.1.) or limiting the degree of influence that common owners can exert on their portfolio companies (see III.2.). Additionally, transparency obligations could be used to reduce the influence of common owners and to gain a better understanding of common ownership links (see III.3.).

It is important to note that the competitive effects of common ownership are highly dependent on the structure of the relevant market.[859] This makes it difficult to create overarching rules on common ownership, as they may be too broad and target many industries that are unlikely to experience anti-competitive effects despite high levels of common ownership concentration. Still, this does not always mean that the application of economic theory requires a case-by-case analysis. With a strong economic rationale, general rules may also be preferable, given the need to balance the costs of intervention against the potential societal costs.[860]

II. Competition Law

1. Antitrust

One way to control minority shareholdings by common owners could be the application of Articles 101 and 102 TFEU to the acquisition of shares. As in the case of direct minority shareholdings, Articles 101 and 102 TFEU could partially fill the gap that is left by the EUMR's jurisdictional scope.[861] As the interpretation of these articles has been discussed above, it is also relevant whether their application also provides a practical and advisable way to address the problem of common ownership.

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[859] *Patel*, CPI Antitrust Chronicle, May 2019, 9, 12.
[860] *Schwalbe/Zimmer*, Law and Economics in European Merger Control, 2009, p. 405.
[861] *Gassler,* World Competition 2018, 3, 7.

With regard to Article 101 TFEU, it could be argued that this provision can be used to target anti-competitive share acquisitions that increase common ownership.[862] As shown above, Article 101 TFEU can be applied to the acquisition of minority shareholdings.[863] However, there are certain legal limitations. The existence of an agreement and the capture of unilateral effects create uncertainty as to its application. There are also practical issues that make the broad application of Article 101 TFEU to changes in the ownership of firm questionable. As common owners regularly buy and sell shares, the potential illegality of these share acquisitions would create major legal uncertainty.

Enforcement through Article 102 TFEU also faces difficulties. With regard to the acquisition of shares, Article 102 TFEU only applies if the acquirer has a dominant position. This is unlikely in a common ownership situation.

Furthermore, relying on Articles 101 and 102 TFEU to limit the acquisition of horizontal shareholdings would be a step backwards when considering the development of European competition law. The interpretation of Article 101 TFEU in the case of acquisitions of shareholdings was mainly a way to fill a gap when merger control was non-existent. With the introduction of the EUMR, the application of Article 101 TFEU to share acquisitions has lost most of its relevance, as the EUMR allows the European Commission to assess acquisitions that confer control.[864] Also, there has already been an ongoing debate on extending the scope of the merger control.[865] With the EUMR, mergers could be regulated conclusively. The application of Articles 101 and 102 TFEU may lead to incoherent enforcement. It is preferable to have a clear and precise control mechanism rather than the high degree of uncertainty that results from an enforcement under Articles 101 and 102 TFEU. Furthermore, the provisions are not well suited to control acquisitions as they can only be applied *ex-post*. However, it should also be noted that the divestiture of a common owner's minority shareholding does not pose the same problems as, for example, in merger cases, as it does not require the break-up of an economic unit, but only the sale of a financial investment.[866]

Articles 101 and 102 TFEU could also be applied to specific conduct. Article 101 TFEU can potentially be applied to coordination or an information exchange between investors and portfolio firms.[867] From a policy perspective, it is unclear whether stricter enforcement of

[862] *Elhauge,* New Evidence, Proofs, and Legal Theories on Horizontal Shareholding, January 2018, p. 36, available at: https://ssrn.com/abstract=3096812.
[863] See Chapter 3.A.I.1.d).
[864] *Struijlaart*, World Competition 2002, 173, 192.
[865] See *Commission*, White Paper – Towards more effective EU merger control, 9.7.2014, COM(2014) 449 final. The following Chapter 3.B.II.2. will discuss the extension of the merger control regulation.
[866] *Seitz*, Common Ownership im Wettbewerbsrecht, 2020, p. 216.
[867] See Chapters 3.A.I.1.b).

Article 101 TFEU is a solution to the anti-competitive effects of common ownership, since there is no clear indication that any specific anti-competitive behaviour leads to higher prices. If anti-competitive effects are only caused by a change in the underlying incentives, which is likely, enforcement against specific behaviour is pointless. Article 101 TFEU is applicable when there is collusive behaviour between funds and firm managers. If competition authorities find such behaviour, these infringements of Article 101 TFEU should be prosecuted. But, this situation is no different from other infringements of Article 101 TFEU. The difficulty is that collusion may not be necessary to generate anti-competitive effects.

Article 102 TFEU can be applied when oligopolists form a collective dominant oligopoly and charge excessive prices. However, it is not practical to enforce Article 102 TFEU in this way. It is very difficult to identify excessive pricing and the success of this approach is uncertain, as shown by the past (non-)enforcement of Article 102 lit. a) TFEU.

In conclusion, mitigating the anti-competitive effects of common ownership through an increased enforcement of Articles 101 and 102 TFEU is difficult and ineffective, as these provisions can only be applied *ex-post* and are subject to significant uncertainties as to their applicability. As common ownership is primarily a structural problem, merger control may be better suited to address its potential anti-competitive effects.

2. Merger Control

a) Overview

There are two broad types of policies in merger control that could be taken to address common ownership. *First*, the assessment under current legislation could be reshaped in various ways (see b)). New rules or guidelines specific to common ownership could be introduced, and the scope of current notification obligations could be interpreted broadly. *Second,* the scope of the merger control could be extended to cover small shareholdings of common owners (see c)).

When considering changes to merger control policy under the current legal framework, several issues could be addressed. The scope of the current notification thresholds could be interpreted broadly. While the reach of these thresholds has already been discussed above, it is also helpful to discuss the practicability of this approach. Moreover, a common ownership analysis could be used to assess both regular mergers and in particular mergers between common owners. Finally, it can be examined whether MHHI thresholds should be determined to guide the substantive assessment.

b) Solutions Under Current Law

(1) Extensive Interpretation of Joint Control

Under the current interpretation of joint control under Article 3 EUMR, it is very unlikely that the minority shareholdings of common owners will lead to a concentration.[868] It is not sufficient for a group of shareholders to have a collective majority of shares which gives them a decisive influence or a minority of shares which may give them control. There must be other circumstances that make the cooperation between shareholders likely. This leads to the question of whether these cases can be covered by a broader interpretation and whether such a change in practice is justified from a policy perspective. *Elhauge* argues that a change is warranted simply because of the potentially large negative effects of common ownership. He contends that the European Merger Regulation has always been interpreted reasonably in the past and that regulatory gaps have been closed.[869] This reasoning is based on the argument that all potentially harmful changes in market structure should be assessed, which is not unreasonable in itself but may lack a broader perspective.

There are also arguments against broadening the interpretation of the term joint control – even if it is recognised that common ownership poses a substantial threat to competition. There is a difference between extending the substantive assessment and broadening the interpretation of concentrations. The reason for the shift in the substantive test is the underlying objective of the merger regulation, which has been clarified by the introduction of the SIEC test: The prevention of changes in market structure that are likely to significantly impede effective competition. Although the definition of concentrations is primarily designed to capture potentially harmful concentrations, it must also recognise other objectives. It is important for companies to have legal certainty as to which concentrations need to be notified. In the case of common ownership, this would be a major problem. Institutional investors – and passive funds in particular – buy and sell shares practically all the time. They would face the problem that each acquisition of shares could potentially trigger a notification obligation. Moreover, this notification may depend not only on their own holdings, but also on the number of shares in the same companies held by other horizontally diversified investors. Investors would thus face considerable uncertainty as to their obligation to notify a concentration, which is essentially what the interpretation of control seeks to avoid.

In conclusion, a broad interpretation is not feasible and removes the legal certainty required by the obligation to notify concentrations. Especially, in the case of joint control, the acquirer does not necessarily know how many shares other common owners may hold and may not be

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[868] See Chapter 3.A.II.4.b).

[869] *Elhauge*, Harvard Business Law Review 2020, 207, 275.

in a position to determine whether joint control exists. If there is a need to assess the shareholdings of common owners, it is not preferable to achieve this through a broad interpretation of control.

An alternative – which will be discussed below (see c)) – could be to extend the current merger regulation so that shareholdings are not only captured if they confer control, but can also be assessed when they confer a lesser degree of influence.

(2) Extensive Interpretation of Material Competitive Influence

As with the interpretation of joint control, it could be argued that material competitive influence pursuant to § 37(1) No. 4 GWB should include acquisitions of common ownership links, as these could significantly impede effective competition.

In the case of common ownership, the common owners have some degree of influence. As the theory of common ownership suggests, this influence can be relevant for the competitive outcome.[870] A plain reading of the term "material competitive influence" might therefore suggest that common ownership links can be captured by § 37(1) No. 4 GWB, since the shareholding confers a certain degree of influence and both empirical studies and theory suggest that this shareholding can trigger anti-competitive effects. However, there are several reasons why this cursory interpretation is incorrect. It does not reflect the legislative rationale for the criterion and its function. If ordinary minority shareholders with small shareholdings had a material competitive influence, the potential scope of the provision would exceed the limits set by the case law and probably the scope that was intended. The notification obligation requires a certain degree of legal certainty, which cannot be undermined by a notification criterion based solely on the substantive analysis. The acquisition of minor shareholdings by common owners does not in itself reflect any precise rights of those shareholders and is not directly linked to a specific level of influence. Full synchronisation between the SIEC test and the notification threshold is not desirable, as a notification system requires a higher level of legal certainty.[871]

As the current interpretation requires certain plus-factors and does not cover minority shareholdings which could potentially lead to anti-competitive effects without any direct influence, it could be argued that the scope of § 37(1) No. 4 GWB needs to be revised.[872] There may be acquisitions that fall under the SIEC test but do not have to be notified because there

[870] See Chapter 2.B.
[871] *Thomas,* Zeitschrift des Instituts für Energie- und Wettbewerbsrecht in der kommunalen Wirtschaft e.V. 2016, 174, 176.
[872] *Maier-Rigaud/Schwalbe/Forster*, Zeitschrift für Wettbewerbsrecht 2016, 246, 254 f.

can be an upward pricing pressure irrespective of the level of control.[873] Similarly, common ownership links can have anti-competitive effects.

While it is highly doubtful whether the current § 37(1) No. 4 GWB can be interpreted as covering cases of common ownership, an extension of the law and its scope is not to be suggested, as this would lead to legal uncertainty in the assessment of share acquisitions that reach the notification threshold.[874] It is difficult to develop criteria that can be used to distinguish between small shareholdings that do not confer material influence and those that do, as the criteria that have been considered in the case law are not informative for making this important distinction and other useful criteria have not been proposed and are not obvious.

If the material competitive influence were to be interpreted extensively or its scope extended to cover common ownership, any acquisition of shares would be invalid.[875] Hence, as any share acquisition could potentially be invalid, this would lead to considerable uncertainty and requires that the law is not interpreted too broadly or at least that the criteria and their interpretation are clarified. Otherwise, investors would have to notify a number of share acquisitions without knowing whether this is necessary. This would also increase the administrative burden.

Although it is possible that a material competitive influence may exist at a shareholding at a level as low as 10%, it is unlikely that cases of common ownership will have to be notified under the existing legal regime. This is not a shortcoming of the legislation, but a necessary consequence of the self-assessment required of companies. Linking the notification to the substantive analysis would expand the scope in a way that is no longer foreseeable. Directly linking the obligation to notify and the possible anti-competitive effects would reduce the legal certainty, which is already low in the case of a material competitive influence. There must be observable factors that make anti-competitive effects likely, so that a substantive assessment seems necessary. However, a complete synchronisation of the material competitive influence and the substantive assessment is not a viable option. Nor are there any obvious criteria that could modify the legal rules in such a way that the legal threshold remains manageable and can capture the acquisition of shares by common owners.

(3) Stricter Enforcement in Merger Cases

One of the main ways of dealing with the anti-competitive effects of common ownership could be a strict enforcement of existing merger regulation. This policy would be the most natural to

[873] *Thomas,* Zeitschrift des Instituts für Energie- und Wettbewerbsrecht in der kommunalen Wirtschaft e.V. 2016, 174, 176.
[874] *Thomas,* Zeitschrift des Instituts für Energie- und Wettbewerbsrecht in der kommunalen Wirtschaft e.V. 2016, 174, 176.
[875] *Weitbrecht/Weidenbach*, Wirtschaft und Wettbewerb 2008, 788, 794.

apply as it would not require any change in merger control law and would be implemented in the assessments that the competition agencies carry out on a regular basis, with much experience and existing case law to provide a frame of reference. As shown above, common ownership can have anti-competitive effects.[876] These can be incorporated into the existing framework of the SIEC test. The common ownership links can themselves give rise unilateral effects. This would require a high level of common ownership and an in-depth analysis of the market structure. Furthermore, common ownership can increase the likelihood of coordinated effects. It can be relevant to several of the *Airtours* criteria and can also affect the overall incentives of firms to collude. Extending the competitive assessment to these effects would not constitute a major change in enforcement. On the contrary, it would be consistent with the use of the MHHI in merger cases and, in particular, the consideration of structural links as an element in the assessment of coordinated effects.

However, there are also reasons against stricter merger review as the best practical way to address common ownership effects. In existing oligopolies, there is no way to challenge common ownership unless there is an additional concentration. If an industry is already an oligopoly, there is not necessarily a notifiable concentration.[877] Merger control cannot deal with existing uncompetitive oligopolies. Moreover, some industries never consolidate in a way that would allow competition authorities to stop any concentration. For example, in many digital markets there is consolidation without external growth.[878] However, the objection that merger control cannot address anti-competitive effects in already concentrated industries can be raised against merger control in general. The system of notification of concentrations in European merger control cannot capture all developments in industries that are uncompetitive. This is inherent in the system and does not differ significantly in the presence of common ownership. The main difference is that merger control cannot assess changes in market structure due to changes in common ownership, whereas it can assess changes in market structure following a change in control. Rather than arguing against the use of merger control, this argument suggests that the scope of merger control may be too narrow to be effective against the anti-competitive effects of common ownership. Regulation would be needed that could more closely control common ownership concentration. Still, the non-controllability of industries that become more concentrated in the absence of notifiable concentrations is not a problem specific to common ownership. It may be worth considering whether merger control should somehow be extended to control the development of oligopolistic market structures

[876] See Chapter 2.B.
[877] *Posner/Scott Morton/Weyl*, Antitrust Law Journal 2017, 669, 723.
[878] *Posner/Scott Morton/Weyl*, Antitrust Law Journal 2017, 669, 723.

without external growth, but this is not an argument against using merger control to indirectly challenge common ownership links.

Furthermore, it could be argued that mergers, as opposed to common ownership links, can generate substantial efficiencies.[879] Thus, there would be more reason to allow mergers than common ownership concentration. It is generally a valid argument to point to the potential efficiencies of mergers as opposed to common ownership. But, as discussed above, common ownership can also have beneficial effects, although they are indirect and mostly irrelevant in merger analysis.[880] The argument that mergers create more efficiencies than common ownership is not an argument against the enforcement of merger control.

It can be concluded that these arguments are not directed against merger control, but are intended to show that regulatory measures are better suited to address common ownership because of the shortcomings of merger control. The question of whether merger control is indeed inadequate and whether other regulatory measures would be more efficient in addressing the competition problems of common ownership does not imply that merger control is not a way to address the anti-competitive effects of common ownership.

(4) Merger Between Common Owners

As a general regulatory measure, it may be advisable to limit the concentration of diversified investment funds, as this may adversely affect competition in product markets.[881] Merger analysis can generally incorporate an assessment of the anti-competitive effects of common ownership.[882]

However, as discussed above, there are some practical difficulties. Since a merger between investors may affect common ownership levels in a large number of different markets, this would significantly expand the scope of the substantive merger analysis. While this is a relevant concern, it is not necessary for competition agencies to carry out an assessment in all potentially relevant markets. One way to limit the potential markets subject to in-depth review could be to set MHHI thresholds, below which no in-depth review of the effects of the merger in a market would take place.

Since the practical difficulties are not an insurmountable obstacle, adding an analysis of common ownership to the merger of common owners is an efficient way of addressing the

879 *Posner/Scott Morton/Weyl*, Antitrust Law Journal 2017, 669, 723.
880 See Chapter 3.A.II.2.c).
881 *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, 1560.
882 See Chapter 3.A.II.2.b).

increase in common ownership. Nevertheless, it allows only an indirect examination of the effects of the increase in common ownership concentration.

(5) MHHI as a Threshold

The MHHI could be used in four ways in the assessment of a merger: (i) as an indicator of competitive effects triggering an in-depth substantive analysis, (ii) as a fixed threshold leading to a prohibition of the merger, (iii) as a safe harbour rule, or (iv) as an additional reference point for the substantive analysis without a formal role.

First, the MHHI could be implemented by the European Commission in its assessment of mergers as a measure of either unilateral or coordinated effects by introducing MHHI thresholds into the substantive merger analysis. A certain MHHI level could indicate competitive harm and lead to a more thorough analysis. For example, *Elhauge* recommends using the MHHI as a threshold, similar to the current role of the HHI in the U.S. Horizontal Merger Guidelines.[883] These guidelines provide a soft safe harbour and an indication of whether an in-depth investigation is necessary.[884] *Second*, it would be possible to set strict thresholds below or above which competition concerns are deemed to exist or can be ruled out. *Third*, the MHHI could also have a safe harbour role. This would be similar to the current role of the HHI in the Merger Guidelines.[885] As with the current use of the HHI levels in the Commission's Horizontal Merger Guidelines, the MHHI would not create a presumption of competition concerns.[886] Rather, it would act as a safe harbour. *Fourth*, the MHHI could be used additionally in merger cases to formalise the level of common ownership and to provide further insights into the market structure.

The use of the MHHI in the substantive analysis of mergers would require a proven and reliable relationship between the MHHI and anti-competitive effects.[887] In considering the appropriateness of using the MHHI, it is important to assess its predictive value in merger analysis. Empirical studies have found a relationship between the MHHI and price.[888] Nonetheless, these studies have focused only on a limited number of industries. It is uncertain whether the same effect holds across markets. The MHHI is only directly applicable to

[883] *Elhauge*, Harvard Law Review 2016, 1267, 1303.
[884] *U.S. Department of Justice/Federal Trade Commission*, Horizontal Merger Guidelines, 2010, p. 19.
[885] *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, ("Horizontal Merger Guidelines"), paras. 19 ff.
[886] *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, ("Horizontal Merger Guidelines"), para. 21.
[887] *Rock/Rubinfeld*, Antitrust Law Journal 2018, 221, 240.
[888] See Chapter 2.B.II.1.

unilateral effects. It does not measure coordinated effects.[889] The HHI may be directly related to coordinated effects under some circumstances.[890] Market concentration facilitates the monitoring of deviations. In contrast, the MHHI has no theoretical relationship with coordinated effects. Thus, the uncertainty about the theoretical relationship between the MHHI and coordinated effects may make its use as an indicator of competitive effects inappropriate.[891] Whereas the importance of the HHI in explaining the likelihood of coordinated effects is relatively clear, there is no economically established link between the MHHI and coordinated effects. The HHI embodies the notion that coordinated effects are more likely in more concentrated markets because it is easier to reach an agreement and to monitor the behaviour of competitors when there are fewer firms active in the market.[892] The MHHI has no such direct application. It measures links between competitors and their changed incentives. Thus, it is mainly related to the measurement of unilateral effects, and this was its intended use and background when the MHHI was developed.[893] Furthermore, it should only be used when the assumptions of the underlying model are met, most importantly when the products in question are homogeneous.[894] In addition, the two individual components of the MHHI are important: the HHI and the MHHI delta. The HHI may also be relevant because MHHI levels become significantly more important for prices when the underlying HHI level exceeds 2500.[895] Accordingly, the threshold of 2500 may be appropriate for competition authorities. [896] A high MHHI that is only caused by a high MHHI delta may not in itself be indicative of significant anti-competitive effects.

The main benefit of including the MHHI in the Horizontal Merger Guidelines would be to allow companies to assess their merger plans with regard to a common ownership dimension. Although the European Commission can already use the MHHI as an indicator and measure of market concentration, its inclusion in the guidelines would clarify how concentrations with a common ownership dimension are assessed. The Horizontal Merger Guidelines already mention the MHHI and describe its potential use.[897] For example, it was used by the Commission in the *Exxon/Mobil* case. In that case, the high level of the MHHI (4243) and its increase by 139 points were taken as an indicator of significant market power and its further

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[889] *Monopolkommission*, Wettbewerb 2018, Hauptgutachten No. 22, 2018, para. 487.
[890] *Stigler*, Journal of Political Economy 1964, 44, 55.
[891] *Patel*, Antitrust Law Journal 2018, 279, 319.
[892] *Patel*, Antitrust Law Journal 2018, 279, 319.
[893] *O'Brien/Salop*, Antitrust Law Journal 2000, 559, 568.
[894] *Patel*, Antitrust Law Journal 2018, 279, 330.
[895] *Elhauge*, Harvard Law Review 2016, 1267, 1276.
[896] *Elhauge*, Harvard Law Review 2016, 1267, 1276.
[897] *Commission*, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, ("Horizontal Merger Guidelines"), para. 20.

strengthening.[898] It also showed a commonality of interest.[899] The Commission used the MHHI as a more accurate measure of post-merger market concentration.[900] This is an approach that the Commission similarly adopted for common ownership in *Dow/DuPont*.[901] In its *Bayer/Monsanto* decision, the Commission did not rely on its MHHI calculation because of the need to make assumptions about the level of control of the shareholders.[902] This shows that the MHHI is neither new to the Merger Guidelines nor to the Commission's case law.

Following the current use of the HHI, the MHHI thresholds could be formally used as a safe harbour or as an indicator for an in-depth assessment. This would increase legal certainty for the merging parties. Nonetheless, it would still be difficult for the parties to calculate the MHHI levels as it requires more data than the HHI, which may not be available to the companies. For example, it is necessary to have ownership data which may not be publicly available. Furthermore, it is difficult to identify potentially harmful or negligible levels of MHHI because the data on MHHI levels are insufficient to reliably estimate harmful effects.[903] Yet, it is never possible to set a "correct" threshold, the levels would necessarily be arbitrary. A simple comparison with the HHI and setting similar levels is possible, but would not allow for the more complex analysis of the MHHI. It would also require a more difficult analysis than the traditional HHI, which is easier to calculate.

The Commission has used the MHHI in several decisions and points out that, like the HHI, it can only be a rough indicator of competitive effects.[904] The MHHI can be a measure that complements the substantive analysis, but the conclusions that can be drawn are limited and must of course be seen in the context of the relevant market. With regard to coordinated effects, it is always necessary to evaluate different criteria. A narrow focus on indicators such as the MHHI cannot replace this analysis and can only provide an initial assessment and an additional aspect to a more comprehensive analysis. In sum, the explicit use of MHHI thresholds, similar to the current use of the HHI, would benefit the merging parties and provide greater legal certainty.

In contrast, the MHHI should not be used as a definite threshold that anticipates the outcome of the substantive analysis. Hard thresholds may lead to the prohibition of mergers that do not give rise to competition concerns, i.e., type-two errors.[905] They would also be incompatible with

[898] *Commission*, Decision of 29.9.1999 in Case No. IV/M.1383 – *Exxon/Mobil*, para. 256.
[899] *Ezrachi*, EU Competition Law, Sixth Edition, 2018, p. 453.
[900] *Ezrachi*, EU Competition Law, Sixth Edition, 2018, p. 453.
[901] *Commission*, Decision of 27.3.2017 in Case No. M.7932 – *Dow/DuPont*, Annex 5.
[902] *Commission*, Decision of 21.3.2018 in Case No. M.8084 – *Bayer/Monsanto*, para. 228.
[903] *Patel*, Antitrust Law Journal 2018, 279, 331.
[904] *Commission*, Annex to the Commission Staff Working Document – Towards more effective EU merger control, 25.6.2013, SWD(2013)239 final, para. 87.
[905] *Schwalbe*, Journal of European Competition Law & Practice 2018, 596, 602.

existing case law, e.g. the requirement that the criteria for coordinated effects must not be applied mechanically. A simple one-measure approach would not meet the requirement of an overall assessment and would also be contrary to the decision-making practice of the European Commission. Moreover, even for the assessment of unilateral effects, a hard limit would not be desirable because the explanatory power of the MHHI is not sufficiently high to provide a precise and measurable threshold.[906] This is even more the case in the context of coordinated effects, where the implications of MHHI levels are more uncertain than in the case of unilateral effects. A decisive role for the MHHI would also be at odds with the common use of market concentration measures.

The MHHI can and should be used as a tool for assessing mergers. Like the HHI, it can be used as a safe harbour and as an indicator for an in-depth assessment. The initial indication of the measure is not strong enough to rely on it as a sole measure of competitive effects. Waiting for more research on harmful MHHI levels and their significance in different scenarios is probably a good option before introducing clear thresholds in the Merger Guidelines. The MHHI is not as easy to apply as the HHI. However, it has some explanatory value for the indirect market concentration and is useful for measuring such links. For unilateral effects it has a more direct application, although it suffers from the same shortcomings as the HHI.[907] While there is some uncertainty about the direct implications of MHHI levels, its inclusion in the Horizontal Merger Guidelines may be helpful. It has already been used by the Commission. Therefore, the Commission could set MHHI thresholds in its merger guidelines. This could lead to an increase in legal certainty, albeit small. A case-by-case analysis of the relevant factors for coordinated or unilateral effects will remain necessary. Still, the MHHI can indicate when a merger is likely to raise competition concerns and an in-depth analysis should be carried out.

c) Extending Merger Control

So far, the options under the current Merger Regulation have been discussed. While there are options to assess common ownership links under the current law, both European and German law provide only limited possibilities to intervene when a firm acquires minority shareholdings in various competing companies. German merger control offers more possibilities to review concentrations, but is not much better equipped than its European counterpart to deal with small minority shareholdings of several common owners.[908]

Given that even a broad interpretation of the current notification thresholds would only allow a small number of cases to be assessed, the question arises as to whether an extension of the

[906] *Patel*, Antitrust Law Journal 2018, 279, 331.
[907] *O'Brien/Salop*, Antitrust Law Journal 2000, 559, 596 f.
[908] See also Chapter 3.A.II.4.b)(2).

merger control thresholds is an effective way to challenge common ownership. It needs to be discussed whether this constitutes an enforcement gap that should be filled, or whether the current legal framework is sufficient given the potential magnitude of the anti-competitive effects. For a gap to exist, both the potential harm that goes uncorrected and the ability of the current law to at least partially provide a remedy for the potential problem must be recognised.

Current competition law does not allow competition authorities to challenge the acquisition of minority shareholdings by institutional investors in several competing firms. Under the current merger regulation, there are ways to address common ownership indirectly. The current merger regulation allows for intervention when there is already a notifiable concentration that can be assessed by the Commission or the German Bundeskartellamt. In such cases, it is possible and desirable for the competitions agencies to include the possible effects of common ownership in their assessment. Furthermore, the anti-competitive effects of a merger between common owners can be examined.

Empirical studies have shown that common ownership can have anti-competitive effects. This is supported by economic theory.[909] However, both the empirical and the theoretical analysis of common ownership remain controversial. Importantly, there is no clear answer as to the magnitude of the effects and how to assess them in individual cases. Given that common ownership is widespread, the potential magnitude is large due to the number of different markets affected.

As regards the criteria for a potential extension of merger control, a new system should capture potentially anti-competitive acquisitions, avoid any unnecessary burden on companies and competition agencies, and should fit into the system of merger control in the EU and its Member States.[910] In other words, the system must be effective in capturing cases where anti-competitive effects are likely to occur, while at the same time being efficient and proportionate in terms of the burden it imposes on companies and enforcers.

In its White Paper, the Commission identified several options as to how direct minority shareholdings could be procedurally controlled: a notification system, a transparency system, or a self-assessment system.[911] While it is interesting to discuss these options in terms of their efficiency for common ownership links, it is first important to clarify whether a new merger

[909] See Chapter 2.B.
[910] *Commission*, White Paper – Towards more effective EU merger control, 9.7.2014, COM(2014) 449 final, para. 42.
[911] *Commission*, White Paper – Towards more effective EU merger control, 9.7.2014, COM(2014) 449 final, para. 43.

threshold would capture relevant common ownership acquisitions, before considering different procedural options.

In discussing the efficacy of lowering the notification threshold under the current notification system, it is necessary to ask whether a new criterion can capture potentially harmful acquisitions of common ownership links. The Commission's proposed notification threshold for direct minority shareholdings is a "competitively significant link", defined as (i) the acquisition of a minority shareholding in a competitor or vertically related company, and (ii) a shareholding of around 20%, or between 5% and 20%, but accompanied by additional factors.[912] When considering the proposed "competitively significant link" in the case of common ownership, even the first criterion is missing, as the common owner and the portfolio firm are not in a competitive relationship. In general, the threshold has some similarities with the German "material competitive influence". However, as already shown, setting the merger threshold at the level of § 35(1) No. 4 GWB would not be effective because it cannot capture common ownership links.[913] Thus, the adoption of the German or a similar notification threshold into EU law would have almost no effect on common ownership links. It is therefore ineffective and inadvisable.

Accordingly, a new standard would have to be broader to cover acquisitions of shares by common owners. However, a broader scope of merger control would lead to a higher level of uncertainty, at least under a system of mandatory notification. In addition, a lower standard would create inefficiencies and an administrative burden by requiring notification of minority acquisitions that do not pose a threat to competition.

Therefore, since a new notification threshold is not obvious, another possibly more practical and effective method of reviewing the acquisitions of minority shareholdings by common owners would be a system of "ex-post evaluation"[914], a "transparency system" or "self-assessment system".[915] Under such a system, the Commission – or other competition authorities adopting such a regulation – would be able to initiate an investigation into potentially problematic minority shareholding acquisitions, either after being informed by the parties of the acquisitions or after gathering information itself.[916] However, given the ineffectiveness of a "competitively significant link" criterion, the question remains whether there is a threshold that

[912] *Commission*, White Paper – Towards more effective EU merger control, 9.7.2014, COM(2014) 449 final, paras. 45, 47.
[913] See Chapter 3.A.II.4.b)(2).
[914] *Seitz*, Common Ownership im Wettbewerbsrecht, 2020, p. 216.
[915] *Commission*, White Paper – Towards more effective EU merger control, 9.7.2014, COM(2014) 449 final, para. 43.
[916] *Commission*, White Paper – Towards more effective EU merger control, 9.7.2014, COM(2014) 449 final, para. 43.

can limit the number of cases. Another option would be to have a system where there is no formal threshold. Instead, competition agencies could proactively review cases. Additionally, a low threshold could be set above which a substantive assessment is optional. For example, there could be a transparency obligation and competition agencies could carry out an (optional) economic analysis of the competitive effects when there is an acquisition of more than 5% of the share capital of more than one competing company in the industry.[917] This would be a more efficient approach than a mandatory assessment of all minority acquisitions. Nevertheless, it would also create some uncertainty. While a precise standard would be preferable, there is no obvious threshold for identifying potentially harmful acquisitions that is not overly broad. Accordingly, a system of ex-post evaluation would be the only option to efficiently assess common ownership links. However, this would be a major change in the merger control system, which may not be justified if only the potential harms of common ownership are assessed. Yet, it could be a reason to reopen the debate on the extension of merger control, as was done in the Commission's White Paper. A systematic change in merger control is only likely to be justified if a new regime focuses on both direct minority shareholdings and common ownership as well. Common ownership provides an additional reason to extend the scope of merger control to cover minority shareholdings. This should be part of a broader discussion covering both direct minority shareholdings and common ownership.

In conclusion, an extension of the scope of the current merger control system would not be effective because a "competitively significant link" is unlikely to capture the acquisition of minority shareholdings by common owners. Thus, extending the notification obligation is ineffective. The actual harm of common ownership links is difficult to determine at this stage. Therefore, it is not desirable to extend the scope of European merger control until the harms of common ownership are better identified and quantifiable. However, it is possible to assess common ownership where there is already a concentration. A system of ex-post evaluation is also possible. Nonetheless, this would lead to a major change in the merger control system and is not currently justified if only the potential harmful effects of common ownership are considered.

Instead, the potential harm should be assessed in the context of other concentrations already subject to merger review. If the anti-competitive effects of common ownership are found to be significant, this approach is not optimal as only a limited number of cases will be subject to review. Nevertheless, it allows at least partial examination of common ownership links and there does not appear to be an efficient way of extending merger control. In the future, it may

[917] *Hellenic Competition Commission*, Press Release – Market Investigation in the Construction Sector, 12.8.2022, available at: https://www.epant.gr/en/enimerosi/press-releases/item/2301-press-release-market-investigation-in-the-construction-sector.html.

be necessary to discuss a system under which competition agencies can proactively assess cases.

3. Summary of Proposals

While it may be possible to enforce Articles 101 and 102 TFEU more strictly and to capture some acquisitions of shares by common owners, this would lead to incoherent and inconsistent enforcement practices. It would also create uncertainty about the application of these laws. Increased enforcement through these instruments is therefore not advisable.

By contrast, enforcement through merger control is a sensible approach. Merger control should take into account the anti-competitive effects of common ownership when assessing mergers between competitors and between common owners. The MHHI could be included in the Horizontal Merger Guidelines to provide guidance although its use as a strict threshold would go too far.

However, an extension of the scope of merger control is not justified at this stage. Acquisitions of shares by common owners should only be reviewed under the existing thresholds. Although the acquisition of shares by common owners does not fall within the scope of merger control even under a broad interpretation of the thresholds, an extension of the merger scenarios subject to merger control is currently not justified. Transferring a notification threshold similar to the German “material competitive influence” to the EU level would at most cover a few relevant share acquisitions.

A system of ex-post review would only make sense if there were no threshold, but if competition authorities were free to review cases and had the power to require the divestiture of shares. However, the current level of common ownership does not justify such a strong systemic change in merger review. This assessment may change in the future if there is stronger evidence of anti-competitive effects or levels of common ownership increase further.

III. Non-Competition Law

1. Shareholder Structure

a) Limit on the Level of Shareholdings

One regulatory measure is to impose limits on the level of common ownership. Such a rule would not directly affect competition law, although it could potentially be enforced by competition authorities. *Posner et al.* propose this hard limit on common ownership as follows:

> *"No institutional investor or individual holding shares of more than a single effective firm in an oligopoly may ultimately own more than 1% of the market share unless the entity holding shares is a free-standing index fund that commits to being purely passive."*[918]

This limit would not apply to all shareholdings, but only to horizontally diversified investors. Effectively, common owners would have to choose between limiting their investments or concentrating their holdings in fewer firms. This would drastically reduce common ownership in all markets where it could currently have negative effects. Moreover, this proposal would "*fundamentally change […] the basic structure of the financial sector*"[919]. It would be the most direct challenge to common ownership as it immediately addresses the level of common ownership concentration. Institutional investors would have to split up their holdings. According to the policy proposal, the DOJ and FTC would have to compile and regularly update a list of oligopolistic industries.[920] Hence, implementation of the proposal would result in a significant administrative burden.[921]

Under the proposal, institutional investors could also choose to be purely passive if they are a free-standing index fund.[922] It is possible that many institutional investors will prefer this second option if possible.[923] However, it is first assumed that investors do not choose to be passive and instead invest in only one firm in an oligopoly or reduce their holdings below 1%, in order to assess how this would affect competition and whether it would effectively solve the common ownership problem.

The *Posner et al.* proposal offers a relatively simple and effective way to limit common ownership concentration. Individual shareholdings, and hence the influence of common owners, would be reduced. The relatively largest investors would cease to be common owners and would only be diversified across industries. If passive investors had to choose a single firm in an industry to invest in, their influence would increase as their individual shareholdings would be larger. This could be positive for corporate governance, as there would be larger shareholders with a concentrated interest in individual firms.[924] However, as this would greatly change the investment options available to institutional investors, there are several points to consider.

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[918] *Posner/Scott Morton/Weyl*, Antitrust Law Journal 2017, 669, 708.
[919] *Posner/Scott Morton/Weyl*, Antitrust Law Journal 2017, 669, 715.
[920] *Posner/Scott Morton/Weyl*, Antitrust Law Journal 2017, 669, 698.
[921] *Wambach/Weche*, Wirtschaftsdienst 2019, 575, 581.
[922] *Posner/Scott Morton/Weyl*, Antitrust Law Journal 2017, 669, 708.
[923] See for a discussion Chapter 3.B.III.2.a)(1).
[924] *Elhauge*, Ohio State Law Journal 2021, 1, 73 f.

Large passive investors holding more than 1% of shares would have to reduce their degree of diversification.[925] Since they would have to actively select a single firm in an industry to invest in, there would be a risk of making poor investment decisions.[926] Nevertheless, it is questionable whether this would affect the effective diversification of these funds. Since the largest diversification effects are achieved by diversifying across industries, *Posner et al.* contend that 99% of the gains from diversification would be retained.[927] Even if institutional investors could not invest in all firms in a market, individual investors could still achieve diversification by investing in several mutual funds.[928]

Furthermore, the proposed regulation would have a profound impact on today's passive funds. Passive investment strategies would be impossible, at least for large funds.[929] One problem is that while investors may achieve an acceptable level of diversification, there would still need to be some active management to pick stocks in each industry. The cost of passive investing would probably rise. Thus, it is possible that restrictions on these non-controlling shareholdings could limit the ability of institutional investors to offer diversified investment options at low cost.

Another argument against limiting the level of common shareholdings is that it may not lead to more concentrated shareholdings, but only to a dispersion of investors. The number of investors would simply increase because the ultimate investors would continue to seek ways to obtain a diversified portfolio at low cost. The main effect of the 1% rule may be to increase the dispersion of ownership. The same shares would simply be allocated to a larger number of investors – the overall level of common ownership would remain unchanged. This could result in lost economies of scale. Nonetheless, it would still lead to a reduction in concentrated common owners and reduce the potential for anti-competitive effects.

A limit on common ownership could also lead to a fragmentation of ownership. Institutional investors may choose to split up into separate legal entities.[930] Otherwise, they would be at a competitive disadvantage to smaller investors who could invest without any restrictions. This would not lead to more concentrated shareholders, but to a more fragmented ownership of companies. Fragmentation of ownership with no change in the overall level of common ownership would only be pro-competitive if investors actually used active mechanisms.[931] If passivity leads to anti-competitive effects, it is unlikely that the dispersion of common owners

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[925] *Wambach/Weche*, Wirtschaftsdienst 2019, 575, 581.
[926] *Seitz*, Common Ownership im Wettbewerbsrecht, 2020, p. 197.
[927] *Posner/Scott Morton/Weyl*, Antitrust Law Journal 2017, 669, 710 f.
[928] *Baker*, Harvard Law Review Forum 2015-2016, 212, 229.
[929] *Seitz*, Common Ownership im Wettbewerbsrecht, 2020, p. 197.
[930] *OECD*, Common Ownership by Institutional Investors and its Impact on Competition – Background Note by the Secretariat, 2017, para. 106.
[931] *Hemphill/Kahan*, Yale Law Journal 2020, 1392, 1452.

will limit the anti-competitive effects of common ownership. There may be a small effect because concentrated shareholders may become larger relative to the smaller diversified funds. However, this does not guarantee that these funds will exert more influence or mitigate the anti-competitive effects that are caused by the passivity of the shareholder base. Overall, investors would spend less on corporate governance, which could have a negative impact on firm efficiency.

On a practical level, it is difficult for investors to select just one portfolio firm in a sector. This requires the coordination of different funds with different investment objectives.[932] For example, most fund families have active and passive funds, industry-specific funds or funds with different investment objectives. Furthermore, any restructuring of investments would be very difficult in practice. Fund families would have to transfer their entire investment in one firm in the industry to another. They would have to coordinate the holdings of all their different funds and constantly monitor their investment decisions across all funds. This high degree of inflexibility could then lead the ultimate investors to prefer small and flexible funds and would create competitive disadvantages for large fund families.[933] While this may be seen as a necessary side-effect, it is important to note that large, passive funds bring about efficiencies in the form of economies of scale, some of which would be lost.[934] Investment costs would rise. In particular, the cost of diversifying the portfolio would rise. While *Posner et al.* may be right that consumers would still be able to diversify their portfolios, this does not mean that they would be able to do so at the same price.

Restrictions on shareholdings may be overly broad, as they would target all markets regardless of their individual characteristics.[935] The negative effects of common ownership depend on various characteristics of the market structure, most importantly the overall concentration and the lack of concentrated shareholders. It may be more efficient to target some industries more than others.[936] Accordingly, a broad limit on horizontal shareholdings would apply to many markets that may have high levels of common ownership but are unlikely to be negatively affected by these ownership structures. Although it would be limited to a defined set of oligopolistic industries, the hard cap on horizontal shareholdings is still very broad.

Overall, a hard limit on common ownership levels is not a convincing proposal. It is likely that reducing common ownership concentration will have positive effects on competition. However, there are several reasons why limiting diversification may not have the desired effect. Most

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[932] *Hemphill/Kahan*, Yale Law Journal 2020, 1392, 1451.
[933] *Hemphill/Kahan*, Yale Law Journal 2020, 1392, 1451 f.
[934] See Chapter 3.A.II.2.c).
[935] *Elhauge*, Harvard Law Review 2016, 1267, 1301.
[936] *Antón/Ederer/Giné/Schmalz*, Innovation: The Bright Side of Common Ownership?, May 2021, p. 30, available at: https://ssrn.com/abstract=3099578.

importantly, not all oligopolistic markets are similarly affected by common ownership. Thus, a broad cap on horizontal shareholdings would be inefficient given the costs of the proposal. As the likelihood of anti-competitive effects is not sufficiently clear, a per-se rule limiting the overall shareholdings is not justified.[937] The necessary costs and restructuring of the investment industry may be justified in some circumstances. One important cost is the potential loss of economies of scale.

In conclusion, the harms arising from the current level of common ownership must be accepted, until it is clear that they are large and that it is possible to reduce them without creating major inefficiencies in other areas. The concrete advantages of the proposal are uncertain, and the regulatory proposal is very broad. The harms that would result from a broad reform are obvious, although they may not be as large and as severe for individual investors as is sometimes claimed. Therefore, the benefits of an intervention are uncertain, while the harms are relatively clear.

Furthermore, it is possible that firms will not choose to restructure their portfolios but will opt for the "purely passive exemption".[938]

b) Safe Harbour

Another regulatory proposal is not a direct regulation to control common ownership, but aims to protect institutional investors and their corporate governance activities, as their involvement in corporate governance has been viewed as positive. The proposal is to create a safe harbour for shareholdings below 15% if investors do not go beyond "normal corporate governance activities".[939] The goal is to create legal certainty for institutional investors and ensure that they can maintain their corporate governance activities.[940] The authors argue that there is no antitrust risk at these shareholding levels because the influence that investors can exercise is too small to affect competition.[941]

There are several reasons not to create such a safe harbour. The proposal appears to over-protect common ownership up to a level where there is a clear potential for competitive harm. Even if a 15% shareholding does not lead to control of an undertaking, it can still lead to considerable influence. There is no evidence that all shareholdings below 15% have no or negligible effects. On the contrary, both empirical and theoretical findings suggest that even

[937] *O'Brien/Waehrer*, Antitrust Law Journal 2017, 729, 768.
[938] See below Chapter 3.B.III.2.a)(1).
[939] *Rock/Rubinfeld*, Antitrust Law Journal 2018, 221, 271.
[940] *Rock/Rubinfeld*, Antitrust Law Journal 2018, 221, 271.
[941] *Rock/Rubinfeld*, Antitrust Law Journal 2018, 221, 270.

relatively small shareholdings can be harmful.[942] A key argument is that shareholders below 15% cannot exert sufficient influence and cannot appoint individuals to the board.[943] However, this does not preclude the firm from giving some weight to the interests of that investor, especially if that investor is the largest or one of the largest shareholders.[944] The safe harbour would therefore only take account of shareholders with a certain degree of direct control and does not consider that investors can influence a firm indirectly. For example, German merger control opposes this view because a "material competitive influence" must be notified even if the shareholding is less than 25%, and there have been cases where a shareholding of less than 15% has conferred a "material competitive influence".[945]

Furthermore, the overly broad scope of the 15% safe harbour becomes even more apparent when there are multiple common shareholders. Under the proposed safe harbour, two or more common investors could hold a stake of just under 15%.[946] This group of investors could then have significant influence over a company. Under the proposed safe harbour rule, there could theoretically be a large common ownership base which, without individually controlling the firms, creates a large potential for competitive harm. For example, three perfectly diversified investors could each hold 10%. This would amount to a 30% block of common owners. This concern is supported by the fact that, in many cases, several common owners hold similarly sized shareholdings. An antitrust risk cannot be excluded a priori. Accordingly, the proposed safe harbour of 15% per company does not adequately filter out non-harmful levels of shareholdings.

2. Corporate Governance

a) Limiting Engagement

(1) Passivity Under the *Posner et al.* Proposal

Under the *Posner et al.* proposal, instead of limiting their common shareholdings, free-standing index funds could hold unlimited shares in all companies, provided they are purely passive, i.e. they do not communicate with top managers or directors, and they vote their shares in proportion to existing votes, so that they have no influence on corporate governance

[942] See for example *Azar/Schmalz/Tecu,* Journal of Finance 2018, 1513, where institutional investors each held less than 10% of the shares.
[943] *Rock/Rubinfeld*, Antitrust Law Journal 2018, 221, 270.
[944] *Posner/Scott Morton/Weyl*, Antitrust Law Journal 2017, 669, 685.
[945] *Oberlandesgericht Düsseldorf*, Judgment of 12.11.2008, Case VI- Kart 5/08 (V) – *A-TEC*.
[946] *OECD*, Common Ownership by Institutional Investors and its Impact on Competition – Background Note by the Secretariat, 2017, para. 110.

decisions.[947] This would remove the ability of common owners to actively influence firm strategy.[948]

Nonetheless, it needs to be discussed whether the pure passivity can effectively reduce anti-competitive effects. If the problem is specifically the passivity and the non-incentivising to compete, this option may have little effect. If reduced pressure to compete is the main cause of anti-competitive effects, reducing interaction between shareholders and management may not be a solution and would not significantly change the effects of common ownership. If the shareholder structure alone is sufficient to cause anti-competitive effects regardless of the passivity or engagement of the common owners, the approach of limiting the influence of common owners would not have the desired effect. The "purely passive exemption" is based on the assumption that common ownership can only cause anti-competitive effects if the owners have influence. This idea is also central to the *O'Brien/Salop* model. The question remains whether firms behave in the interests of their shareholders irrespective of the control that the owners have over their portfolio firms. One reason why managers may have little reason to consider the interests of their passive shareholders is that they cannot sell their shares and exit. Therefore, they could not influence the firm either directly or by threatening to exit. Accordingly, the incentives for firms to act in the interests of these shareholders and the anti-competitive risks are also very low. The remaining possible harm would be the passivity of not encouraging competitive action, which is still a relevant concern.[949] In summary, while pure passivity can address most of the potential causal mechanisms – including most passive mechanisms – a failure to induce aggressive competition can still lead to anti-competitive effects. It may not be as effective as a direct reduction of common shareholdings.

One possible outcome of the *Posner et al.* proposal is that institutional investors will not reduce their common shareholdings, but will refrain from engagement and will hold their portfolios completely passive.[950] This option would only exist for index funds that do not make active investment decisions. Large institutional investors with both active and passive funds would have to separate them. Whether investors would refrain from engaging and remain passive depends on their incentive to influence corporate behaviour versus the cost of rebalancing the portfolio. *Posner et al.* consider it likely that firms have a strong "*desire to engage in corporate governance*"[951]. Others argue that even the talk of regulating engagement or being exposed to antitrust liability could discourage investors from exercising their role as active shareholders.[952]

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[947] *Posner/Scott Morton/Weyl*, Antitrust Law Journal 2017, 669, 708.
[948] *Wambach/Weche*, Wirtschaftsdienst 2019, 575, 581.
[949] See Chapter 2.C.III.2.b).
[950] *Rock/Rubinfeld*, Antitrust Law Journal 2018, 221, 266.
[951] *Posner/Scott Morton/Weyl*, Antitrust Law Journal 2017, 669, 772.
[952] *Hemphill/Kahan*, Yale Law Journal 2020, 1392, 1397.

If investors were to stop engaging in corporate governance, this would create inefficiencies for firms that would not be seen if firms concentrated their shareholdings.[953]

Posner et al. give three reasons why they see think it is unlikely that most funds will switch to being fully passive: *First*, funds with active strategies would not be able to comply with the "fully passive"-option. This strategy could only be used by passive funds. *Second,* most fund families offer both active and passive funds. In these structures, all funds would have to be fully passive. *Third*, the funds would not have a strong interest in strict indexing and would prefer to engage in corporate governance.[954] While the first two reasons are understandable in the context of their regulatory approach, the last argument is unconvincing. Under the *Posner et al.* proposal only a "free-standing index fund"[955] would be able to opt for the exemption and choose to be fully passive. Since the most influential passive funds are part of larger groups that also offer active funds, only small and individual index funds could choose to be passive. Only a very limited number of funds could take advantage of the possible exemption. Another possibility is that large fund families will split their business into two separate entities. While most fund families today offer both active and passive funds, these could be split into one fund group that manages only passive funds and remains fully passive – both in terms of stock picking and corporate governance. The other branch would manage active funds, which would have no problem holding undiversified portfolios.

Firms may prefer to end their engagement activities.[956] This would not involve additional costs. Instead, it would reduce costs for institutional investors. Without making specific calculations about the costs of corporate governance, it seems more costly to constantly rebalance and monitor the portfolio of all funds compared to the benefits of engaging in corporate governance. In particular, the costs of managing index funds are relatively low because the management process is mechanical and does not require any active investment decisions.[957]

While the passivity of institutional investors may have a positive impact on competition, it may also have an impact on corporate governance. It is unclear whether the influence of passive investors is positive for corporate governance.[958] While there are differing views on the influence of passive investors, the engagement of shareholders with a long-term investment horizon is seen as beneficial for corporate governance.[959] Taking away their voting power

[953] *Elhauge*, Harvard Law Review 2016, 1267, 1315.
[954] *Posner/Scott Morton/Weyl*, Antitrust Law Journal 2017, 669, 772.
[955] *Posner/Scott Morton/Weyl*, Antitrust Law Journal 2017, 669, 708.
[956] *Hemphill/Kahan*, Yale Law Journal 2020, 1392, 1401.
[957] *Bebchuk/Hirst*, Boston University Law Review 2019, 721, 727.
[958] See *Griffin*, Maryland Law Review 2020, 954, 972 f. for a review of the empirical literature.
[959] *Lambert/Sykuta*, CPI Antitrust Chronicle, May 2019, 49, 54.

would give activist investors with potentially short-term interests more influence.[960] Yet, short-term oriented investors are generally considered to be less interested in long-term economic growth.[961]

Given the two opposing potential consequences for competition and corporate governance, an optimal solution will lead to large, concentrated, and long-term shareholders with the ability and the incentive to influence corporate governance in a positive way. If the proposal leads to this shift towards less industry-diversified portfolios, this would have a positive effect on corporate governance, as each shareholder would have a strong interest in the performance of individual companies. However, it is unclear whether this will be the outcome of the proposed rules. If it is preferable for common owners to remain passive, the proposal could have a negative impact on corporate governance. Given the uncertainty about both the magnitude of common ownership effects and the consequences for corporate governance of firms, it is not possible to answer whether the proposed regulation is a proportionate and efficient means of addressing the anti-competitive effects of common ownership.

In conclusion, greater investor passivity is indeed a likely outcome of the implementation of the proposed rules. Most funds may try to comply with the pure passivity clause rather than restructure their portfolios. The effectiveness of this approach is questionable, as a passive mechanism of a failure to induce competition is also a potential causal mechanism. Furthermore, it would not have immediate positive consequences for the corporate governance of firms.

(2) Limiting Engagement in General

Another option to reduce the anti-competitive effects of common ownership could be to limit the engagement of common owners, irrespective of the size of their shareholdings. This could either require pure passivity, as discussed above, or it could focus only on specific corporate governance channels, for example by establishing Chinese walls – common owners would not be able to communicate and exchange information with their portfolio firms.[962]

If firms were prohibited from voting and engaging with companies, their influence would be reduced and management may be less likely to take their interests into account, which could reduce the effects of the common ownership links. However, if engagement is not a necessary element for negative effects, this regulation does not efficiently address the problem. In practice, and from an efficiency perspective, it may be easier to prohibit firms from engaging

[960] *Griffin*, Maryland Law Review 2020, 954, 981.
[961] *Griffin*, Maryland Law Review 2020, 954, 982.
[962] *Hellenic Competition Commission*, Press Release – Market Investigation in the Construction Sector, 12.8.2022, available at: https://www.epant.gr/en/enimerosi/press-releases/item/2301-press-release-market-investigation-in-the-construction-sector.html.

and voting than to set limits on common shareholdings and force them to divest. Instead of forcing institutional investors to restructure their portfolios, an obligation to be fully passive would not result in any direct additional costs for investors. Nor would it require competition authorities to monitor common ownership levels and define industries. While restricting corporate governance activities is likely to be efficient, one of the main harms of this approach could be the poor corporate governance of firms already described above, since the engagement of long-term shareholders can be positive for corporate governance.[963] This creates a policy dilemma that is not easy to resolve.

Completely prohibiting common owners from governance activities, the "pure passivity" discussed above, would be very restrictive. Regulating specific channels of engagement, such as voting or direct communication, would not be as broad. However, it is unclear whether such a more targeted approach would be as effective. The main problem is that it is not yet known which channel – if any – is causing anti-competitive effects.[964] It is likely to be inefficient to regulate a specific channel, because there is probably no single channel to influence portfolio companies. And even if there were a specific channel, it is not currently known.

If common ownership can still have anti-competitive effects even in the case of passive owners, the only way to address the problem would be to regulate shareholdings. Accordingly, limiting engagement appears too restrictive, as both its positive and negative effects have to be weighed. As the extent of the anti-competitive effects of common ownership is not sufficiently clear, the potential negative impact on corporate governance is not clearly outweighed.

b) Transferring Influence to Individual Shareholders

One option that has not been proposed to address the harms of common ownership is to transfer the shareholder rights from the institutional investors as intermediaries to the individual investors who are the economic owners of the shares. *Rock/Rubinfeld* mention this option in passing, without examining it in detail.[965]

Institutional investors acknowledge that they are only intermediaries and not the economic owners of the shares.[966] In the context of common ownership, this transfer of power would remove the influence of the common owner– a result very similar to investor passivity. The problem of using active mechanisms would be reduced, since each individual investor is unlikely to have the power to induce firms to act uncompetitively. Instead of completely eliminating the voting of large institutional investors and thus potentially empowering

[963] *Lambert/Sykuta*, CPI Antitrust Chronicle, May 2019, 49, 54.
[964] See Chapter 2.C.III. for a discussion of possible causal mechanisms.
[965] *Rock/Rubinfeld*, Antitrust Law Journal 2018, 221, 265.
[966] See, for example, *BlackRock,* Viewpoint "Index Investing and Common Ownership Theories", March 2017, distinguishing between asset managers and asset owners.

shareholders with a short-term investment horizon, the voting power would only be transferred to the individual investors. This could mitigate some of the negative effects on corporate governance of firms.

There are various ways in which the interests of individual shareholders could be represented in the voting process.[967] The general problem persists that there is rational ignorance on the part of individual investors who have little to gain from their individual engagement.[968] For this reason, intermediating mechanisms have been proposed that would make it easier to identify and channel the interests of individual shareholders. For example, shareholders could choose proxy advisors or other agents to represent their interests, or they could give general voting instructions.[969]

The potential anti-competitive effects of common ownership are an additional reason to consider giving individual investors more rights to influence firms. As both the details of this proposal and its implications are unclear, this approach needs to be part of a wider debate.

c) Preliminary Results

Corporate governance is one channel that could mitigate the potential of anti-competitive effects of common ownership. Still, the efficacy of limiting engagement and voting of common owners is unclear, given that negative consequences for competition could also arise from the fact that firms are not forced to compete. Completely restricting the engagement of common owners is a very broad approach and, as it could have a negative impact on corporate governance, creates a policy dilemma. Since both the extent of the anti-competitive effects and the potential impact on corporate governance are unclear, these opposing effects are not easy to resolve.

Another approach, besides directly restricting corporate governance channels, could be to transfer shareholder rights from institutional investors to the individual investors. This transfer would reduce the influence of common owners, as individual investors would have neither as much power to actively influence firms nor as much passive weight to indirectly affect management decisions. This is an approach that could address the causal mechanisms underlying the anti-competitive effects and should be discussed in a wider debate.

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[967] *Griffin*, Maryland Law Review 2020, 954, 990 ff.; *Hart/Zingales*, The New Corporate Governance, NBER Working Paper Series, Working Paper 29975, April 2022, pp. 20 f.

[968] The same was true of passive investors when they were still very small and only held few shares in any particular firm; see *Coates*, The Future of Corporate Governance – Part I: The Problem of Twelve, Harvard Public Law Working Paper No. 19-07, September 2018, p. 10.

[969] *Hart/Zingales*, The New Corporate Governance, NBER Working Paper Series, Working Paper 29975, April 2022, pp. 20 f.; *Griffin*, Maryland Law Review 2020, 954, 991 ff.

3. Transparency Obligations

a) Common Ownership Levels

As an additional measure, transparency obligations could improve the understanding of common ownership. This transparency could focus on the level of common ownership, i.e. the number and extent of common shareholdings, which would contribute to a better understanding of the overall extent of common ownership.[970] It may also make it easier for researchers to collect data to study the effects of common ownership in specific markets. While the extent of common ownership can be estimated in general terms with existing data sources, more ownership data on specific industries would improve the understanding of common ownership concentration in more detail. Nonetheless, this can only be a secondary measure that does not directly address the potential effects of common ownership.

b) Corporate Governance Activities

While information on common ownership levels would be of general value, it would not lead to a better understanding of the effects of common ownership. In contrast, knowledge of specific topics of communication and voting behaviour would potentially provide insights into the mechanisms that may lead to anti-competitive effects. Therefore, another area of transparency could be the communication between common owners and portfolio firms. Information on the voting behaviour of common owners would also improve the understanding of the causal mechanisms.[971] As the causal mechanisms are still an under-researched area, this will be an effective way to gain a better understanding of the mechanisms underlying the anti-competitive effects of common ownership and to guide future regulatory measures, which could potentially focus more on specific channels. It may also lead to the conclusion that the communication between common owners and their portfolio firms is not problematic from a competition perspective, which would also be a valuable outcome.

Besides providing additional insights into causal mechanisms, the disclosure of competitively sensitive communications could also have a direct positive effect on competition, since common owners will be discouraged from making anti-competitive proposals.[972]

Accordingly, creating transparency about both the voting behaviour of common owners and their communication with portfolio firms is an efficient way to improve the understanding of common ownership and potentially reduce its impact. It is an advisable measure alongside more direct approaches because it is less intrusive than other proposals that directly target corporate governance channels and should be used as a complementary measure.

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[970] *Schwalbe*, Journal of European Competition Law & Practice 2018, 596, 603.
[971] *Seitz*, Common Ownership im Wettbewerbsrecht, 2020, p. 219.
[972] *Rock/Rubinfeld*, Antitrust Law Journal 2020, 201, 229.

4. Summary of Proposals

Several options for reducing anti-competitive effects of common ownership through regulation outside of competition law were discussed. It was shown that limiting horizontal shareholdings is not currently justified. While it is likely that reducing common ownership concentration will have positive effects on competition, there are still some reasons why limiting diversification is not advisable. A hard cap on shareholdings is overly broad. As some markets may be more affected by common ownership than others, it is a very broad approach to cover all oligopolistic markets. A general cap does not efficiently address harmful common ownership structures, as markets with similar levels of common ownership may be affected in very different ways. Moreover, a limit on common shareholdings may have a negative impact on corporate governance of firms and is likely to increase the cost of passive investment. In addition, the benefits of this approach are uncertain as the extent of competitive harm is difficult to quantify.

Overall, the magnitude of both the positive effects on competition and the negative effects on corporate governance and investment are not sufficiently clear. Therefore, it is not possible to weigh these effects and to come to a clear conclusion that reducing horizontal shareholdings will have a net positive effect. Directly challenging high levels of common ownership is not a convincing solution to the common ownership problem.

Restricting corporate governance channels is a more promising option to reduce the potential anti-competitive effects of common ownership. Restricting the ability of common owners to vote and to communicate with their portfolio firms is a potentially effective method. It should be noted that it is conceivable that anti-competitive effects result from a passive mechanism, i.e. firms are not actively induced to compete under higher levels of common ownership. If this is indeed the dominant mechanism, restricting corporate governance channels will have little effect. Furthermore, it is not advisable to focus on specific corporate governance mechanisms, as it is not clear whether the correct mechanism can be targeted. However, as restricting corporate governance channels may also have negative consequences for the governance of firms, it is unclear whether it will have an overall positive effect when weighing its potential positive and negative effects.

Another way to reduce the power of common owners is to give the shareholder rights to the individual investors, particularly voting rights. This is a sensible approach. It would reduce the influence of large common owners and would effectively act as a direct constraint on their ability to engage with and influence their portfolio firms. Nonetheless, this approach needs to be part of a wider debate because it needs to be properly implemented with mechanisms that make it easy for individual investors to communicate their preferences and to exert influence. The common ownership problem provides a strong argument in favour of this approach.

As a complementary measure, transparency obligations can help to generate insights on both the extent of common ownership in specific markets and about the potential causal mechanisms. More knowledge on the latter is especially important as the main shortcoming in the common ownership literature is not so much the identification of common ownership as such, but rather the understanding of the causal mechanisms leading to anti-competitive effects. Therefore, transparency obligations should focus on voting behaviour and communication between common owners and firms. In general, transparency obligations are also less restrictive than the other options discussed. Accordingly, they are a reasonable approach to support the analysis of common ownership.

C. Conclusion – Legal Analysis

In Chapter A.I., it was discussed whether antitrust law can be applied either to the acquisition of shares by common owners or to specific conduct of investors or their portfolio firms. While Articles 101 and 102 TFEU can theoretically capture the acquisition of minority shareholdings, their application would create a lot of legal uncertainty since their potential scope is unclear. It would also not be a practical approach since share acquisitions would be invalid and would have to be divested *ex-post*. In contrast, Article 101 TFEU can be applied to specific conduct of firms, such as explicit coordination or the exchange of sensitive information. Article 102 TFEU can potentially be applied if commonly owned firms charge excessive prices, although finding such an infringement is difficult to prove in practice. As antitrust law would only be applicable in certain cases and would lead to incoherent enforcement, it was shown that merger control is generally better suited to address the potential anti-competitive effects of common ownership.

In Chapters A.II.2. and A.II.3., it was examined whether common ownership links can be assessed in a regular merger case and in particular in a merger between common owners. It was shown that the effects of common ownership links can be included in the substantive assessment either as unilateral or as coordinated effects. On the one hand, common ownership can itself give rise to unilateral effects. However, these unilateral effects may be difficult to prove in a merger case as their economic basis is not yet well established. Still, common ownership links can be an „element of context“ when assessing the unilateral effects of a merger and can also be relevant in the scenario where an aggressive competitor, a maverick, is eliminated after the merger. On the other hand, common ownership can also contribute to a coordinated effects analysis, as it can affect some of the criteria for coordinated effects.

As shown in A.II.4., the current merger control regime is not sufficient to capture acquisitions of shares by common owners. The threshold of “control” in Article 3 EUMR does not capture the acquisitions of minority shareholdings by common owners. Given the current level of horizontal shareholding, these will also not lead to a “material competitive influence” within the meaning of § 37(1) No. 4 GWB.

Based on this analysis, potential solutions to limit the anti-competitive effects of common ownership were addressed in Chapter B.

As regards solutions in competition law, in Chapter B.II. it was shown that Articles 101 and 102 TFEU can be applied to specific conduct, but that this is a not an advisable option as a general measure to address the problems raised by common ownership. Rather, the anti-

competitive effects of common ownership should be integrated into the substantive assessment of mergers. As common ownership can give rise to both unilateral and coordinated effects, these can be assessed in a regular merger scenario. The MHHI can be used as guidance and could be included in the Horizontal Merger Guidelines. Nonetheless, strict MHHI thresholds should not be set.

In contrast, it is not currently justified to extend the merger control thresholds. A threshold similar to the German "material competitive influence" would not cover a relevant number of cases and would not be effective. In contrast, a system of ex-post evaluation of minority shareholdings without formal notification thresholds is the only effective way to directly address common ownership links. However, this would lead to a significant change in the merger control system. Therefore, it should be further discussed whether this is necessary and proportionate given the potential harms of both common ownership and also direct minority shareholdings. At this stage, the potential harm of common ownership alone is not a sufficient reason to change the merger control system.

Regarding regulatory options outside competition law, the analysis in Chapter B.III. concluded that a limit on common ownership levels is not currently justified because the potential negative and positive consequences of this approach are not sufficiently clear. While it may reduce the likelihood of anti-competitive effects, it may also lead to poorer corporate governance of firms and higher costs for passive investment strategies. As it is not known to what extent a limit on horizontal shareholdings will have these effects, it cannot be recommended with certainty.

Restrictions on certain corporate governance channels will similarly have these opposite effects, although they would not increase the cost of investment. Therefore, the potential consequences are also not sufficiently certain. In addition, the effectiveness of this measure is unclear, as anti-competitive effects may be caused by the fact that common owners do not actively encourage competition. Restricting corporate governance channels would not eliminate this passive mechanism.

A more indirect but potentially effective measure would be to transfer shareholder power to the individual investors. This would reduce the power of today's large common owners, most of whom are institutional investors. Since this would substantially change today's system of financial intermediaries, it should be part of a wider debate that also needs to find practical solutions to encourage individual investors to get involved in corporate governance.

Additionally, transparency obligations on the level of common ownership links and the communication between common owners and portfolio firms could contribute to a better understanding of the common ownership issue, both in terms of its extent and the potential

causal mechanisms. While more knowledge about the extent of common shareholdings is of general value, insights into the potential mechanisms are more important, given the lack of understanding about the causal mechanisms. Transparency on the voting behaviour of common owners and their communication with portfolio firms can help to fill this gap.

Part 4 – Conclusion

The key questions this thesis sought to answer were (i) how common ownership can and should be regulated under current European and German competition law, and (ii) whether additional regulation is recommended.

To this end, it was first necessary to analyse and discuss the underlying phenomenon from an economic perspective in order to provide a basis for the subsequent legal analysis. Economic research is essential as a guide to the application of the law.

In the first part, Chapter 2.A.III., the current level of common ownership was illustrated. It was shown that common ownership concentration has increased significantly since 2008 and was already on the rise before then. The prevalence of high levels of common ownership varies across regions and markets. While in the U.S. common ownership is an almost ubiquitous phenomenon, in Europe it is less pronounced and limited to certain industries. However, common ownership concentration is likely to increase in the future. All in all, this leads to a large anti-competitive potential.

In Chapter 2.B.I., several measures of common ownership were presented. Most notably, it was found that the modified Herfindahl-Hirschman Index (MHHI) can be used to measure common ownership and can have a meaningful interpretation for the likelihood of anti-competitive effects. However, like the underlying Herfindahl-Hirschman Index, it may only be an indicator of anti-competitive effects and does not measure them directly. Price pressure indices, such as the Upward Pricing Pressure (UPP), can also be applied to common ownership and can more directly measure competitive effects. In addition, metrics such as profit weights and the interconnectedness between firms can be used to measure the degree of common ownership between two firms.

Empirical studies that have examined the various effects of common ownership were reviewed and discussed in Chapter 2.B.II. An analysis of these empirical studies is necessary in order to assess whether theoretically plausible anti-competitive effects can also be detected in actual market outcomes. The first empirical studies, the Airline and the Banking Study, used versions of the MHHI and found an effect of common ownership levels on prices. While some empirical studies have questioned these results, several other empirical studies have found results that support the identification of anti-competitive effects. Accordingly, there is evidence that common ownership has anti-competitive effects. This finding is supported by the fact that there are numerous studies that show that common ownership affects firm behaviour in various ways, e.g., concerning innovation and the likelihood of mergers. Therefore, it is reasonable to conclude that it may also affect competition. Nonetheless, the review of the empirical studies

also highlighted that more research is still needed, particularly in the following three areas. *First*, it is important to have a better understanding of the magnitude of common ownership effects in order to more accurately identify the levels of common ownership that are potentially harmful. *Second*, it would also be valuable to gain more knowledge about the market characteristics under which anti-competitive effects are most likely to occur. *Third*, more research on the causal mechanisms leading to effects of common ownership would be useful in order to allow for a more targeted regulatory approach.

Still, the call for more empirical evidence on anti-competitive effects must also recognise its limitations. *First*, it is not always feasible to test for anti-competitive effects as the necessary data may not be available. *Second*, it is not possible to arrive at a point where there is "definitive proof" as empirical research can only infer causation, not prove it.

In Chapter 2.C., the causal mechanisms that could link common ownership with anti-competitive effects were presented and discussed. This is an important step, as it improves the knowledge of the practical implications of common ownership and potentially contributes to efficient regulation.

It was found in Chapter 2.C.II. that common owners favour less competition between their portfolio firms. This is true for both direct owners and for institutional investors as intermediaries, although the latter benefit less from reduced competition.

Having established a general interest of common owners in reduced competition, the possible mechanisms leading from common ownership to anti-competitive effects were assessed in Chapter 2.C.III. Common owners could either use active mechanisms, or firms could passively compete less. Voicing their interests is the main way in which investors can influence their portfolio firms. Voting and threatening to exit and sell their shares is mainly a secondary measure that supports shareholder power. In contrast to these active mechanisms, commonly owned firms may also passively compete less. There are two possible passive channels: Either firms are not actively pushed to compete with more common ownership, or commonly owned firms actively recognise the anti-competitive incentives of their owners and act accordingly. Both can explain anti-competitive effects. Finally, the likelihood of each mechanism was evaluated, and both were compared. This analysis of the literature and the mechanisms concluded that active mechanisms are certainly possible. However, it is not clear whether these active channels of influence are regularly used in practice. Besides active mechanisms, a passive mechanism is also possible and may be the simplest explanation for anti-competitive effects. The plausibility of a passive mechanism also illustrates that common ownership can be regarded as a structural problem for competition, as anti-competitive effects can occur even in the absence of any direct conduct of common owners with respect to their portfolio firms.

Still, uncertainty remains about the causal mechanisms. It cannot be said that either an active or a passive mechanism is more likely than the other. It is also possible that both mechanisms operate simultaneously. Therefore, this is an area of research that should be further explored, as the understanding of the causal mechanisms is crucial for the application of the law and, ultimately, for the development of regulations that can effectively address the problem. In particular, more research on the use of active mechanisms would help to identify approaches that do not unduly restrict specific corporate governance channels.

In Part 3, it was discussed how common ownership could be treated under competition law and whether additional regulation is necessary. Therefore, the application of existing competition law to common ownership was examined (A.), as well as possible legal solutions to the issue of common ownership (B.).

In Chapter 3.A.I., the application of antitrust law was considered. It was shown that both Articles 101 and 102 TFEU could theoretically be applied to acquisitions of shares by common owners. Nonetheless, the scope of these provisions is very unclear, and this would lead to serious legal uncertainty. In addition, as Articles 101 and 102 TFEU would render such acquisitions invalid and could only be applied *ex-post,* this would not be a practical option to control the acquisition of common shareholdings. However, it was shown that certain conduct of common owners or commonly owned firms could constitute a violation of Articles 101 and 102 TFEU, in contrast to the direct acquisition of shares. Still, the application of Article 102 TFEU would also raise practical problems. A finding of excessive pricing under Article 102 lit. a) TFEU is practically difficult and, thus, a rather theoretical option. Most importantly, competitors could coordinate or exchange information through a common owner and such conduct could infringe Article 101 TFEU. All in all, it was demonstrated that antitrust law can only be applied in very limited circumstances and that its application would lead to inconsistent enforcement and serious legal uncertainty. Therefore, merger control can generally better address the potential anti-competitive effects of common ownership.

Several scenarios in which merger control could be applied were presented in Chapter 3.A.II.: a regular merger, a merger between common owners and the acquisition of shares by one or multiple common owners. In Chapter 3.A.II.2., it was shown that common ownership can be part of the substantive assessment in regular merger cases. Common ownership can be a relevant factor for both unilateral and coordinated effects. In the assessment of unilateral effects, it may be primarily an element of the market structure and may also influence the assessment of whether a competitor is particularly aggressive, i.e., a maverick. Common ownership can also affect some of the criteria for coordinated effects. It has been shown in Chapter 3.A.II.3. that common ownership can also be a relevant factor in the assessment of a

merger between common owners. As a merger between common owners may lead to an increase in common ownership in many markets, these effects should be part of the substantive assessment of the merger. Chapter 3.A.II.4. discussed whether the acquisition of shares can be a notifiable concentration under either European or German merger control. It was found that common ownership links do not lead to a notifiable concentration at the current level of common ownership. Acquisitions of shares by common owners will likely neither lead to sole nor joint control of the common owners. While German law has a wider range of notifiable concentrations, it is also unlikely that its thresholds will be reached.

In Chapter 3.B.I., possible competition law solutions that could mitigate the competitive effects of common ownership were discussed. It was reiterated that the application of Articles 101 and 102 TFEU does not provide a good solution to the problem of common ownership. In contrast, merger control is better suited to assess the effects of common ownership. Most importantly, it was shown that common ownership can be an element of the substantive assessment in merger cases. This should be the primary way in which common ownership should be assessed. Additionally, it is recommended that the MHHI should be included in the Horizontal Merger Guidelines and provide guidance for the assessment. However, rigid MHHI thresholds should not be set. In contrast, the analysis has demonstrated that an extension of the current merger control thresholds is not justified at this stage. It is likely that a notification threshold similar to “material competitive influence” in German law would not cover a relevant number of cases and would thus be ineffective. A very different approach would be a more rigorous change of the merger control system to a system of ex-post evaluation. This would allow for the assessment of acquisitions of common shareholdings. Under such a system, competition agencies would be free to review share acquisitions and would have the power to order divestitures. However, this would amount to a major systemic change in merger control. Given that the magnitude of anti-competitive effects is still unclear, this change is not warranted at this stage. It should be part of a broader discussion that also covers direct minority shareholdings.

Additional regulation that could cover common ownership was assessed in Chapter 3.B.II. As a first and most direct option, the level of horizontal shareholdings could be limited. It has been established that while this approach would probably be effective, it is not currently justified. It is not possible to quantify the potential magnitude of the reduction in anti-competitive effects compared to higher costs for passive investment strategies and potentially worse corporate governance. As it is unclear which of these effects outweighs the other, a limit on horizontal shareholdings is not yet recommended.

Similarly, restricting certain channels of corporate governance would also have these opposite effects. As the consequences are not well known, these measures cannot be recommended. In addition, it is uncertain whether this approach would have the intended pro-competitive effect. Since anti-competitive effects could also be caused by the passivity of common owners, restricting corporate governance channels would have no effect on this potential mechanism.

Moreover, a new and potentially effective way of reducing the shareholder power and passive influence of large common owners was presented: shareholder rights could be transferred to individual investors. As this would be a major change for institutional investors and corporate governance in general, it should be part of a wider debate that also seeks practical solutions to encourage individual investors to become involved in corporate governance.

In addition, transparency obligations covering the voting behaviour of common owners and their communication with portfolio firms are an additional option to deepen the understanding of common ownership and potentially reduce its impact. Insights into firms' communications would improve the understanding of potential causal mechanisms and reduce the likelihood of problematic communications by common owners with their portfolio firms. Transparency is also less restrictive than direct limits on horizontal shareholdings or corporate governance channels. Furthermore, transparency requirements generate more data that could be used for empirical research. This is particularly important in order to gain further insights into the potential mechanisms at work. Knowledge of the communications between common owners and their portfolio firms would help to provide a better picture of these contacts and whether they are problematic. Furthermore, collecting data on shareholdings and making it available to researchers would allow for more research on common ownership in different markets.

To summarise the recommendations, general changes to competition law do not seem necessary at this stage. Instead, the anti-competitive potential of common ownership should be taken into account in the analysis of mergers and, if necessary, in antitrust cases focusing on specific conduct. Regulatory solutions outside competition law are also not recommended. One solution that would indirectly address the issue and should be considered, is to give shareholder rights to individual investors, thereby reducing both the power to use active mechanisms and the passive impact of large institutional investors.

While the proposed approach of increased enforcement of merger control appears appropriate at present, it may be necessary to review this strategy in the future. Three future developments may necessitate a change in this assessment towards a more comprehensive regulation of common ownership.

First, future empirical evidence may show that there are significant anti-competitive effects of common ownership in many markets. This would provide a strong basis for a more general regulatory approach, as the harm would be clear and identifiable. It would therefore be justified to adopt a broad regulatory approach. Research may also show that a passive assessment of common ownership under current law is not sufficient to address its anti-competitive effects. This would justify extending the scope of merger control to limit further increases in common ownership.

Second, a more detailed knowledge of the causal mechanisms may allow for a more targeted approach. For example, certain corporate governance channels could be regulated, or if anti-competitive effects are caused by investor passivity, it may be found that only reducing common ownership concentration as such can mitigate anti-competitive effects.

Third, the level of common ownership may continue to increase further and may require a reassessment of the situation. While some current levels of common ownership may not yet appear to be problematic, this is likely to change as horizontal shareholdings between competitors in product markets increase. At higher levels of common ownership, the application of existing competition law may no longer be effective and a more interventionist approach may become necessary. Therefore, competition authorities should monitor changes in common ownership on an ongoing basis. Transparency obligations are a useful tool to ensure that this continuous monitoring is possible.

Although it remains to be seen whether any of these scenarios will materialise, common ownership will remain a subject of constant research. New insights are likely to emerge in the future. As the level of common ownership will probably continue to increase, the issue will need to be monitored and discussed on an ongoing basis.

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