



*“Analysts are supposed to be a check on the financial system—people who can wade through a company's financials and tell investors what's really going on. (...) Unfortunately, some are little more than cheerleaders—afraid of rocking the boat at their firms, afraid of alienating the companies they cover and drawing the wrath of their superiors.”<sup>1</sup>*

## **1. Introduction**

### **1.1 Context of the dissertation**

This quotation by the well-known financial analyst Mike Mayo summarises some of the main points of the criticism about sell-side equity analysts which has been discussed in literature since the 1990s (see, e.g., Demski 2003; Mehran and Stulz 2007; Ramnath et al. 2008; Bradshaw 2011, for overviews).<sup>2</sup> Sell-side equity research is conducted by financial analysts employed by brokerage houses and investment banks and is provided for customers of these financial institutions (Michaely and Womack 1999, pp. 657-659; Groysberg and Healy 2013, pp. ix, 47-58). By mitigating information asymmetries and by providing insight for their customers, who can be institutional and retail investors, sell-side analysts act as information intermediaries and also support the companies they cover by increasing the investor recognition of the covered stocks (Healy and Palepu 2001, p. 408; Groysberg et al. 2008, p. 26; Bowen et al. 2008; Groysberg and Healy 2013, pp. ix, 20f.; Li and You 2015). Typically, sell-side analysts compile, besides textual analysis in their written research reports, three different common quantitative measures: earnings forecasts, target prices and stock recommendations (Brav and Lehavy 2003, p. 1933; Asquith et al. 2005, p. 255; Demirakos et al. 2010, p. 37; Bradshaw et al. 2013, p. 931). However, prior research has provided evidence that these

---

<sup>1</sup> Mayo (2011).

<sup>2</sup> Mike Mayo is the author of the book *“Exile on Wall Street: One Analyst's Fight to Save the Big Banks from Themselves”* published in 2011.



measures can be optimistically biased by conflicts of interest (e.g., Demski 2003; Mehran and Stulz 2007; Ramnath et al. 2008; Bradshaw 2011, for overviews).<sup>3</sup>

Conflicts of interest caused by economic incentives for the financial analysts can reduce their effectiveness as information intermediaries and thus can cause the persistence of information asymmetries (Healy and Palepu 2001, p. 409, 433; Ramnath et al. 2008, p. 57). Two categories of conflicts of interest especially are closely related to the business models of investment banks and brokerage houses, which typically use the income generated in the investment banking departments and trade commissions to fund their sell-side financial analysts, since many customers do not compensate sell-side research departments directly for the provision of their reports (Cowen et al. 2006, pp. 122-124; Ljungqvist et al. 2007, p. 421; Groysberg and Healy 2013, pp. 47-57; Bilinski et al. 2015, p. 2).<sup>4</sup>

First, in investment banks, sell-side financial analysts could be pressured to make biased research reports about customers of their employers' securities underwriting or M&A departments in an overly optimistic direction, in order to support the business of these units (Karamanou 2011, p. 2; Bradshaw 2011, p. 26). Second, sell-side financial analysts have an incentive to publish overly optimistic research in order to maintain good relations with the covered firm's management, which should increase the probability of receiving "*privileged access*" (Carapeto and Gietzmann 2011, p. 757) to the firm's information (Karamanou 2011, p. 2; Bradshaw 2011, p. 26).<sup>5</sup> However, such analysts, who might use information obtained in

---

<sup>3</sup> Demski (2003, p. 61) draws the conclusion that a "*general finding is that analysts' forecasts are upward biased*", and that "*recommendations are also typically skewed toward the 'strong buy' and 'buy' categories, rather than to 'hold' or 'sell'*". Thus, I define, in line with relevant prior literature (e.g., Ramnath et al. 2008; Mehran and Stulz 2007), that over-optimism is caused by conflicts of interest in the sense of biased advice. Moreover, it is important to note, that "*an important distinction between biased forecasts driven by judgment errors as distinct from economic incentives is that the former is non-motive driven, while the latter is motive driven*" (Ramnath et al. 2008, p. 57).

<sup>4</sup> Consequently, Groysberg and Healy (2013) name the business models as the "*investment banking model*" (Groysberg and Healy 2013, p. 59) and the "*trading commission model*" (Groysberg and Healy 2013, p. 74).

<sup>5</sup> Bradshaw (2011, pp. 26-28) ranks the sources of conflict of interest for financial analysts according to their relative importance in the literature (descending order): 1. Investment banking business, 2. Maintaining the favour of firm managers, 3. Trade volume generation, 4. The influence of institutional investors, 5. Hired analyst coverage, 6. Behavioural bias of analysts. As, for instance, Groysberg and Healy (2013, pp. 89-91) point out, that trade volume generation is another relevant source of conflict of interest for brokerage firms applying the "*trad-*



many cases, via selective disclosures, can improve the informativeness of their research outputs and the accuracy of their earnings forecasts (e.g., Gintschel and Markov 2004; Hutton 2005; Mohanram and Sunder 2006). Thus, it is not unambiguously defined how financial analysts with “*privileged access*” (Carapeto and Gietzmann 2011, p. 757) use this competitive advantage (Michaely and Womack 1999, p. 656; Bradley et al. 2003, p. 3).

While issuing stock recommendations can be seen as the final step in the financial analysts’ research process summarizing the insights of analysts’ information processing, the common quantitative metrics are also being issued separately from each other (Beyer et al. 2010, p. 325; Bradshaw 2009, p. 1076; Booth et al. 2014, p. 465; Asquith et al. 2005, p. 255). Moreover, there is growing evidence from recent research, that sell-side financial analysts use earnings forecasts, target prices and stock recommendations in different ways (Malmendier and Shanthikumar 2014; Bilinski et al. 2015). Malmendier and Shanthikumar (2014) provide evidence that analysts have a stronger incentive to make biased stock recommendations than earnings forecasts. This is because overly optimistic earnings forecasts are negatively welcomed by both the management of the covered firms and by the institutional investors (Malmendier and Shanthikumar 2014, p. 1289). Bilinski et al. (2015) can show that financial analysts concentrate on biasing the more granular target prices instead of stock recommendations or earnings forecasts. Thus, these recent findings affirm overall evidence in prior research that a positive bias in earnings forecasts, caused by conflicts of interest, is less clear (Mehran and Stulz 2007, p. 287).

Both outlined business models for funding analyst sell-side research were challenged by different regulatory reforms in the US and the European Union, which addressed conflicts of

---

*ing commission model*” for funding equity research. Analysts employed by such brokerage firms could be pressurised into biasing their reports because optimistic research reports generate a higher trading volume and thus higher commission for their employer than pessimistic ones (Karamanou 2011, p. 2; Groysberg and Healy 2013, pp. 89-90). Another relevant conflict of interest which could create incentives for biasing research reports are relations with institutional investors (e.g., Bilinski et al. 2015). However, these conflicts of interest are not addressed by the regulations outlined in this section and thus might persist even after the introduction of the regulatory reforms (Cowen et al. 2006, p. 120; Bilinski et al. 2015, p. 5).



interest in analyst research and selective disclosures (Avgouleas 2005; Groysberg and Healy 2013; Dubois et al. 2014). While the US-regulatory measures NYSE Rule 472, NASD Rule 2711, Regulation Analysts Certification (Reg AC) and the Global Settlement concentrate on rules for the disclosure and prevention of conflicts of interest in investment research, Regulation Fair Disclosure (Reg FD) concerns the prevention of selective disclosures (e.g., Contoudis 2003; Hovakimian and Saenyasiri 2010; Koch et al. 2013; Hovakimian and Saenyasiri 2014). In the European Union, conflicts of interest in analysts' research are addressed by two directives, the MAD (Market Abuse Directive, introduced in 2003) and the MiFID (Markets in Financial Instruments Directive, introduced in 2004) (e.g., Ferrarini 2004; Enriques 2006). According to Christensen et al. (2016), a remarkable feature of the MAD is that substantial differences exist across the EU member countries concerning the time of implementation and the severity of the sanctions.

The MAD and the MiFID are, amongst other objectives, geared up for the mitigation of conflicts of interest in the field of the financial analysts' investment research (MiFID, recital 29; MAD, Article 6(5)), by, in the case of the MAD, introducing disclosure rules and by introducing and strengthening organisational requirements (e.g., so-called "*chinese walls*") and conduct-of-business rules for brokerage firms and banks in the case of the MiFID (e.g., Avgouleas 2005; Enriques 2006). Both directives are accompanied by implementing directives (Commission Directive 2003/125/EC and Commission Directive 2006/73/EC), which contain detailed regulations concerning the presentation of financial research and the prevention and disclosure of possible conflicts of interest.

Moreover, the MAD prohibits the issuance of selective disclosures (e.g., Ferrarini 2004). According to Article 6(3) of the MAD, firms are required to disclose insider information to all market participants and are not allowed to disclose insider information to only selected individual financial analysts, which makes the MAD comparable to Reg FD, the relevant US



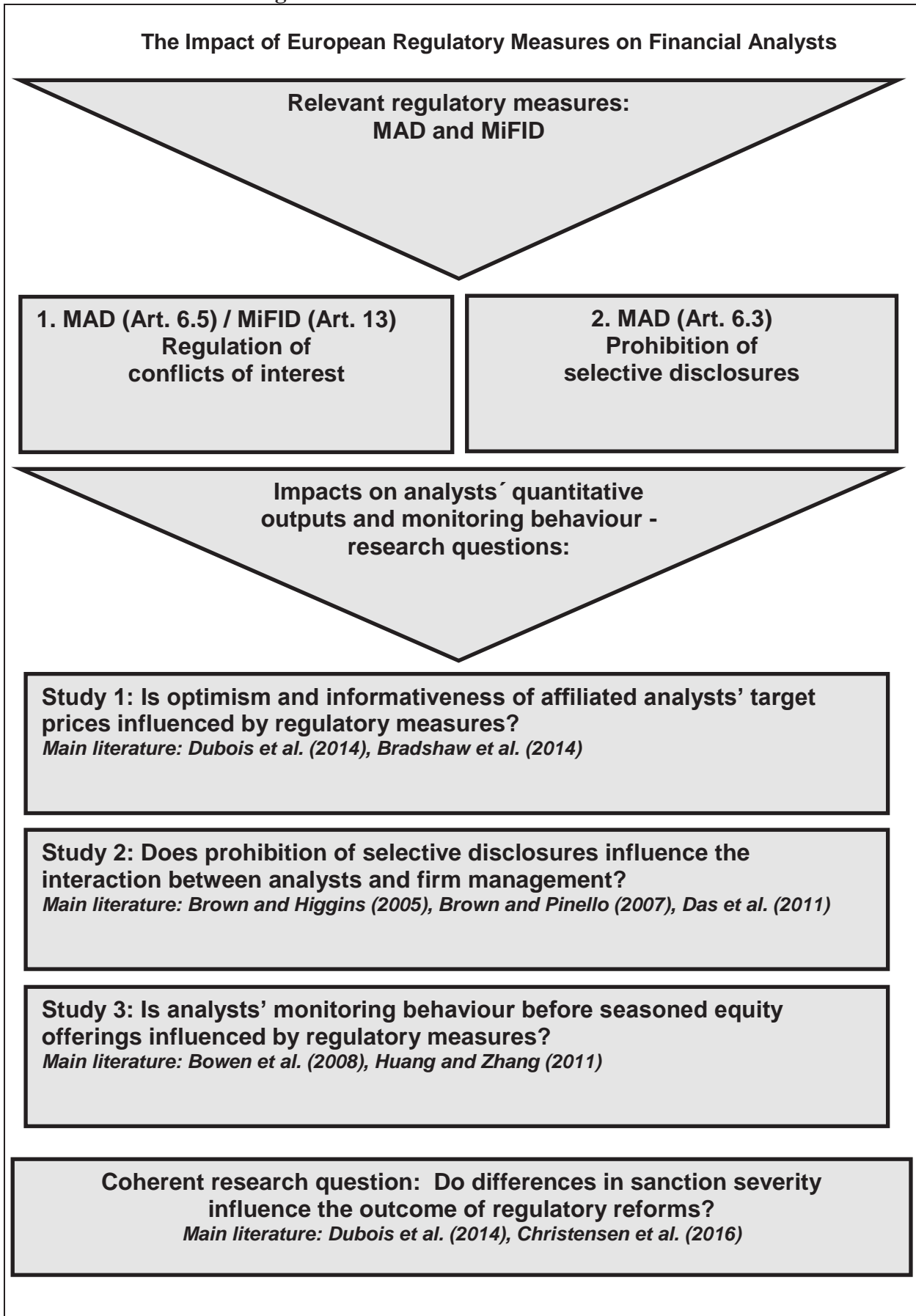
regulatory measure regarding the prohibition of selective disclosures (Avgouleas 2005; Lau Hansen and Moalem 2009).

## **1.2 Contribution of the dissertation**

The European regulatory environment provides, from a researcher's point of view, an ideal setting for investigating the impacts of regulatory changes, since the staggered implementation of the MAD across EU-Member countries facilitates the identification of regulatory effects (Christensen et al. 2016). Moreover, the substantial differences across the EU member countries concerning the severity of the sanctions of the MAD allow to investigate whether these differences influence regulatory outcomes (Dubois et al. 2014; Christensen et al. 2016). Utilising these advantages of the European regulatory setting, this dissertation investigates whether the objectives of the outlined European measures MAD and MiFID were met by investigating their impact on the behaviour and information environment of sell-side financial analysts. Furthermore, although the relevant regulatory measures in the US and Europe are comparable to each other (Avgouleas 2005, p. 211; Dubois et al. 2014, p. 496), additional insights going beyond the prior investigations of the US regulatory measures (e.g., Cornett et al. 2007; Kadan et al. 2009; Das et al. 2011) can be gained by considering the potential differences in the institutional setting between the US and Europe and by including additional analyst metrics such as target prices.

As outlined in Figure 1.1, I investigate the impact of the regulation of conflicts of interest and prohibition of selective disclosures on sell-side financial analysts' quantitative outputs and monitoring behaviour, using all three common quantitative measures: earnings forecasts, target prices and stock recommendations. My investigation is split up into three different empirical studies, each addressing another specific research question within the scope outlined.

**Figure 1. 1: Contribution of the Dissertation**





Study 1 investigates the question whether optimism and informativeness of target prices issued by sell-side analysts, whose employing financial institution acted as securities underwriter or M&A advisor for a covered firm (“*affiliated analysts*”)<sup>6</sup>, were influenced by the European regulatory measures. As pointed out, Bilinski et al. (2015), provided evidence that sell-side financial analysts concentrate on biasing the more granular target prices instead of stock recommendations or earnings forecasts. Moreover, the disclosure requirements of the MAD are geared more explicitly towards stock recommendations, making target prices a less visible measure for sending an overly optimistic opinion in the post-regulation period.<sup>7</sup> Thus, the regulatory measures introduced could provoke a trade off between the quantitative analyst metrics. Concentration on biasing target prices could be seen as an “*avoidance strategy*” (Leuz and Wysocki 2016, p. 536). By addressing this research question, Study 1 augments prior literature in several dimensions. First, the related study of Dubois et al. (2014) concentrates on stock recommendations, which, based on the results of Malmendier and Shanthikumar (2014), are considered to be the more biased measure compared with earnings forecasts. A recent, and growing, stream of literature focuses on analysts’ target prices which, when compared with discrete stock recommendations, contain more forthright valuation implications (Bradshaw et al. 2013). Thus, Study 1 augments prior literature by examining the impact of the regulatory measures on target prices and reacts, like the studies of Bilinski et al. (2013), Bradshaw et al. (2014) and Bilinski et al. (2015) to the call for more research by Ramnath et al. (2008, p.68), who state, that “*further research is required to describe the behavior of the forecasts that have higher price impacts, such as long-term growth forecasts and target prices*”. Second, while Dubois et al. (2014) and Hovakimian and Saenyasiri (2014)

---

<sup>6</sup> Typically, financial analysts are considered to be affiliated, when their employing bank or brokerage firm was involved as an underwriter or advisor in an IPO, SEO or M&A transaction of the covered firm (e.g., Kolasinski and Kothari 2008; Kadan et al. 2009; Dubois et al. 2014).

<sup>7</sup> Article 6(4) of Directive 2003/125/EC requires banks and brokerage firms employing analysts to disclose, separately and with a quarterly frequency, tables which include the distributions of all their unaffected and their conflicted buy/hold/sell recommendations. However, there is no comparable disclosure requirement for target prices (Staikouras 2008, p. 370).

investigate the impact of the MAD on financial analysts' conflicts of interest, there is, to my knowledge, apart from the studies of Prokop and Kammann (2017), who investigate earnings forecasts, and Höfer and Oehler (2014), who apply mean comparison tests, no study which applies multivariate analysis in order to investigate the impact of the MiFID on stock recommendations and target prices. Thus, Study 1 contributes to the existing literature on the regulation of financial analysts by examining the effects of the MiFID on stock recommendations and target prices.

Study 2 analyses whether the prohibition of selective disclosures introduced by the MAD influences the interaction between sell-side analysts and the management of the covered firms. This interaction between analysts and firm management is known as “*forecast guidance*” or “*expectations management*” in the literature (e.g., Matsumoto 2002; Cotter et al. 2006). As pointed out, sell-side analysts are interested in good relations with a covered firm's management, which is why they pay attention to maintaining their earnings forecasts on a moderate level shortly before the earnings announcement date because the management has an incentive “*to meet or beat*” financial analysts' earnings forecasts (e.g., Degeorge et al. 1999; Bartov et al. 2002, p. 202; Wallmeier 2005). After the introduction of the MAD, private forecast guidance conducted via selective disclosures by firm management is no longer allowed, thus guidance has to be conducted publicly, which should make it more difficult for firms to achieve a positive stock price benefit by using expectations management (Avgouleas 2005, p. 211; Canace et al. 2010; Williams and Sun 2011). Thus, study 2 investigates how the introduction of the MAD influenced the prevalence of expectations management. By doing this, Study 2 augments prior literature by addressing how regulatory changes and cross-country differences could influence the amount of expectations management which is applied by firms. Thus, Study 2 adds to the stream of literature on forecast guidance (e.g., Brown and Higgins 2005; Brown and Pinello 2007; Das et al. 2011).





Study 3 investigates, whether affiliated sell-side financial analysts' monitoring behaviour before seasoned equity offerings (SEOs) is influenced by the introduction of the MAD and MiFID. Prior research (e.g., Altinkılıç and Hansen 2003; Corwin 2003; Mola and Loughran 2004; Bowen et al. 2008; Huang and Zhang 2011) provides evidence, that shares in an SEO have to be issued with a discount, which increases the cost of issuing equity capital (e.g., Bowen et al. 2008). The study by Bowen et al. (2008) provides evidence that this discount can be reduced, when issuing firms are covered by affiliated analysts who work for the main underwriter of the SEO. These analysts should have "*privileged access*" (Carapeto and Gietzmann 2011, p. 757) to company information due to their employers' involvement in the marketing of the SEO and the due diligence investigations (Michaely and Womack 1999, p. 656; Bradley et al. 2003, p. 3; Bowen et al. 2008, p. 666). Thus, in the very specific SEO-setting, affiliated analysts can help to reduce information asymmetries utilizing the information obtained via their employers' involvement in the SEO (Bowen et al. 2008). However, the regulatory measures geared up to prevent "*privileged access*" (Carapeto and Gietzmann 2011, p. 757) to firm information could stop this effect of affiliated analyst coverage in the context of SEOs, which could be seen as an "*unintended consequence*" (Brüggemann et al. 2012; Leuz and Wysocki 2016, p. 531) of the introduction of MAD and MiFID. By addressing this research question, Study 3 augments the prior findings in the SEO underpricing literature (e.g., Corwin 2003; Mola and Loughran 2004; Bowen et al. 2008; Huang and Zhang 2011). Study 3 is, to my knowledge, the first one to investigate how analyst coverage influences SEO underpricing in an international cross country setting. Bowen et al. (2008) and Huang and Zhang (2011) investigate the impact of analyst coverage for samples of US-SEOs, while Gupta et al. (2013), who examine the impact of regulatory differences on SEO underpricing, do not include analyst coverage as an explanatory variable in their international sample of SEOs from 39 countries. Moreover, the SEO underpricing setting provides an accurate direct measure for the cost of capital, in contrast to indirect measures like bid-ask spreads or

estimated discount rates obtained from valuation models (Bowen et al. 2008, p. 662). In addition to this advantage, SEO underpricing should be less affected by endogeneity issues, since it is measured after the number of covering analysts is determined and over a short time interval of just one day (Bowen et al. 2008, p. 662).

A coherent research question, addressed by all three studies, is whether differences in sanction severity influence the outcome of regulatory reforms. Investigating this research question is facilitated by the ideal features of the European regulatory environment, which includes differences in sanctions severity for infringements of the regulatory measures between EU member countries (Dubois et al. 2014; Christensen et al. 2016). Thus, by exploiting the “*cross-sectional variation*” (Leuz and Wysocki 2016, p. 571) in sanction severity of the MAD as well as by exploiting the outlined “*time-series variation*” (Leuz and Wysocki 2016, p. 571) in the MAD implementation across EU member countries, this dissertation adds to the growing stream of literature investigating the impact of regulatory changes on the basis of the European regulatory environment (e.g., Christensen et al. 2013b; Dubois et al. 2014; Christensen et al. 2016).

### **1.3 Content of the dissertation**

The dissertation is organized as follows: The introduction (Chapter 1) outlines the context, contribution, and structure of the dissertation. Chapter 2 includes a portrayal of the relevant regulatory measures and provides implications for the empirical investigation. The following three chapters, chapters 3 to 5, include the three empirical studies. The final chapter 6 draws a conclusion by summarising the main findings of the empirical studies, by outlining the main limitations and by presenting potential avenues for further research.