

2 The Firm Characteristic of Corporate Diversification

This chapter provides the basic knowledge for my subsequent examinations through a comprehensive discussion of the firm characteristic of corporate diversification. Section 2.1 presents the business strategy underlying the firms' diversification decisions as well as the empirical measurement of corporate diversification. Section 2.2 introduces and structures the existing research literature on the various effects (benefits and costs) of corporate diversification. Section 2.3 discusses studies that empirically examine the valuation implications (premium vs. discount) of corporate diversification. Section 2.4 presents research studies that apply the concept of corporate diversification to related accounting research fields. Therefore, Section 2.4 serves as a bridge to the following chapters, which yield various implications of corporate diversification for earnings quality and firm valuation.

2.1 Basics about Corporate Diversification

2.1.1 Diversification Strategy

The concept of diversification goes originally back to Markowitz (1952) and describes the notion of risk reduction by investing in a portfolio of securities. Depending on the correlations of those securities, such a diversified portfolio is either less risky (i.e., exhibits a lower variance of returns for a given level of expected returns) or more profitable (i.e., exhibits higher expected returns for a given level of variance of returns) than a weighted average of its individual securities. However, conceptual travelling has led to an adoption of this concept to many research areas other than finance (e.g., corporate development and corporate finance).

For example, from a strategic management perspective, corporate diversification describes the expansion of a firm into new business activities through internal business development, strategic partnerships or mergers and acquisitions (M&A).³ As a result, the extent to which firms are operating in various industries (segments) is referred to as the degree of diversification or diversity.⁴ In contrast, the concentration of business activities of a firm in its core competencies is referred to as focusing. In this context, Chandler (1962) coined the famous phrase “structure follows strategy” as guideline for strategic management decision making, which emphasizes that corporate structure is created to implement a predefined corporate strategy. While corporate strategy determines long-term goals and adopts courses of

³ See Ramanujam and Varadarajan (1989).

⁴ See Pitts and Hopkins (1982).

action for achieving these goals, corporate structure represents the organizational form through which corporate strategy is administered.⁵

Ansoff (1957) defines the decision for firms to diversify as a growth strategy by entering new markets with new products. Regarding the relationship between segments within a firm, Ansoff (1957, 1965) distinguishes between three different types of diversification. (1) Vertical diversification is explained by the integration of the production program (i.e., upstream or downstream of the value chain). (2) Horizontal diversification describes the introduction of new products for existing customers without contributing to the core product line. Both vertical and horizontal diversifications are also known as related diversification due to the defined field of interest (i.e., production program or costumers) and dependence on similar resources such as in technology. The contrary is described by (3) lateral or conglomerate diversification, in which the firm's intent is to launch itself into new but unrelated products or markets beyond current resources and capabilities. This is also known as unrelated diversification due to lack of common links between the firm's segments. In addition to growth as the main driver for diversification as business strategy, Ansoff (1957) also names risk reduction and excess productive capacity as other reasons for firms to diversify.

Similarly, Montgomery (1994) describes three comprehensive theories to explain the motives for firms to diversify. The market-power view suggests that firms diversify to gain advantages of reduced competition. Hence, diversification enables a reduction in the uncertainty of future earnings and the possibility of financial distress (i.e., bankruptcy risk). The resource-based view implies that excess capacity in resources and capabilities are transferable across different industries to generate synergies (e.g., economies of scope) within a firm. These two theories describe the general benefits inherent in corporate diversification. In contrast, the agency-theory view argues that managers (agent) are willing to diversify in order to enforce their own personal interests against the firm's shareholders (principal). Consequently, agency costs arise due to asymmetric information between managers and shareholders, which result in value-destroying actions from self-interested managers.⁶

⁵ Chandler (1962) divides the organizational form into either the unitary form (U-form) or the multi-divisional form (M-form). While the U-form describes a company that groups similar activities together in one specialized unit, the M-form characterizes a company which is divided into self-contained units where complementary activities are grouped together. Accordingly, the U-form builds the basis for the M-form of an organization, which is created when the firm pursues a strategy of diversification.

⁶ Those actions to invest in value-destroying projects that exceed the optimal level of diversification are caused by incentives of the management due to empire building (power and prestige), increasing managerial compensation, and entrenchment by investments related to manager-specific skills or the reduction of managerial employment risk. For a more detailed explanation see Montgomery (1994).

Finally, Teece (2010) explains that business strategies are essential facets in designing a competitively sustainable business model. He states that the notion of the business model refers to a more conceptual rather than a financial model of a business and that it essentially describes the way the firm *goes to market*.⁷ This is in line with Penman (2013, p. 22) who describes the business model as “concept or strategy under which a firm operates to add value from selling products or services to customers”. Therefore, a core component in designing a business model is explained by diversification strategy which represents the identification and decision about how market segments should be targeted. Teece (2010) argues that this includes segmenting the market, creating a value proposition for each segment, and setting up tools to deliver that value from each segment.

To illustrate the importance of the diversification strategy, I plot in Figure 2 the number of firm-year observations and return on assets (ROA) as measure of firm performance for diversified and focused firms for the time period of 1976 to 2015.⁸ In terms of observations, the number of focused firm observations has increased substantially until 1997, while the number of diversified firm observations has slightly declined in the same time period. However, the adoption of the Statement of Financial Accounting Standards (SFAS) 131 marks a structural break in time because it requires new segment disclosures for fiscal years ending after December 15, 1997.⁹ As a consequence, the number of focused firm observations has quickly decreased whereas the number of diversified firm observations significantly increased and has remained well above the number of focused firm observations. Therefore, SFAS 131 revealed the so-called “hidden diversified firms” which operated in more than just one business segment but reported to be focused under the old rule SFAS 14.

In terms of firm performance, two time series patterns are particularly noticeable. First, the ROA has declined more strongly and even becomes negative for focused firms compared to diversified firms during the stock market boom and bust (i.e., dotcom bubble) at the turn of the century. Second, the ROA has declined even more strongly for focused firms during the

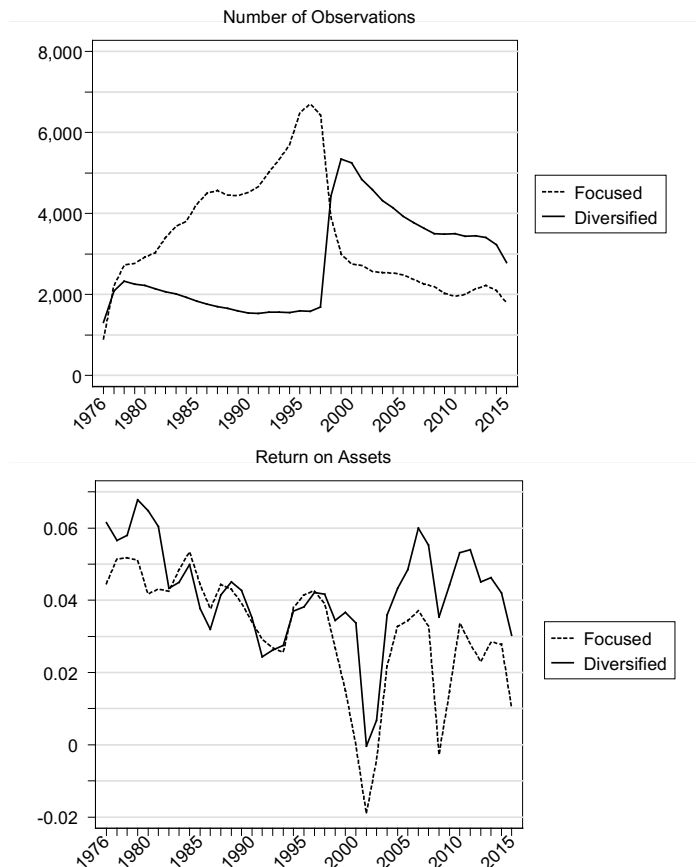
⁷ The business model describes which benefit the firm delivers to customers, how it organizes to achieve this, and how it creates and captures value. Therefore, it contains implicit assumptions about customers’ behavior, the forecast of revenues and costs, strategies to respond to changing nature of user needs, and analyses about likely competitor response (Teece 2010).

⁸ Diversified firms are defined as operating in at least two different industries (segments), whereas focused firms concentrate only on their core line of business. Concerning the assignment of firms to industries, I use the standard procedure in the literature by applying the Standard Industrial Classification (SIC) codes (see Section 2.1.2 for more information).

⁹ SFAS 131 requires that publicly traded diversified firms report financial and related information for their operating segments, if sales, profit or loss, or assets of those segments exceed 10 percent of all reported operating segments. In addition, this statement is based on the management approach which requires the management to report the segments, how they are organized within the firm (FASB 1997).

recent financial crisis between 2007 and 2009. Since then, diversified firms have outperformed focused firms, which can be explained by diversification strategy that helped to stabilize revenues and earnings during these turbulent times. I provide more useful numbers about the development of the degree of diversification and different trends in basic accounting items (i.e., total sales, total assets, earnings) for diversified and focused firms in Appendix A of this thesis.

Figure 2: Relevance of Corporate Diversification



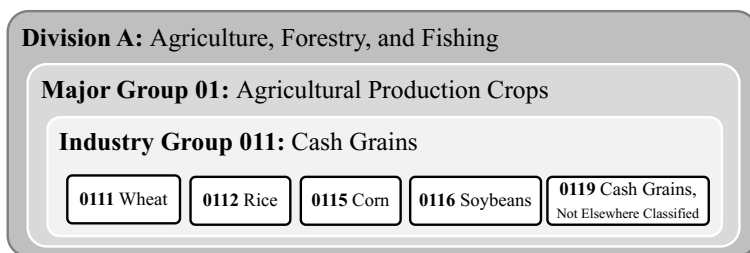
This figure presents the number of observations and the performance (measured by return on assets) of diversified and focused firms over time. The sample includes 246,718 firm-year observations (of which 110,625 are diversified). The data was retrieved from the intersection of the Compustat Annual Industrial and Compustat Industrial Segment files for the time period of 1976 to 2015 (for all firms with available accounting data on total sales, total assets and earnings – excluding financial firms in SIC code level 6000-6999).

Source: Own illustration.

2.1.2 Measurement

The industry affiliation in most empirical studies relating to corporate diversification is measured by the Standard Industrial Classification (SIC) codes. This industry classification scheme by the U.S. Census Bureau represents the standard procedure to assign firms to homogeneous groups.¹⁰ Figure 3 illustrates the structure of the SIC allocation system for one (i.e., Division A) of the ten different divisions.¹¹

Figure 3: Allocation of Firms into SIC Codes



This figure presents an example of the system of classifying industries in the U.S. (established in 1937), which is used for the measurement of a firm's diversification status.
Source: Own illustration.

Most studies cited in this thesis avoid defining diversification in detail and rather consider firms as diversified (multi-segment) when their segments operate in at least two different industries (four-digit SIC codes).¹² Consequently, firms are treated as focused when they operate in only one single industry.¹³ In addition, a distinction is made using SIC codes between related and unrelated diversification. Thus, related diversification is considered as a firm's segments operating in different industries (four-digit SIC codes) or industry groups (three-digit SIC code), whereas unrelated diversification is viewed as a firm's segments operating in different major groups (two-digit SIC codes) or divisions (letter SIC codes). Moreover, the status of diversity is measured by the number of industries (segments) in which

¹⁰ Bhojraj et al. (2003) report that industry definition with SIC codes has a long history in the academic literature. SIC codes have been available since 1937 and are used in more than 90 percent of studies that employ a general industry classification scheme.

¹¹ The structure of the SIC codes is organized hierarchically, from divisions (letter SIC codes) to a finer separation named major groups (two-digit SIC codes), industry groups (three-digit SIC codes) and industries (four-digit SIC codes). For more information about the different SIC groupings see https://www.osha.gov/pls/imis/sic_manual.html.

¹² See for example Berger and Ofek (1995) and Campa and Kedia (2002).

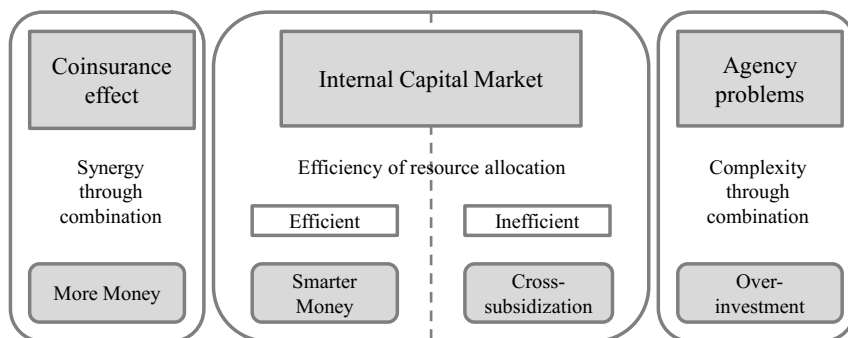
¹³ In this thesis, the expressions "focused", "single-segment", and "stand-alone" are used interchangeably for firms that operate in only one industry.

a firm operates (reported by different four-digit SIC codes). The SIC system is also used by Fama and French (1997) to reorganize firms by their four-digit SIC codes into 48 industry portfolios. While both systems are widely used in academic research and divide firms into homogeneous groups, the specific intent of Fama and French (1997) is to form groups of industries according to their common risk characteristics.¹⁴ However, one weakness of the SIC system is that it was developed for traditional industries and thus is slow to recognize new and emerging industries.¹⁵

2.2 Effects of Corporate Diversification

In perfect capital markets under the Modigliani-Miller (1958) assumptions, investors can diversify away non-systematic risk within their own portfolios and thus may not want firms to pursue diversification strategies. However, in the presence of capital market imperfections such as taxes, bankruptcy costs or agency costs, corporate diversification implies a variety of effects (benefits and costs) which have the potential to either enhance or destroy value. Figure 4 illustrates the most important *ex ante* effects (i.e., coinsurance effect, internal capital market and agency problems), which will be discussed in the following two sections.

Figure 4: Effects of Corporate Diversification



Source: Own illustration.

¹⁴ For detailed information about Fama and French 48 industry classification, see the website of Kenneth R. French available at: <http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/>.

¹⁵ As an alternative, the North American Industry Classification System (NAICS) was developed and released in 1997 to replace the SIC system and to allow for a high level of comparability in business statistics among North American countries (i.e., USA, Canada, and Mexico). However, the U.S. Security and Exchange Commission (SEC) still uses SIC codes for industry classification as its standard.

2.2.1 Benefits of Corporate Diversification

Diversified firms are related to several benefits based on financial synergies and operating efficiencies. Lewellen (1971) explains that the combination of imperfectly correlated cash flows from different business segments enables firms to exploit additional leverage possibilities through improved satisfaction of their contractual debt criteria. This so-called “coinsurance effect” can create financial synergies through higher debt capacity (optimal leverage) for diversified firms, which implies a larger tax shield and higher firm value.¹⁶ Leland (2007) confirms that diversified firms benefit from coinsurance by less risky firm-level cash flow realizations and thus less bankruptcy risk (costs). Moreover, diversification may further lower taxes by enabling the firm to offset immediately operating losses from a particular segment against the profits of other segments.

Williamson (1975) posits that each diversified firm creates an internal capital market which allows an efficient resource allocation because funding between the business segments is organized more efficiently (less costly) than through the external capital market. For example, Chandler (1977) suggests that diversification may lead to greater operating efficiency by enhancing economies of scope and increasing managerial coordination. Stulz (1990) documents that an efficient internal capital allocation in diversified firms mitigates the underinvestment problem by reallocating scarce resources to more profitable net present value (NPV) projects than their segments would make as stand-alone firms. In addition, Gertner et al. (1994) point out that control rights transferred to a firm’s headquarter improve the monitoring of the diversified firm’s segments and thus make the headquarter an efficient intermediary for the resource allocation process. Similarly, Stein (1997) notes that the benefit of internal capital markets lies in the reduction of costs of obtaining funds necessary for investments by transferring control rights and increasing monitoring of each business segment to engage in winner-picking.¹⁷ Finally, Maksimovic and Philips (2002) explain that diversified firms can benefit from increased market power by cross-subsidized predatory pricing.

2.2.2 Costs of Corporate Diversification

Diversification is associated with creating several costs, which are finally due to information asymmetries. Jensen (1986) argues that managers have incentives to pursue their private

¹⁶ This effect is also called the “more-money effect” because diversified firms are able to raise more money from the external capital market compared to focused firms (Stein 2003).

¹⁷ Winner-picking (and loser-sticking) means the allocation of funds within a diversified firm to the most valuable segments (Stein 1997). This is also called the “smarter-money effect” of internal capital markets (Stein 2003).

benefits by reinvesting accessible free cash flows even when their companies have no profitable investment opportunities.¹⁸ This overinvestment problem claims that diversification exacerbates managerial agency problems, which arise from higher organizational complexity and resulting monitoring problems between managers and corporate outsiders. Therefore, diversified firms are exposed to higher agency costs compared to their stand-alone peers.

Scharfstein and Stein (2000) find that less profitable segments are subsidized by more profitable segments through the internal capital market of diversified firms. They explain that inefficient internal investments (i.e., cross-subsidization) arise from behavioral problems between headquarters (CEO) and rent-seeking divisional managers inside diversified firms.¹⁹ Shin and Stulz (1996) make a related argument that corporate bureaucracy causes an inefficient capital allocation within diversified firms resulting from a more complex intra-organizational coordination. Consequently, diversified firms incur costs associated with increased information asymmetries, which do not affect focused firms.

2.3 Relevance of Corporate Diversification for Financial Economics Research

Numerous studies in the financial economics literature examine the valuation effects of corporate diversification. These effects have led to an ongoing controversial debate whether diversified firms trade at a discount or premium relative to their stand-alone counterparts. For example, the conglomerate merger wave over the period from 1960 to 1970 was driven by the concept of economies of scope, whereas the refocusing wave in the 1980s and early 1990s was initiated by a trend towards more specialization and higher market valuations (Comment and Jarrell 1995; Servaes 1996). The prevailing view in the extensive literature is, however, that the potential costs of diversification outweigh the potential benefits.²⁰

The empirical studies of Lang and Stulz (1994) and Berger and Ofek (1995) demonstrate that the typical diversified firm trades at a substantial discount compared to a benchmark portfolio of focused firms. They find that costs associated with overinvestment and cross-subsidization

¹⁸ See Jensen and Murphy (1990) which point out that managers seek private benefits such as enhancement in power and prestige (i.e., empire building) as well as compensation. Shleifer and Vishny (1989) explain that managers spend enormous effort to make themselves valuable to the shareholders by investing in assets related to manager-specific skills (i.e., managerial entrenchment). Amihud and Lev (1981) note that managers tend to diversify in order to reduce firm-specific risk because this also lowers their individual employment risk.

¹⁹ Scharfstein and Stein (2000) model a two-tiered agency conflict between (1) headquarters (CEO) and corporate outsiders and (2) between the CEO and divisional managers to explain cross-subsidization within a diversified firm.

²⁰ Table 1 presents a selection of some of the most influential studies about the *theoretical* effects of corporate diversification and their *empirical* valuation implications for diversified firms.

exceed the potential benefits and contribute to a significant diversification discount. Accordingly, Denis et al. (1997) emphasize the importance of agency costs in explaining misallocation of diversified firms and confirm that managers will reduce diversification only if forced to do so by market disciplinary forces (e.g., equity ownership or external corporate control threats).²¹ Krishnaswami and Subramaniam (1999) document that misallocation of resources are caused by information asymmetry problems and misalignment of incentives between central and divisional managers.²² More specifically, they find that firms which engage in a corporate spin-off (reduce diversity) show declining degrees of information asymmetries and raise more funds following the spin-off. Rajan et al. (2000) confirm that a “political battle” between different business segments leads to a misallocation of resources on internal capital markets. They explain rent-seeking divisional managers influence corporate headquarters by the use of distorted private information about the investment prospects of their segments and thereby drain resources from better performing segments which, overall, leads to an inefficient allocation of capital among segments.

However, several empirical studies argue that these value-destroying effects are attributable to factors other than diversification. For example, Campa and Kedia (2002) find that the diversification decision is endogenous and determined by the same firm-specific characteristics which cause the firms to be discounted. Graham et al. (2002) point out that the value reduction occurs because the firm acquires already discounted business units and not because diversification destroys value. In addition, Villalonga (2004) show that the discount of conglomerates is due to data and measurement problems and find that diversified firms even trade at a premium. More recent evidence emphasizes the value-enhancing effects of diversification. For example, Hann et al. (2013) find that coinsurance can reduce systematic risk by avoiding deadweight costs of financial distress and thereby reduce the cost of capital. Duchin (2010) shows that coinsurance enables diversified firms to hold less cash through more efficient fund transfers. In addition, Kuppaswamy and Villalonga (2010) detect that the independence from external capital markets increased the value of diversified firms during the 2007-2009 financial crises by reducing funding constraints through an efficient resource allocation. Similarly, Yan et al. (2010) emphasize the importance of less costly internal capital markets by avoiding transaction costs and the positive liquidity effects caused by these during recessions. Overall, there is still no clear consensus on the diversification discount.

²¹ The agency cost hypothesis predicts that managers, when not monitored by corporate outsiders, deliberately make poor resource allocation decisions to enhance their private benefits from diversification.

²² The information asymmetry hypothesis predicts that diversification creates an intra-organizational complexity which results in a greater level of asymmetric information within diversified firms.

Table 1: Corporate Diversification and Related Financial Economics Literature

Author(s)	Type	Value Effect	Main Finding
Lewellen (1971)	Theoretical	<u>Benefit:</u> Coinsurance	Financial benefits of mergers arise through the combination of imperfectly correlated activities that increase the firm's debt capacity (leverage).
Williamson (1975)	Theoretical	<u>Benefit:</u> Internal Capital Market	The internal capital market is seen as a competitive resource allocation process in which funding is organized more efficiently (lower transaction costs) than through the external capital market benchmark.
Jensen (1986)	Theoretical	<u>Cost:</u> Agency Problems	Managers have incentives to reinvest accessible free cash flows even when their companies have no profitable investment opportunities (over-investment problem).
Stulz (1990)	Theoretical	<u>Benefit:</u> Internal Capital Market	Efficient resource allocation in diversified firms mitigates the underinvestment problem by reallocating scarce resources to more profitable net present value (NPV) projects.
Berger and Ofek (1995)	Empirical	<u>Discount:</u> Over-investment & Cross-subsidization	Diversified firms are valued less than comparable portfolios of focused firms.
Denis et al. (1997)	Empirical	<u>Discount:</u> Agency Costs	Managers derive private benefits from corporate diversification and thus maintain value-reducing diversification strategies until market disciplinary forces interfere (e.g., acquisition attempts).
Krishnaswami and Subramaniam (1999)	Empirical	<u>Discount:</u> Information Asymmetry Costs	Firms which engage in corporate spin-offs show declining degrees of information asymmetry. For example, firms in need of external capital show a higher propensity to engage in spin-offs.
Scharfstein and Stein (2000)	Theoretical	<u>Cost:</u> Internal Capital Market	Higher level of information asymmetry between CEO and divisional managers leads to a subsidization of less profitable segments by more profitable segments (inefficient cross-subsidization or so-called "socialism").
Rajan et al. (2000)	Empirical	<u>Discount:</u> Information Asymmetry Costs	Information asymmetry between central managers (headquarters) and rent-seeking divisional managers leads to inefficient investment (i.e., cross-subsidization) and less valuable firms.
Campa and Kedia (2002)	Empirical	<u>Premium:</u> Correction for Selection-bias	After controlling for endogeneity of the firm's diversification decision, the calculated discount always drops and sometimes even turns into a premium.
Villalonga (2004)	Empirical	<u>Premium:</u> New Data Source	Diversification discount is an artifact of Compustat Segment data. Using an alternative data source, diversified firms trade at an average premium.
Leland (2007)	Theoretical	<u>Benefit and Cost:</u> Financial Synergies	Financial synergies can be positive (favoring mergers) or negative (favoring separation). More likely to be positive when correlations are low, volatilities are low and similar, and default costs are jointly high (i.e., risk-reduction of diversification).
Hann et al. (2013)	Empirical	<u>Premium:</u> Coinsurance	Coinsurance enables management to transfer resources from cash-rich to cash-poor segments and thereby reduces cost of capital through the avoidance of countercyclical deadweight costs (i.e., reduction of systematic risk).

This table presents some of the most influential studies of corporate diversification in the financial economics literature.

2.4 Application of Corporate Diversification to Related Accounting Research

The main purpose of financial reporting is to provide decision useful information about a firm's performance and thus reduce information asymmetries between corporate insiders and outsiders (see Section 3.2.1 for more details). Therefore, asymmetric information is an important phenomenon underlying both the economic consequences of accounting information and the valuation implications of diversification (see Sections 2.2 and 2.3).

Several studies examine accounting-related research questions in the context of corporate diversification because asymmetric information is likely more important for diversified firms than for focused firms (see Table 2 for an overview). Consequently, diversified firms deliver a powerful setting for evaluating potential effects attributable to more agency problems and higher organizational complexity. For example, Thomas (2002) and Duru and Reeb (2002) examine whether increased asymmetric information (e.g., through higher complexity) lead to less accurate analysts' earnings forecasts for diversified firms. Berger and Hann (2003) and Bens and Monahan (2004) investigate whether less agency problems through the monitoring role of higher disclosures quality result in higher firm excess value. Moreover, a recent study by Franco et al. (2016) is the first to find that higher segment disclosure quality aggravates the negative relation between diversification and the cost of debt because segment disclosures enable investors a better assessment of the coinsurance effect of diversification.

Table 2: Corporate Diversification and Related Accounting Literature

Author(s)	Research Field	Theoretical Link	Main Finding
Thomas (2002)	Analysts' Forecasts & Earnings Announcements	Information asymmetry	Greater industrial diversification is <u>not</u> associated with increased asymmetric information.
Duru and Reeb (2002)	Analysts' Forecasts	Information asymmetry: Increased complexity of the forecasting task	Corporate international diversification is associated with less accurate and more optimistic forecasts.
Berger and Hann (2003)	Disclosure Quality & Firm Value	Agency problems: Monitoring role of (mandatory) disclosures	Increased information environment through adoption of SFAS 131 (i.e., more disaggregated information), which affects firm valuation.
Bens and Monahan (2004)	Disclosure Quality & Firm Value	Agency problems: Monitoring role of (voluntary) disclosures	Positive association between voluntary disclosure and firm excess value because of less information problems.
Demirkan et al. (2012)	Earnings Quality & Cost of Capital	Internal agency problems	Diversified firms have lower discretionary accruals quality, which lead to higher cost of (equity and debt) capital.
Franco et al. (2016)	Disclosure Quality & Cost of Debt	Segment disclosure quality affects investors' assessment of the coinsurance effect of diversification	Negative relation between industrial diversification and bond yields becomes stronger for firms with high-quality segment disclosures (i.e., positive economic effect of coinsurance).

This table presents a selection of important corporate diversification studies dealing with accounting-related questions.

The Coinsurance Effect of Corporate Diversification
An Empirical Analysis of the Accounting and Economic
Implications

Nußmann, D.

2018, XXIV, 146 p. 6 illus., Softcover

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