Journal of Economics, Business & Organization Research

PROCEEDINGS OF THE THIRD ECONOMICS, BUSINESS AND ORGANIZATION RESEARCH (EBOR) CONFERENCE

ROME, ITALY, 2020

THE RELATION BETWEEN INFORMATION ASYMMETRY, DISCLOSURE POLICY AND CORPORATE TAX PLANNING

Cristina SÁ[1] **Helena ALVES**[2]

1 CARME, ESTG, Polytechnic of Leiria, Portugal, CORRESPONDING AUTHOR, cristina.sa@ipleiria.pt

2 School of Technology and Management of Leiria (ESTG), Polytechnic Institute of Leiria, Portugal, helena.alves@ipleiria.pt

Abstract

The call for greater transparency from companies it's seen as a way to help reduce tax avoidance. Although some studies have linked tax planning to various factors, few studies have examined the relation between information asymmetry, disclosure policy and tax planning. Managers visibly face conflicts between financial disclosure quality and tax planning. Academic research points financial analysts as a way to reduce the information asymmetry and reduce corporate tax avoidance. The main purpose of this paper is to discuss the relation between information asymmetry, disclosure policy and corporate tax planning, by revisiting the main empirical literature. Firstly, we discuss concept of information asymmetry and its measures. After, we analyse the concept of tax planning. Finally, we examine the relation between information asymmetry, disclosure policy and tax planning. Academic research point financial analysts as a way to reduce the information asymmetry between firms and investors, and as a consequence, they reduce corporate tax avoidance. Some authors argue that if shareholders want to monitor firms' tax related decision, disclosure policies and tax regulatory bodies should consider requiring increased tax related disclosures by firms. However, other authors argue that with increased tax related disclosure, managers are discouraged from pursuing "legitimate" tax planning activities. The added value of this work relies on the analysis of empirical literature results about information asymmetry, disclosure policy and tax planning, providing a more extensive overview of this relation. This study provides insights that tax authorities and politicians can use to better focus their strategies and actions in order to increase compliance and reduce tax evasion.

Keywords: *Information Asymmetry, Disclosure Policy, Corporate Tax Planning.*

Appolloni et al. (eds). Proceedings of the Third EBOR Conference 2020, pp. 393-408, 2020.

1. THE CONCEPT OF INFORMATION ASYMMETRY

The information asymmetry is the extent to which the amount of information regarding the company varies from one group of investors to another and, thus, provides the differentiation between the informed and uninformed investors. Otherwise, the information asymmetry between administration and new shareholders can affect the investment decisions of the company because of the sub or under evaluation of the shares in the market. Information differences across investors (or groups of investors) have been a longstanding concern to securities regulators (Lambert *et al.*, 2007). To Bergh *et al.* (2019) the information asymmetry concept underlies some of the management field's most important theories and topics. To the authors, limited information may be one of the most common problems surrounding human and organizational interactions of any kind. According to Cheynel and Levine (2020) voluntary disclosures lead to higher *ex ante* information asymmetry.

The asymmetric information arises when, in the context of market transactions, the two sides that deal with the subject or content of information, in terms of quantity and quality, are not equal (Watts and Zimmerman, 1986). According to Ranaldo (2002) the information asymmetry refers to information not yet embodied in the fundamental asset value. To Brown and Hillegeist (2007: 444) information asymmetry in the stock market occurs when "*one or more investors possess private information about the firm while other investors are uninformed (i.e. have access only to public information)"*. As stated previously, the separation of ownership and control in publicly listed companies gives rise to information asymmetries between managers and investors because managers have superior information on the firm's current and future performance than outside investors (Jensen and Meckling, 1976; Myers and Majluf, 1984). The literature recognizes that firms might find it advantageous to give additional pieces of information to outsiders, through the annual report or other communication channels. The information asymmetry between firms and potential investors, due to a low level of disclosure, increases the cost of capital by introducing the adverse selection between buyers and sellers of the firm's shares (Petersen and Plenborg, 2006).

According to Welker (1995) considerable resources are devoted to establish and enforce regulations that improve public perceptions of corporate disclosure practices. Despite these regulatory efforts, firms still have considerable discretion in determining the timeless, scope, content, and form of disclosure provided to equity market participants, amongst others. According to Welker (1995: 802) "*this diversity in disclosure practices produces variation in the level of information asymmetry characterizing trade in equity market*". Welker (1995) also

speaks about one persistent component of the adverse selection problem that is the possibility that material firm-specific information exists and has not been publicly disclosed by the firm. According to the author this "*withheld*" information may be privately available to select traders who invest in costly information acquisition, creating an adverse selection problem when uncertainty about the occurrence of information events exists and firms follow a policy of providing incomplete disclosures with respect to such events.

Past literature has pointed out the adverse effects that information asymmetries have on the functioning of markets (Akerlof, 1970). Information asymmetry is thought to promote reluctance to trade and increase the cost of capital as investors "*price protect*" against potential losses from trading with better informed market participants (Bhattacharya and Spiegel, 1991). The study of market microstructures formalized this notion of price protection and suggested that observable measures of market liquidity can be used to identify the perceived level of information asymmetry facing (uninformed) participants in equity markets (Lev, 1988).

To Kanagaretnam *et al*. (2007) investors possess varying degrees of information about the companies in which they invest and this may lead to the existence of informed traders, which transact with the advantage of superior information. Kim and Verrecchia (1994) suggest that earnings releases will reduce information asymmetry as they disseminate information to all market participants. However, the same authors also recognized that information asymmetry may remain at an elevated level following the earnings release because some traders are better able to process the information than others.

Analytically, Barry and Brown (1985), Diamond (1985), Diamond and Verrecchia (1991) and Kim and Verrecchia (1994) argue that more information generally reduces information risk on prices. Likewise, voluntary disclosure serves to reduce information asymmetry among traders. Empirically, Leuz and Verrecchia (2000) and Welker (1995), among others, investigate links between voluntary disclosure and stock liquidity. They found that firms with better quality disclosure have lower bid-ask spreads. In addition, Botosan and Plumlee (2002) test the capital market effect of voluntary disclosure on the cost of capital, and they found that the cost of capital decreases with more disclosure. Trabelsi *et al.* (2004) and Trabelsi *et al.* (2008) study the incentives of internet financial reporting, and found that internet disclosure helps to reduce analysts' forecasting error.

Most of the above evidences are consistent with the idea that public voluntary disclosure serves to reduce information asymmetry. Furthermore, the previous disclosure research also demonstrated that the corporate governance quality has a significant impact on both the quantity

and quality of these corporate information disclosures (*e.g.* Ho and Wong, 2001; Chau and Gray, 2002; Eng and Mak, 2003; Kanagaretnam *et al.*, 2007).

2. HOW TO MEASURE INFORMATION ASYMMETRY

The literature indicates that bid-ask spread is commonly used as a proxy to measure information asymmetry. "*Bid-ask spread is the difference between bid price a dealer is willing to pay for a security and the higher ask price at which the dealer is willing to sell the security*" (Almutari, *et al.*, 2009: 602).

In this sense, the bid-ask spread is a measure of the liquidity degree of firms' securities which was proposed by Demsetz (1968). The bid-ask spread addresses the adverse selection problem that arises from transacting in firm shares in the presence of asymmetrically informed investors. Less information asymmetry implies less adverse selection, which implies in turn a smaller bid-ask spread (Leuz and Verrecchia, 2000). Welker (1995: 803) suggests the bid-ask spread as a measure of market liquidity, because it provides a direct measure of the price protection that uninformed market participants demand as compensation for the perceived information risk associated with trading in equity markets. According to the author, "*if corporate disclosure policy is indeed effective in mitigating adverse selection, then the empirical prediction is that the bid-ask spread, which decreases in a liquid market, will be negatively related to disclosure policy*". Also to Stoll (2000) an important dimension of stock liquidity is the bid–ask spread. Attig *et al.* (2006), studying the effects of large shareholding on information asymmetry and stock liquidity, computed a measure of stock liquidity and information asymmetry. According to the authors, liquidity is maximal when traders can transact without a time delay or price concession. They use as a measure of stock liquidity the average of daily closing bid–ask spreads.

Leuz and Verrecchia (2000: 91) examine the relation between disclosure, information asymmetry and the cost of capital. According to the authors "*a firm's commitment to greater disclosure should lower cost of capital that arise from information asymmetries*".

These authors suggest the bid-ask spread and the turnover ratio as two complementary for information asymmetry. The trading volume is an alternative proxy for adverse selection but, according to the authors, less explicit. Trading volume is a measure of liquidity and captures the willingness of some investors who hold firm shares to sell and the willingness of others to buy. This willingness to transact in firm shares should be inversely related to the existence of information asymmetries. Despite this, the authors recognize that the trading

volume can be influenced by a host of other factors unrelated to information. These factors include portfolio rebalancing, liquidity shocks, changes in risk preferences, among others. There is, however, some empirical evidence supporting the authors' choice of trading volume as an inverse proxy for information asymmetry. Easley *et al.* (1996), for example, show that the probability of information-based trading is decreasing in trading volume.

More recently, Petersen and Plenborg (2006) find that the turnover ratio increases with the level of disclosure and that the bid-ask spread decreases with the level of disclosure. To the authors, both the bid-ask spread and turnover ratio seem to be appropriate measures for information asymmetry.

According to Wu (2019) studies have used the number of analysts as a proxy for information asymmetry because research analysts are shown to be an important information source for outsiders. Analysts analyze, interpret, and disseminate information to capital market participants, and thus help reduce the informational advantage of the insiders.

Share price volatility has been used by prior studies as a proxy for information asymmetry (*e.g.* Lang and Lundholm, 1993). According to Leuz and Verrecchia (2000: 99) "*to the extent that smooth transitions in share prices suggest the absence of information asymmetries between the firm and shareholders, or among investors, low levels of volatility suggest fewer information asymmetries*". However, volatility is also influenced by many factors unrelated to information asymmetry. Moreover, Bushee and Noe (2000) demonstrate that the effect of disclosure on volatility is complex and may depend on the type of investors attracted to the firm. In this sense, Leuz and Verrecchia (2000) assume that, as a measure of information asymmetry, volatility is likely to be least reliable. Some authors use insider trading profits as a proxy for information asymmetry. According to Frankel and Li (2004: 232) "*insiders' profit, when they trade on value-relevant information before public disclosure leads to its full incorporation into stock prices*". Thus, insider trading profits are related to the degree of information asymmetry between managers and outside investors. Intuitively, insider trading profit should be zero if market participants have the same information as managers. Kyle (1985) demonstrates that insider profits increase in insiders' information advantage. In his model, only the insider knows the liquidation value of the risky asset. Thus, the insider's information advantage can be defined as the variance of this liquidation value. In a model that incorporates financial disclosure into Kyle's (1985) setting, Baiman and Verrecchia (1996) show that insider profits decrease as public information becomes more precise. Their model explicitly links disclosure incentives, information asymmetry and insider trading profits.

However, Frankel and Li (2004) argue that Kyle's model does not fully capture market characteristics that limit insider profits. They give as an example, the fact that uninformed traders aware of information asymmetry may limit the losses sustained at the hands of insiders. According to Admati and Pfleiderer (1988) uninformed traders are likely to alter their trading behaviour, or in extreme, as stated by Merton (1987), leave the market.

Uninformed traders can also respond to information asymmetry by gathering information either themselves or via intermediaries. For example Barth *et al*. (2001) suggest that high information asymmetry makes private information acquisition more profitable. Although, Grossman and Stiglitz (1980) and Verrecchia (1982) state that the incentive to gather information reduce the profits of information gathering so, in equilibrium, the degree of information asymmetry and the amount of information gathering are such that information gatherers earn only a normal rate of return on their activities. Holden and Subrahmanyam (1992) find that competition among insiders also reduces the profitability of their trades.

Other actions limit the profits of insiders with superior private information, aside from private information acquisition and trader competition, such as corporate policies or governmental regulations because it can restrict inside trades. The literature presents numerous factors that can affect manager's ability to garner profits from private information. Nonetheless, some previous studies found that insider trades are profitable.

For example, the work of Seyhun (1986, 1992) and the work of Rozeff and Zaman (1988) show that insiders earn abnormal returns.

3. TAX PLANNING

The concept of tax planning is difficult to define. An evidence of that difficulty is the set of different expressions present in empirical literature to refer these practices, for example, tax planning (Cooper, *et al*. 2020; Halon and Heitzman, 2010), tax management (Minnick and Toga, 2010), tax avoidance (Anouar and Houria, 2017), among other.

Flesch (1968) defined tax avoidance as the art of avoiding tax without actually breaking the law. So Oats (2005) considered this definition wide and it fails to understand the degrees and the distinctions between the acceptable and unacceptable tax avoidance. Other authors considered tax avoidance as a legal activity representing activities within the boundaries of the law, whereas tax evasion is illegal (Blaufus, et al., 2016). The concept is not always use with the same meaning which difficult the comparison between empirical studies results. Minnick and Noga (2010: 708) define tax management "*as the ability to pay a low amount of taxes over*

a long period of time".

Tax planning activities often involve a large amount of monetary resources. Fees related to tax and legal area represent around 30% of the revenues of International Accountancy firms (AccountancyAge, 2016). There are several factors firms take into account before engage into those practices. Some firms limit their tax planning activities based on reputational effects. They fear to be considered poor corporate citizens for having low tax rates (Hanlon and Slemrod, 2009). Other companies implement tax planning activities in order to increase financial accounting results. Firms engage in tax planning activities with the purpose to improve accounting results. Although Graham *et al*. (2014) state that it´s important that tax planning activities do not harm earnings per share. Also firms attend to Generally Accepted Accounting Principles Effective Tax Rate (GAAP ETR) and paid cash taxes before defining tax planning strategies.

McBarnet (1992: 334) refers that large corporation compliance strategy tend to "*to escape tax. but at the same time, whether successful in that first goal or not, it allows them to escape any risk of stigma or penalty*". Companies tax avoidance is, in most situations, possible due to the various interpretations of the tax law letter (Sikka and Haslam, 2007). It depends on the use of preferential provisions in the tax code, such as exclusions, exemptions, deductions, credits, preferential rate and deferral of tax liability. In this context companies with good tax planning strategies are able to legally avoid a high amount of taxes. These savings have enormous possibilities through the use of foreign Direct Investment (FDI) options. Some researchers state tax planning as a key factor for competitiveness in a competitive environment (Anouar and Houria, 2017). Nowadays International institutions like OEDC or European Commission have been made efforts to fight illegal tax avoidance. For example, according to news published on 4th October 2017 the European Commission has ruled that Amazon must pay €250m in back taxes to Luxembourg. European Commission is developing efforts to crack down on tax avoidance by tech giants (COM, 2017). Close to a third of the growth of the overall industrial output in Europe is already due to the uptake of digital technologies. In 2017, 9 out of the top 20 companies by market capitalisation were technology companies, accounting for 54% of the total top 20 market capitalisation (PWCb, 2017).

Walker (2006) refers to several possible actions to improve corporate tax compliance namely simplifying the tax code, obtaining better data on noncompliance, continuing to oversee the effectiveness of Internal Revenue Service (IRS) enforcement, leveraging technology, and sending sound compliance signals through increased collections of taxes owed. The IRS has

estimated the amount of clear noncompliance to total $32 billion for tax year 2001 in the U.S. (Walker, 2006).

Considering small companies and entrepreneurs, Kirchler (1999, p. 133) refers that *"especially entrepreneurs who take the risk of establishing an enterprise perceive taxes as severe reduction of their profit and possibilities for reinvestment".*

Legal tax rules influence a large spectrum of corporative decisions in particular multinational corporations. In respect to finance theory it influences capital structure decisions, including the choice of debt, equity, leasing, and other financing instruments. The relation between tax administration and corporative tax payers play a role in corporate risk management, dividend, and share repurchase policies. Also taxes can shape the form and timing of compensation and pension policies. Sometimes they influence the choice of organizational form (corporate *versus* partnership). Finally, the complexity and richness of the international tax code provides a variety of incentives that affect corporate decisions.

Taylor and Richardson (2012) examined tax management practices within corporate groups and found that transfer pricing and the use of intragroup debt are the most widely used techniques to reduce the tax liabilities on groups. Also the world economy development and technologic advances create conditions for the appearing of new ways of develop business activities. COM (2017) outlines some examples: online retailer model, (business model of Amazon, Zalando, Alibaba); social media model (business model of Facebook, Xing, Qzone); subscription model (Netflix, Spotify, iQiyi; and collaborative platform model, (Airbnb, Blablacar, Didi Chuxing). According to PWCa, (2017:6)"the effective tax rate for digital business models lies between -10% and 25%". On average, digital business models are taxed at a rate of 10.20% which is 11.73% percentage point lower than traditional business models. The reason for this is an assumed higher portion of costs that do not require capitalisation in the investment structure (in particular software developed in-house and intangible assets) as well as more favourable depreciation rules for digital capital goods and the applicability of special tax incentives for research, development and innovation (PWCb, 2017).

4. RELATION BETWEEN INFORMATION ASYMMETRY, DISCLOSURE POLICY AND CORPORATE TAX STRATEGIES

According to Bergh *et al.* (2019) information asymmetry is a condition wherein one party in a relationship has more or better information than another. To Johnson and So (2018) the

severity and content of asymmetric information influences most interactions between economic agents, particularly in cases of adverse selection or moral hazard.

Literature provides, essentially, two potential mechanisms through which disclosure quality was expected to reduce information asymmetry: by altering the trading incentives of informed and uninformed investors so that there is relatively less trading by privately informed investors; and by reducing the likelihood that investors discover and trade on private information (Brown and Hillegeist, 2007).

In relation to the first mechanism, Merton (1987) argues that investors are more likely to invest and trade in firms that are well known or that they judge favorably. If higher disclosure quality increases a firm's visibility and/or reduces the costs of processing firm specific public information, then higher disclosure quality will induce more trading in firm's stock by uninformed investors. Also Fishman and Hagerty (1989) use a similar argument. So, quality will be associated with relatively less informed trading, which in turn will reduce information asymmetry. To Brown and Hillegeist (2007: 444) the presence of information asymmetry creates "*an adverse selection problem in the market when privately informed investors trade on the basis of their private information*". In this sense, there is the risk that an uninformed investor will trade against a privately-informed investor. For the authors a firm's choice of disclosure quality affects this information risk by altering the distribution of public and private information among investors.

In relation to the second mechanism, Verrecchia (1982) examines a setting where public information disclosed by the firm is a perfect substitute for private information. He shows that the amount of costly private information that investors choose to acquire is generally decreasing in the amount of firm-disclosed public information. Diamond (1985) also finds that the incentives for investors to acquire private information are reduced when firms disclose information publicly. Gelb and Zarowin (2002) and Lundholm and Myers (2002) find that current stock returns reflect more information about future earnings when disclosure quality is higher. Also Brown and Hillegeist (2007) state that firms with high disclosure quality are more likely to publicly release material information promptly and provide forward-looking information. As such, the authors argue that higher disclosure quality reduces private information search incentives and that more informativeness disclosures reduce the total set of information about future earnings that can be privately discovered about a firm. Since there is less information available to be discovered, in addition to the reduced search incentives, the authors expect that the frequency of private information events will be declining in disclosure

quality. Admati (1985) , Wang (1993), Dow and Gorton (1995) and Easley and O'Hara (2004) all model the activities of informed and uninformed traders, and they found that, because of the different degree of available information, informed traders and uninformed traders invest in different portfolios. Specifically, informed traders construct their portfolios on the efficient frontier associated with their superior information. Since uninformed traders have inferior information, they cannot "*replicate*" the informed traders' portfolios, thus their portfolios will always locate below the informed traders' efficient frontier. As selective disclosure causes information asymmetry, it makes informed traders better at the expense of uninformed traders.

The framework developed by Easley and O'Hara (2004) consider both public information and private information together. They provide an analytical model to demonstrate how a firm's information structure affects its capital market behavior. Their findings suggest that for stocks with more private information and less public information, uninformed investors require a higher rate of return as compensation because more private information increases information asymmetry and the information risk uninformed investors face.

In addition to disclosure's effect on information asymmetry, the previous arguments also show that the level of information asymmetry is likely to influence the firm's choice of disclosure quality, because the firm may choose a higher level of disclosure quality when the current level of information asymmetry is high.

Tax planning by firms is a highly significant activity. Tax planning by firms is of wider public interest since it can affect the level of provision of public goods which can then contribute to social issues (Slemrod, 2004). Although traditionally tax planning has been viewed as benefiting shareholders via increased after tax earnings, more recently the underlying motivation has been questioned. Desai and Dharmapala (2006) argue that when an information asymmetry exists between managers and shareholders with respect to tax planning, it can facilitate managers acting in their own interests resulting in a negative association between tax planning and firm value.

According to Hanlon and Heitzman (2010), tax avoidance is seen as the reduction of explicit cash taxes, which includes all types of transactions, from investing in a municipal bond to using tax shelters.

Kerr (2012) finds that information asymmetry leads to tax avoidance. In contrast, several other studies find that aggressive tax planning affects earnings quality and information

asymmetry (e.g., Hanlon (2005), Ayers, Jiang, and Laplante (2009), Comprix, Graham, and Moore (2011), and Balakrishnan, Blouin, and Guay (2012)).

According Chen and Lin (2017), the question of whether the information environment affects or is affected by tax avoidance is under debate because the direction of the causality between these two constructs is unclear. Furthermore, unobservable factors could be correlated with both information asymmetry and tax avoidance at the same time. These authors found that firms avoid tax more aggressively after a reduction in analyst coverage. This effect is mainly driven by firms with higher existing tax-planning capacity, smaller initial analyst coverage, and a smaller number of peer firms. Moreover, the effect is more pronounced in industries where reputation matters more and in firms subject to less monitoring from tax authorities.

The authors also argue that financial analysts care about corporate tax policies because a firm's tax shield is associated with capital budgeting, cost of capital, and eventually firm valuation. Financial analysts have both the abilities and incentives to produce and distribute tax-related information and hence reduce information asymmetry between the firms they cover and their investors. This reduction in information asymmetry might make it more difficult for a firm to hide earnings through tax sheltering or complicated financial structures because the transaction costs for tax avoidance will tend to be higher.

Chen and Lin (2017) find that a significant increase in tax avoidance exists only in the subsample of firms with low initial analyst coverage. This finding further strengthens the main hypothesis that information asymmetry materially affects corporate, the cost includes both direct cost and indirect cost. Direct costs include the risk of being detected by tax authorities, and indirect costs include reputation costs and financial costs. The authors also find that the strong effects of analyst coverage on tax avoidance are mostly concentrated in the consumer-oriented industries, as customer perception of a firm is more important in these industries (also see Hanlon and Slemrod (2009) and Graham et al. (2014). Graham et al. (2014) provide evidence that if tax avoidance hurts a firm's overall reputation among customers, it will be more cautious in its tax-avoidance behavior. Chen and Lin (2017) also find that the effect of a reduction in analyst coverage on tax avoidance is more pronounced for firms with a smaller number of peer firms and when tax-authority monitoring is low.

5. CONCLUSION

This paper examines the relation between information asymmetry, disclosure policy and tax planning activities. The added value of this work relies on the analysis of empirical literature

results about information asymmetry, disclosure policy and tax planning, providing a more extensive overview of this relation. The information asymmetry results from the fact that managers have more and much better information, than the general investors, about the present situation and future perspectives of the company. The expression tax planning was applied to refer to all the activities designed to have a positive effect on effective tax rate. From an economic perspective it is a rational behaviour that a company uses legal loopholes in order to reduce the amount of taxes to pay.

Academic research point financial analysts as a way to reduce the information asymmetry between firms and investors, and as a consequence, they reduce corporate tax avoidance.

Some authors argue that if shareholders want to monitor firms' tax related decision, disclosure policies and tax regulatory bodies should consider requiring increased tax related disclosures by firms. Increased disclosure reduces "illegitimate" activity and so shareholders and tax administrators would benefit.

However, other authors argue that with increased tax related disclosure, managers are discouraged from pursuing "legitimate" tax planning activities. So, it's difficult to determine the extent and form of additional disclosures and the boundary between "legitimate" and "illegitimate" tax planning.

This study provides insights that tax authorities and politicians can use to better focus their strategies and actions in order to increase compliance, reduce tax evasion, fight underground economy and increase country´s competitiveness.

References

AccountancyAge. (2016). The Top 40 Networks & Associations 2016: The Survey, Available at https://www.accountancyage.com/aa/analysis/1776670/top-35- networks-2013-the-survey, Accessed 19.10.207

Admati, A. (1985). "A Noisy Rational Expectations Equilibrium for Multi-Asset Securities Markets" Econometrica. May, 629-657.

Admati, A. & Pfleiderer, P. (1988). "A Theory of Intraday Pattern: volume and price variability" Review of Financial Studies. 1 (1), 3-40.

Almutairi, A. et al. (2009). "Auditor tenure, auditor specialization, and information asymmetry" Managerial Auditing Journal. 24 (7), 600-623.

Ayers, B. C.; J. Jiang, & S. K. Laplante (2009). "Taxable Income as a Performance Measure: The Effects of Tax Planning and Earnings Quality." Contemporary Accounting Research, 26, 15–54.

Akerlof, G. (1970). "The Market for Lemons: Quality uncertainty and the market mechanism" The Quarterly Journal of Economics. 84 (3), 488-500.

Attig, N. et al. (2006). "Effects of large shareholding on information asymmetry and stock liquidity" Journal of Banking and Finance. 30, 2875–2892.

Anouar, D & Houria Z. (2017). The determinants of tax avoidance within corporate groups: Evidence from Moroccan Groups, International Journal of Economics, Finance and Management Sciences, Vol. 5 No 1, pp.57-65.

Baiman, S. & Verrecchia, R. (1996). "The Relation among Capital Markets, Financial Disclosure, Production Efficiency, and Insider Trading" Journal of Accounting Research. 34, 1-22.

Balakrishnan, K., J. L. Blouin, & W. R. Guay (2012). "Does Tax Aggressiveness Reduce Corporate Transparency?" Working Paper, London Business School.

Barth, M. et al. (2001). "Analyst coverage and intangible assets" Journal of Accounting Research. 39 (1), 1–34.

Barry, B. & Brown, S. (1985). "Differential information and security market equilibrium" The Journal of Financial and Quantitative Analysis. 20 (4), 407-422.

Bergh, D. D., Ketchen Jr, D. J., Orlandi, I., Heugens, P. P., & Boyd, B. K. (2019). Information asymmetry in management research: Past accomplishments and future opportunities. *Journal of management*, *45*(1), 122-158.

Bhattacharya, U. & Spiegel, M. (1991). "Insiders, outsiders and markets breakdowns" The Review of Financial Studies. 4(2), 255-282.

Blaufus, Kay; Braune, Matthias, Hundsdoerfer, Jochen & Jacob, Martin (2016). "Does legality matter? The case of tax avoidance and evasion" Journal of Economic Behavior & Organization 127 (2016) 182–206.

Botosan, C. & Plumlee, M. (2002). "A re-examination of disclosure level and expected cost of equity capital" Journal of Accounting Research. 40 (1), 2-40.

Brown, S. & Hillegeist, S. (2007). "How disclosure quality affects the level of information asymmetry" Review of Accounting Studies. 12, 443-477.

Bushee, B. & Noe, C. (2000). "Corporate Disclosure Practices, Institutional Investors and Stock Return Volatility" Journal of Accounting Research. 38, 71-202.

Chau, G. & Gray, S. (2002). "Ownership structure and corporate voluntary disclosure in Hong Kong and Singapore" The International Journal of Accounting. 37(2), 247- 265.

Chen & Lin (2017). "Does Information Asymmetry Affect Corporate Tax Aggressiveness?" Journal of Financial and Quantitative Analysis Vol. 52, No. 5, pp. 2053_2081.

COM (2017). 547 final, (2017), A Fair and Efficient Tax System in the European Union for the Digital Single Market.

Comprix, J., R. C. Graham, & J. A. Moore (2011). "Empirical Evidence on the Impact of Book-Tax Differences on Divergence of Opinion among Investors." Journal of the American Taxation Association, 33, 51–78.

Diamond, D. (1985). "Optimal release of information by firms" Journal of Finance. 40 (4), 1071-1094.

Demsetz, H. (1968). "The cost of transacting" Quarterly Journal of Economics. 82, 33-53.

Diamond, D. (1985). "Optimal release of information by firms" Journal of Finance. 40 (4), 1071-1094.

Desai, M. A., & D. Dharmapala (2006). “Corporate Tax Avoidance and High-Powered Incentives.” Journal of Financial Economics, 79, 145–179.

Diamond, D. & Verrecchia, R. (1991). “Disclosure, liquidity and the cost of capital” Journal of Finance. 46, 1325-1359.

Dow, J., & Gorton, G. (1995). “Profitable Informed Trading in a Simple General Equilibrium Model of Asset Pricing” Journal of Economic Theory. 67, 327-369.

Easley, D. et al. (1996). “Liquidity, information, and infrequently traded stocks” Journal of Finance. 51, 1405–1436.

Easley, D. & O'Hara, M. (2004). “Information and the Cost of Capital” Journal of Finance. 59, 1553-1583.

Eng, L. & Mak, Y. (2003). “Corporate Governance and voluntary disclosure” Journal of Accounting and Public Policy. 22 (4), 325-345.

Cheyney & Levine (2020). “Public Disclosures and Information Asymmetry: A Theory of the Mosaic” The Accounting Review, 95 (1): 79–99.

Cooper, Maggie & Nguyen, Quyen T.K. (2020). “Multinational enterprises and corporate tax planning: A review of literature and suggestions for a future research agenda” International Business Review. June 2020 29(3)

Fishman, M. & Hagerty, K. (1989). “Disclosure Decisions by Firms and the Competition for Price Efficiency” Journal of Finance. 44, 633-646.

Flesch, M.C. (1968). “Tax avoidance: the attitude of the courts and the legislature”, Current Legal Problems, Vol. 21, pp. 215–38.

Frankel, R. & Li, X. (2004). “The Characteristics of a Firm’s Information Environment” Journal of Accounting and Economics. 37, 229–259.

Gelb, D. & Zarowin, P. (2002). “Corporate disclosure policy and the informativeness of stock prices” Review of Accounting Studies. 7(1), 33–52.

Graham, J. R., M. Hanlon, T. Shevlin; & N. Shroff (2014). “Incentives for Tax Planning and Avoidance: Evidence from the Field.” Accounting Review, 89, 991–1023.

Grossman, S. & Stiglitz, J. (1980). “On the Impossibility of Informationally Efficient Markets” American Economic Review. 70, 393-408.

Hanlon, M., & J. Slemrod (2009). “What Does Tax Aggressiveness Signal? Evidence from Stock Price Reactions to News about Tax Shelter Involvement.” Journal of Public Economics, 93, 126–141.

Hanlon, M. (2005). “The Persistence and Pricing of Earnings, Accruals, and Cash Flows When Firms Have Large Book-Tax Differences.” Accounting Review, 80, 137–166.

Hanlon, M., & S. Heitzman. (2010). “A Review of Tax Research.” Journal of Accounting and Economics, 50, 127–178.

Ho, S. & Wong, K. (2001). “A study of the relationship between corporate governance structure and the extent of voluntary disclosure” Journal of International Accounting, Auditing and Taxation. 10 (1), 139-156.

Holden, C. & Subrahmanyam, A. (1992). “Long-Lived Private Information and Imperfect Competition” Journal of Finance. 47, 247-270.

Jensen, M. & Meckling, W. (1976). “Theory of the firm: managerial behaviour, agency costs and ownership structure” Journal of Financial Economics. 3 (4), 305-360. Electronic version available at http://ssrn.com/abstract=94043, 1-77.

Johnson, T. & So, E. (2018). “A Simple Multimarket Measure of Information Asymmetry”, Management Science, Articles in Advance, pp. 1–26

Lambert, R. et al. (2007). “Accounting Information, Disclosure, and the Cost of Capital” Journal of Accounting Research. 45, 385-420.

Lang, M. & Lundholm, R. (1993). “Cross-sectional determinants of analyst ratings of corporate disclosures” Journal of Accounting Research. 31 (2), 246-271.

Leuz, C. & Verrecchia, R. (2000). “The economic consequences of increased disclosure” Journal of Accounting Research. 38, 91-124.

Kanagaretnam, K. et al. (2007). “Does good corporate governance reduce information asymmetry around quarterly earnings announcements?” Journal of Accounting and Public Policy. 26(4), 497-522.

Kerr, J. (2012). “The Real Effects of Asymmetry: Evidence from Tax Avoidance.” Working Paper, Columbia Business School.

Kim, O. & Verrecchia, R. (1994). “Market liquidity and volume around earnings announcements” Journal of Accounting and Economics. 17, 41-68.

Kyle, A. (1985). "Continuous Auctions and Insider Trading" Econometrica. 53, 1315-1335.

Kirchler, E. (1999). “Reactance to taxation: Employers´ attitudes towards taxes”, Journal of Social-Economics, Vol. 28, pp. 131-138.

Lev, B. (1988). “Toward a Theory of Equitable and Efficient Accounting Policy” The Accounting Review. 63 (1), 1-22.

Leuz, C. & Verrecchia, R. (2000). “The economic consequences of increased disclosure” Journal of Accounting Research. 38, 91-124.

Lundholm, R. & Myers, L. (2002). “Bringing the future forward: The effect of disclosure on the return-earnings Relation” Journal of Accounting Research. 40(3), 809–839.

McBarnet, D. (1992). “The Construction of Compliance and the Challenge of Control: The Limits of Noncompliance Research”, In J. Slemrod (ed). Why People Pay Taxes: Tax Compliance and Enforcement, University of Michigan Press, Ann Arbor, pp.333-45.

Merton, R. (1987). “A Simple Model of Capital Market Equilibrium with Incomplete Information” Journal of Finance. 42 (3), 483-510.

Minnick, K. & Noga, T. (2010). “Do corporate governance characteristics influence tax management?”, Journal of Corporate Finance, Vol. 16 No. 5, pp. 703-718.

Myers, S. & Majluf, N. (1984). “Corporate financing and investment decisions when firms have information that investors do not have” Journal of Financial Economics. 13(2), 187-221.

Oats L. (2005). “Distinguishing closely held companies for taxation purposes: the Australian experience 1930–1972”, Accounting, Business and Financial History, Vol. 15 No 1, pp. 335–61.

Petersen C. & Plenborg, T. (2006). “Voluntary disclosure and information asymmetry in Denmark” Journal of international Accounting, Auditing and Taxation. 15, 127- 149.

PWCa), (2017). Digital Tax Index 2017: Location tax attractiveness for digital business models http://www.pwc.de/digitalisierungsindex2017.

PWCb), (2017). Global Top 100 Companies by market capitalisation. Scholes, M.S.; Wolfson, M.A.; Erickson, M.; Maydew, E.L.; Shevlin, T. (2005), Taxes and Business Strategy: A Planning Approach, third ed. Prentice-Hall, Upper Saddle River, NJ

Ranaldo, A. (2002). "Transaction costs on the Swiss stock" Financial Markets and Portfolio Managemnet. 16, 53-63.

Rozeff, M. & Zaman, M. (1988). "Market efficiency and insider trading: New evidence" Journal of Business. 61, 25-44.

Sikka, P., & Haslam, C. (2007). "Transfer pricing and its role in tax avoidance and flight of capital: some theory and evidence", In Centre for global accountability, seminar series University of Essex, UK.

Slemrod, J. (2004). The economics of corporate tax selfishness. *National Tax Journal,57*(4), 877-899.

Seyhun, H. (1986). "Insiders' profits, costs of trading, and market efficiency" Journal of Financial Economics. 16, 189-212. Seyhun, H. (1992) "The Effectiveness of the Insider Trading Sanctions" Journal of Law and Economics. 35,149–182.

Sikka, P., & Haslam, C. (2007). "Transfer pricing and its role in tax avoidance and flight of capital: some theory and evidence", In Centre for global accountability, seminar series University of Essex, UK.

Stoll, H. (2000). "Friction" Journal of Finance. 55, 1479-1514.

Taylor, G. & Richardson, G. (2012). "International corporate tax avoidance practices: evidence from Australian firms", International Journal Accounting, Vol.47, pp. 469–496.

Trabelsi, S. et al. (2004). "The management of financial disclosure on corporate websites: A conceptual model" Canadian Accounting Perspectives, 3 (2), 235-259.

Trabelsi, S. et al. (2008). "Incremental Voluntary Disclosure on Corporate Websites, Determinants and Consequences" Journal of Contemporary Accounting and Economics. 4 (2), 120-155.

Verrecchia, R. (1982). "Information acquisition in a noisy rational expectations economy" Econometrica. November, 1415-1430.

Walker, D.M. (2006). Challenges to Corporate Tax Enforcement and Options to Improve Securities Basis Reporting. Statement to United States Government Accountability Office.

Wang, J. (1993). "A Model of Intertemporal Asset Prices Under Asymmetric Information" Review and Economic Studies. 60, 249-282.

Watts, R. & Zimmerman, J. (1986). Positive Accounting Theory. Englewood Cliffs, NJ: Prentice-Hall.

Welker, M. (1995). "Disclosure policy, information asymmetry and liquidity in equity markets" Contemporary Accounting Research. 11(2), 801-827.

Wu, W. (2019). Information asymmetry and insider trading. *Fama-Miller Working Paper*, 13-67.