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Private SME accounting in Poland. Does bank lending influence their accounting and financial reporting practice?

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Abstract: Using data from private Polish Small and Medium-sized Entities (SMEs) for 2003-2013, I investigate in this paper the influence of bank borrowing on their book-tax conformity and accounting practices. In order to verify the importance of the link between tax law and the accounts of private firms, I created variables capturing the records according to local GAAP and I separated records in line with tax rules reflecting the impact of tax law on the accounting practices. Besides the book-tax differences measurement proposed by Watrin *et al.* (2014), I applied Tang's (2015) approach to estimate book-tax conformity that captures permanent and temporary book-tax differences. I find that bank lending increases the book-tax conformity of profitable firms. Tax avoidance applied by borrowers has a lower impact on book-tax differential than in the case of non-borrowers. Moreover, the findings indicate that monitoring by lenders force SMEs to adopt more advanced accounting practices by adhering to the prudence principle. This allows lenders to learn more about the ability of borrowers to repay loans thanks to more informative earnings. However, only 22.5% of borrowers applied accounting standards that are not recognized by tax law.

Keywords: SME, book-tax conformity, private firms, bank lending, Poland

JEL codes: G32, H25, H26, H32, M41

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1. Introduction

In this paper I investigate the influence of bank borrowing on SME book-tax conformity and their accounting practices. The transition of Poland from a centrally-planned, predominantly state-owned economy to one based mainly on private companies, together with the urgent problem of corporate bad debt in the banking system, resulted in limited access to bank loans and a low share of bank debt in the capital structure of private firms. Increasing the opportunity to acquire external funding has required bank system reform and the establishment of a reliable accounting system. However, even after two decades, tax records still play the dominant role in providing financial information for at least 90% of the business sector in Poland, i.e., for those active firms that do not prepare financial statements due to a lack of accounting books (GUS, 2015). Partnerships (natural persons) are allowed to maintain tax records with no accounting books if their revenues are less than the €1.2M threshold. Natural person is a legal form of a firm set up by individuals (mostly more than one individual) that is taxed by PIT (personal income tax). More than 90% of active firms in Poland has got a legal form of the partnership (over 1.5 million entities) (Bank Pekao SA, 2016). Besides them there are almost 3 million of individuals that do business on their own account (self-employed) (registered in the REGON in the Central Statistical Office) (Siudaj, 2015). Most partnerships employ 5-9 employees (microfirms) in Poland. Besides financial, insurance and state institutions, it is solely obligatory for private limited liability companies and joint-stock companies to maintain accounting books in Poland. Thus, the choice of the legal form of a business is correlated with obligatory accounting records and access to bank debt. This is because banks require financial statements to evaluate a loan application. As a consequence, at least in part, the non-financial corporate debt-to-GDP ratio in Poland is still one of the lowest in the European Union, although it increased from 20% in 1995 to 46% in 2015.

I look in this paper at the link between tax law and the accounting of private SMEs in Poland, and the impact of bank lending on the extent in which their financial results and taxable income mirror each other (measured by book-tax conformity). I seek answer to the following research questions: Does debt financing provided by banks influence book-tax conformity in private companies in Poland? Additionally, are lenders really interested in high book-tax conformity when they extend debt to borrowers? And, should those lenders demand greater information regarding the loan-applicant's earnings (higher informative earnings)? Taking into account a more active role in management, one could notice that shareholders (or owners) of private small firms rely less on financial statements for monitoring managers. Consequently, it is even more interesting whether monitoring by lenders forces companies to adopt more advanced accounting practices than non-borrowers? Using a panel analysis of data on Polish private SMEs for the years 2003-2013, I investigate how bank lending affects factors associated with private firm book-tax conformity, taking into account

the impact of accruals**,** the recognition of transactions based on accounting standards, and the principles of prudence and matching (pensions, provisions for employee benefits and other provisions, and the revaluation of non-financial assets)**,** and separate the recognition of business operations in accordance with tax regulations by: depreciation and amortization, long-term and short-term deferred costs and tax avoidance. Book-tax differential results from the differences between accounting and tax law purposes and approaches to the recognition of costs and revenues. The main sources of book-tax differences are the impairment of assets, valuation at fair value, provision for warranty repairs, foreign exchange differences from the valuation as at the balance sheet date, provisions for employee benefits, interest accrued but not paid, interest due but not yet received, and unpaid wages, etc. These are temporary book-tax differences which are not respected by tax law in the current year, but which will reverse in the following period. Due to the reversal, these temporary book-tax differences are subject to deferred income tax. In contrast, permanent book-tax differential contains tax-exempt income and non-deductible expenses. The first covers tax-free dividend income and grants, whereas the latter mainly includes costs of representation and private placement advertising, catering services, donations, penalties, fines, interest for late payment of taxes and social insurance, and others. There is little empirical research on private firm financial reporting and book-tax conformity, mainly due to the lack of reliable data. With this study, I contribute to the literature by exploiting the fact that bank lenders use financial statements not only to evaluate a loan application, but also to monitor the borrower's financial standing. This allows me to study the impact of bank lending on private SMEs accounting and financial reporting practice in comparison with non-borrowers. Moreover, in Poland, private legal entities are required to conduct accounts both to calculate taxable income and to prepare an annual financial statement.

Book-tax conformity means the links between income tax and financial reporting rules, and to what extent tax rules influence financial accounting measurements. For this purpose, the differences between accounting income and taxable income are used. The taxable income is estimated by taxation divided by nominal tax rate. The larger the book-tax differential, the weaker the relationship between taxable income and accounting income (and the lower the book-tax conformity). I use alternative empirical measures, proposed by Watrin *et al.* (2014) and Tang (2015), to calculate book-tax conformity on a single-entity level. Because corporate reporting relying on records kept for tax purposes results in lower earnings quality (Hanlon *et al.*, 2005; Hanlon *et al.*, 2008; Plummer & Tse, 1999; Easton *et al.*, 2009), debt holders lose information of borrowers financial standing as a result of the higher book-tax conformity. While previous studies have typically examined book-tax conformity at international level (largely in relation to earnings management and tax avoidance), my study is among the first to consider the book-tax conformity of private companies from one country and compare the factors determining book-tax conformity between borrowers and non-borrowers out of private SMEs. In Poland, accounts are required

by corporate income tax law to calculate the taxable income of legal persons. The dominance of accounting books with no deferred tax observed for Polish private companies (74%) shows that accounting valuation and impairment (not accepted by tax regulation) do not play a substantial role. I find that higher book-tax conformity is constantly associated with an increase in non-bank borrowing, while with an increase in bank debt merely for profitable borrowers (in the model of the total temporary and permanent book-tax differential). Thus, my findings contribute to recent research on the relationship between book-tax conformity and capital structure (Blaylock *et al.*, 2016) which focus on total debt share in the market value of total assets. The results indicate that higher book-tax conformity increased reliance on debt in the corporate capital structure in the U.S. and caused a shift from equity to debt financing. My findings shed new light on the link between increased book-tax conformity and debt share in capital structure, taking into account separate bank debt and non-bank borrowings. This means that, in Poland, private companies with accounting books could improve their access to bank loans by increasing book-tax conformity till they remain profitable. The results offer compelling evidence that private firms recognize more conforming income when they are larger and have more tangible assets. Decreases in the book-tax conformity appear significantly related to the use of the accrual method by profitable borrowers (for the permanent book-tax differential), and the use of more advanced accounting practices, adhering to the *prudence principle* (for the temporary and permanent book-tax differences).

Prior research has shown that information asymmetry between lender and borrower hampers lender readiness to provide finance (Coluzzi *et al.*, 2012) and limits private firms (mainly SMEs) access to bank lending (Beck & Demirguc-Kunt, 2006; Chua *et al.*, 2011). To assess a firm's credit worthiness, lenders are likely to prefer the most reliable information regarding downside risk and the evaluation of the firm's collateral, as well as financial statements that are useful in assessing the timing and riskiness of the firm's expected future cash flows from existing projects and anticipated investments (Armstrong *et al.*, 2010). However, during the loan agreement, after the loan is granted, banks require reliable and timely measures of financial performance to monitor existing capital investments, resulting in changes in financial reporting. My findings reveal that unprofitable companies (with financial losses) have higher permanent and temporary book-tax differences than borrowers with fewer bank loans. This means that lender demand for information decreases book-tax conformity of borrowers, depending on their profitability. I contribute to the literature not only by providing a deep insight into the relatively unexplored area of behavioral response to changes in the degree of book-tax conformity, but also by analyzing a novel dataset of 30,000 private limited liability and non-public joint-stock companies.

The remainder of the paper is constructed as follows: Section 2 presents the main economic reforms Poland underwent during the transition period which shaped the environment for economic activity. Section 3 describes the interplay between tax and

financial reporting as one of key influences on the development of accounting in Poland. Section 4 provides a literature review and develops hypotheses. Section 5 outlines the research design and explains different approaches to measure book-tax conformity. Section 6 provides the results of the analyses. Finally, section 7 gives the conclusions.

2. Regulatory Reforms and Bank Lending for Business Sector in Poland

In the case of Poland, in a historically short-period, very deep and radical reforms made the irreversible turn from a centrally-planned economy and authoritarian political system to a liberal market economy and democratic society possible, which finally led to integration into the global economy and EU membership.

Regulation, including non-transparency, overly-complex taxes, the labor code (excessive employee protection and inflexible contracts) and social insurance contributions, hindered the growth of firms, imposed high costs on small companies and created uncertainty for them (Balcerowicz *et al.*, 1998). Additionally, dominant state or foreign companies enjoyed lower costs of credit compared to new entrants, and were able to potentially "crowd out" new entrants in credit markets (Hussain, 1994). The lack of external sources of finance impeded the development of new private firms and seemingly halted private sector growth. Retained profits were the main source of finance for investments of enterprises in Poland (Balcerowicz *et al.*, 1998). Furthermore, this situation reduced investor and lender demand for financial information, thereby discouraging firms from using advanced accounting. Companies confined themselves to respecting tax regulations and, as a consequence, their accounting books were also mainly based on tax regulations.

Sources of funding are an essential issue for business enterprises. Because of the limited availability of external capital, they invest less, do not use leverage, and grow more slowly (Rajan & Zingales, 1995). However, in Poland, most of the restructuring programmes envisaged writing off overdue payments to the treasury, the social security system and other forms of subsidy. On the one hand, this weakened financial discipline and raised expectations of the same debt relief and future financial injections. But, on the other hand, the level of public subsidies in Poland was too high - 1.3% of GDP in 2002 compared to 1.0% in the EU - with a predominance of hard-to-monitor indirect instruments (Kozarzewski *et al.*, 2004). In 1990-1992, bad debts owed to banks seriously threatened the stability of the Polish banking system. These debts were heavily concentrated in about 10% of the enterprise sector, with the remaining 90% of that sector almost debt-free (Gomułka, 1993). In 1993, the Enterprise and Bank restructuring programme was launched, preventing a crisis in the Polish banking system with the help of bank portfolio restructuring and recapitalisation, and bank-enterprise conciliation agreements, in

addition to improving bank capacity in risk assessment (Kozarzewski *et al.*, 2004). As a result of the afore-mentioned reforms, Poland was (and still remains) one of countries with the least debt-to-GDP ratio for non-financial corporations in the European Union, at 46.1%, while Germany stands at 54.9%, the Czech Republic at 56.6%, and a staggering 90.4% for Hungary as of mid-2015 (Fig. 1). The Financial Development Index for Poland is around 0.5, and the relationship between financial development and economic growth rate is on the upper incline of the bell-shaped curve (IMF, Sahay *et al.*, 2015). In Poland, during last two decades non-financial corporate debt-to-GDP ratio increased by 26 pp., from 19.9% at the end of 1995, to 46.1% by the middle of 2015. In the case of the euro area, non-financial corporate debt-to-GDP ratio rose from 51.3% of GDP at the end of 1997 to 104.8% as of 30th June 2015. Although in Poland the percentage of companies utilizing banking products to finance their activities is increasing, it is much lower than the EU average (ZBP, 2015, Dobbs *et al.*, 2015). Often, even creditworthy businesses decide not to obtain external capital because of the high costs of bank loans not only financial, but also administrative costs, including an obligation to audit financial statements. Białek-Jaworska and Nehrebecka (2016) show that SMEs in Poland use much less bank credit than their creditworthiness would allow, implementing financial strategies that follow the 'pecking-order' theory.

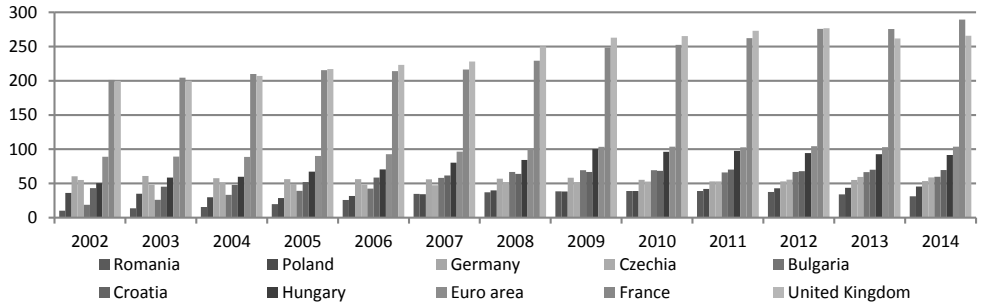


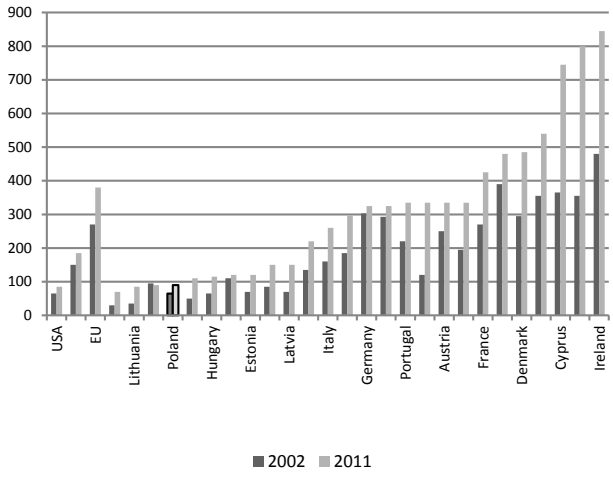
Figure 1. Non-financial corporate debt-to-GDP ratio (%)
Source: based on the Bank for International Settlements (BIS)

In Poland, only 10% of active companies do bookkeeping and prepare financial statements (GUS, 2015) needed for the analysis of a loan application. The lack of accounting records and financial statements is a major reason for limited access to bank credit for companies. In this case, the basis for assessing the creditworthiness of a company is the tax returns of the entrepreneur-owner. However, if the owner of the company optimizes its taxation, i.e. commits to paying the lowest possible taxes, and subsequently reports a very low income, this could be a factor that prevents the obtaining of a bank loan. In the case of bank lending to an individual, the bank takes into account the stability of income sources (requiring an employment contract for an indefinite period). While in the case of the analysis of a business loan application, companies are required to present at least a simplified balance sheet and an income

statement in the absence of accounting records this is not so easy requiring a recording of business operations for their aggregating and the preparing of a balance sheet and income statement. In contrast, companies with accounting books obtain a bank loan on the basis of financial statements prepared on the basis of their accounts, not their tax returns. The low book-tax conformity allows them to obtain a bank loan, despite sustaining a tax loss, or non-payment of income tax due to corporate income tax (CIT) deductible tax losses. The company may deduct tax losses from the tax base for 5 years at no more than 50% of the losses from previous years in a given year. Data from the Ministry of Finance in Poland indicates that 60% of companies - potential taxpayers of corporate income tax CIT - do not pay income tax (corporate income tax = 0). This can explain why partnerships also search for an opportunity for tax optimization and tax avoidance.

The involvement of foreign banks in Poland is relatively large compared with euro area countries, although less than in some countries of Central and Eastern Europe. Based on a study of the impact of cross-border banks on financial stability, Schoenmaker & Wagner (2011) showed that the banking sectors of new countries are dependent on the banks of the old EU countries (EU-15) due to the significant involvement of foreign capital. In recent years there has been a decrease in the average share of foreign capital and an increase in the average measures of concentration.

The comparative cross-country statistics (Fig. 1-3) show that bank finance is less important in Poland than many other countries. Poland has a relatively small banking sector (Fig. 2) with over twice as many bank loans held by households than companies (Fig. 3). SMEs finance most company investment with the use of their own funds (64%), bank loans, borrowings or leasing (18%), and funds from foreign sources (8%). The greatest involvement of internal funds in financing investments is observed in large companies (73.6%), decreasing with the transition to a reduced company size, i.e., medium (64.8%) and small (62.5%). The number of companies that finance investments through leasing is increasing each year. In 2013, only 7% of companies benefited from leasing, rising to 11% in 2014, 13% in 2015 and again in 2016 to 17%. For the same period, leasing to finance investments rose to 34% for small companies. This could be explained by the low requirements of financial statements for confirming the financial standing of the lessee. Fourteen percent of respondents to the Panel Polish Enterprises survey conducted by National Bank of Poland indicated there was no possibility to obtain bank loans due to a lack of creditworthiness. By far the most common reason or the self-financing current business operations is the absence of the need to use external funds (54%), followed by an aversion to debt (28% in 2015, 31% in 2016). For the remaining 9% of respondents, equity seems to be cheaper than external financing.



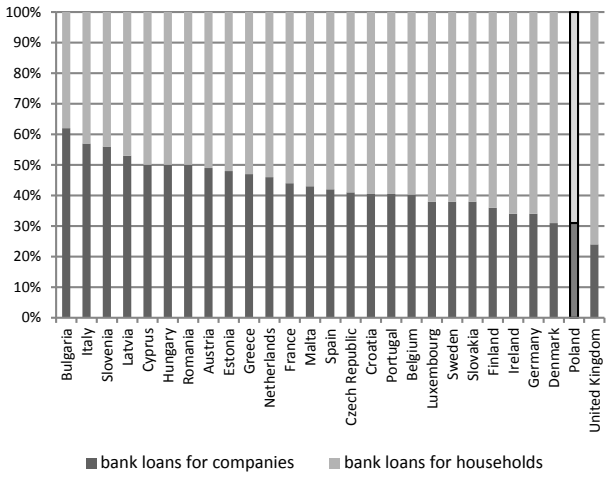


Figure 2. Size of the banking sector of EU members, % of GDP

Source: EBC. Eurostat, Bijlsma & Zwart (2013) elaboration based on

Figure 3. Structure of loans to non-financial sector in the EU at the end of 2014

Source: National Bank of Poland the European Central Bank data.

3. Accounting in Poland - the interplay between tax and financial reporting

In Poland, the central setting of the reporting model and accounting principles fell within the competence of the Ministry of Finance. The measurement concept was based on the full accrual basis (Nowak, 2015). The core of the Accounting Act has

its emphasis on disclosure rather than measurement and giving a "true and fair view" of an entity's financial position (wealth and liabilities), and financial performance and profitability. The 1994 Accounting Act introduced cash-flow reporting (solely for larger companies), the concept of deferred tax, business group accounting, and the increased role of the prudence principle through provisions for various risks and contingencies.

However, the interplay between tax and financial reporting is one of the key influences on the development of accounting (e.g. unwillingness to adopt the IFRS). This is because the tax system involves specific principles for recognising revenues and the costs of their realisation, strict principles of fixed assets and intangibles amortization and depreciation, and the adjustment of their value. The 1992 Act on corporate income tax empowered the Minister of Finance to determine, by way of decree, which property elements are regarded as tangible assets and which as intangible, and to lay down the principles of their amortization, depreciation, and value adjustment. The high impact of the tax law on accounting in Poland results in differences in how much the accrual basis is modified, and the method of applying the matching concept. Entities can make only tax closures, but this would result in limited credibility as a consequence of the loss of the neutrality of their financial information (Nowak, 2015). Under high book-tax conformity, tax policymakers are likely to intervene in the standard-setting process (Atwood *et al.*, 2010). In 1999, only 5.7% of active enterprises did bookkeeping, including primarily legal persons (limited liability and joint-stock companies) (Fig. 4). In 2013 that figure had risen to 10.2%. Although Polish accession to the European Union and the related preparations in the pre-accession period undoubtedly increased awareness of Polish enterprises in terms of the benefits of bookkeeping, in 2001 and 2002 there were still large companies employing over 250 employees that did not maintain accounting books. In 2002, the number of medium-sized entities that did not conduct accounts nearly doubled. This could be due to the amendment of the Accounting Act, which allows enterprises with revenues from sales of goods, final products and financial operations of less than the €800,000 threshold (in the previous year) to refrain from keeping accounting books. Under the act on natural persons income tax, the limit was the same, but was related to revenues from economic activity. Conversely, it could be due to enterprises adjusting to the "dot.com" crisis (the bursting of the internet technology-related share speculation bubble). After increasing the limit for non-obligatory accounting for partnerships to €1.2M Euro in 2009, there were again large companies that did not conduct accounts in 2010 & 2011, albeit smaller in number. In 2002, 868 medium-sized enterprises (with more than 50 employees) had no accounting records, and in 2004, the year of Poland's accession to the EU, the figure was 539. Prior to the subprime mortgages crisis of 2007, there were 444 entities without accounting records, and 321 companies in 2013 (almost 10% of the large companies in Poland). The remainder of the business sector that did not keep accounting books, maintained various forms of registers for tax purposes. The most popular of these registers, 49.6% of enterprises in 1999 and 67.5% of the business

sector in 2013, were ledgers of revenue and expense (Fig. 4). These allowed the calculation solely of taxable income, recording revenue (sales of goods and services and other revenue items) and costs (categorised into trade goods and materials at purchasing prices, purchase-related costs and payroll-related expenses and other items).

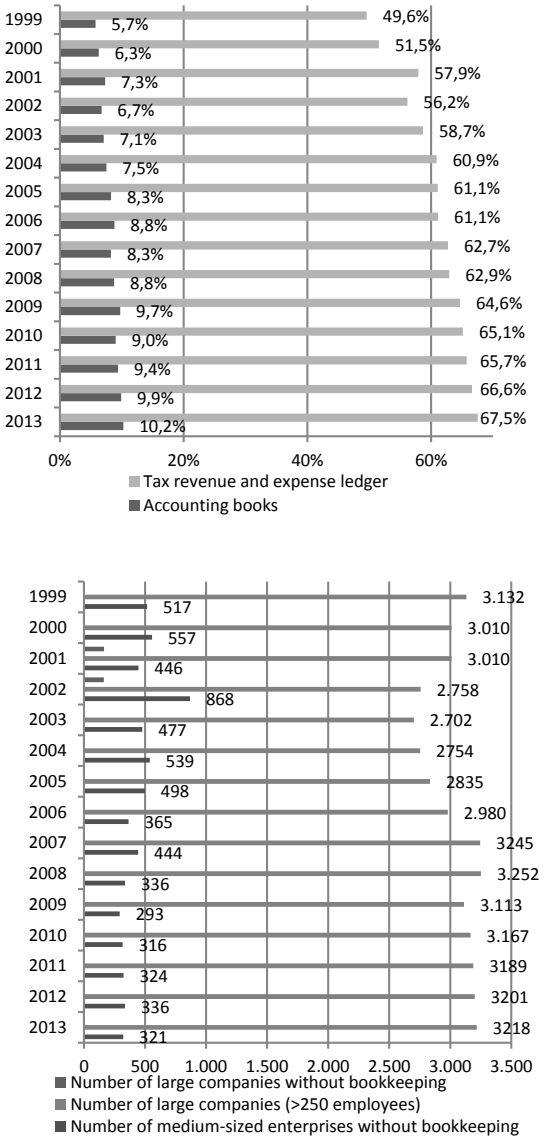


Figure 4. Use of accounting books vs. tax records by the Polish business sector
Source: based on the Polish Central Statistics Office database.

The remainder of the entities recorded only revenue for tax purposes or did not record any revenue or costs due to paying tax in an amount calculated by the tax office according to a tax card (GUS, 2003, 2007; Białek-Jaworska & Matusiewicz, 2015).

Although Poland has a well-developed legal framework that regulates enterprise sector functionality, the main threat to this functionality is the poor enforcement of existing laws (Kozarzewski *et al.*, 2004), particularly in the scope of private corporate bookkeeping and financial reporting. Hope (2003) explained that environments with a high ownership concentration have low disclosure levels. However, this significant proportion of medium-sized businesses that were not engaged in bookkeeping could be influenced by the development of financial and accounting software to keep tax returns (including ledgers of revenue and expense) with additional tools supporting the management of the company, including records of settlements with suppliers and customers, billings, payments, and even ratio analysis (based on the author's survey of the ERP software offered for SME presented on ICT vendors web sites in Poland, conducted in 2009).

The accreditation of the accounting profession through the requirement to hold a certificate for bookkeeping services, administered by the Ministry of Finance, was abolished on August 9, 2014, (under the law of 9 May 2014) to facilitate access to perform certain regulated professions. By August 2014, the exam or university degree covering the specialisation in Finance and Accounting and completed postgraduate studies in the area of accounting combined with a requirement of 2 or 3 years of professional experience in accounting or auditing, serves as the basis for certification. In 2016 the certification and exams on tax advisor professions still remains and is also conducted by the Ministry of Finance. Tax advisors also have the authority to provide bookkeeping services. The tax advisor statutory competence to provide account-keeping services is more evidence of the significant influence of tax law on accounting practice in private companies in Poland.

According to Art. 9.1 of the Corporate Income Tax Act, taxpayers are required to keep their accounting records in accordance with separate regulations, in a manner which ensures the identification of: taxable income (or loss), tax base, tax due for the tax year, as well as a presentation of fixed assets and intangible assets with information needed to calculate depreciation write-offs. According to Art. 27 of the Corporate Income Tax Act, taxpayers required to prepare a financial report shall submit their financial reports to the Tax Office together with a copy of the shareholders' meeting resolution where the company financial report is approved. Taxpayers required to have their financial report audited shall, in addition, submit the chartered auditor’s statement and report within 10 days of the annual report approval. The additional information attached with the financial report shall include a specification of the main items differing the taxable base from the gross financial income.

The permanent book-tax differential results from differences between accounting and tax law purposes and approaches to the recognition of costs and revenues.

Temporary differences, on the other hand, are caused by the fact that accounting principles and tax regulations do not define in the same way the moment when revenue is generated or a cost is incurred. Accounting books are a source of information for tax-related purposes and are expected to enable the correct identification of taxable income. Figure 5 presents taxable income identification methods: (1) pre-tax accounting income adjusted by expenses and revenues not acknowledged by the tax law or accounting act. The latter includes revenues and expenses that had been excluded from income in previous years, but became revenues and expenses in the current period, e.g. currency exchange differences from the balance sheet valuation in previous years; (2) pre-tax accounting income adjusted by permanent and temporary book-tax differences; (3) taxable revenue over tax deductible expenses (recognized by income tax law). The book-tax differential can be disaggregated into differences that are permanent and those which reverse over time. Temporary (timing) differences arise when an income or expense over time is identical for tax and accounting purposes, but its inter-temporal allocation is different. For that reason, the timing differences are said to reverse, so that their aggregate over all periods is zero. Due to the opportunity for reversal, they are a subject to deferred income tax. The main sources of temporary book-tax differences are: impairment of assets, valuation at fair value, provision for warranty repairs, foreign exchange differences from the valuation as at the balance sheet date, provisions for employee benefits, interest accrued but not paid, interest due but not yet received, and unpaid wages, etc. Permanent differences are tax-exempt income and non-deductible expenses. The first cover tax-free dividends received from other companies and grants. Other examples of permanent book-tax differential with regards revenue include any non-monetary or partly monetary performance, including upward adjustments of real estate purchased below its market value or of any interest-free loans or loans received at below-market interest rates.

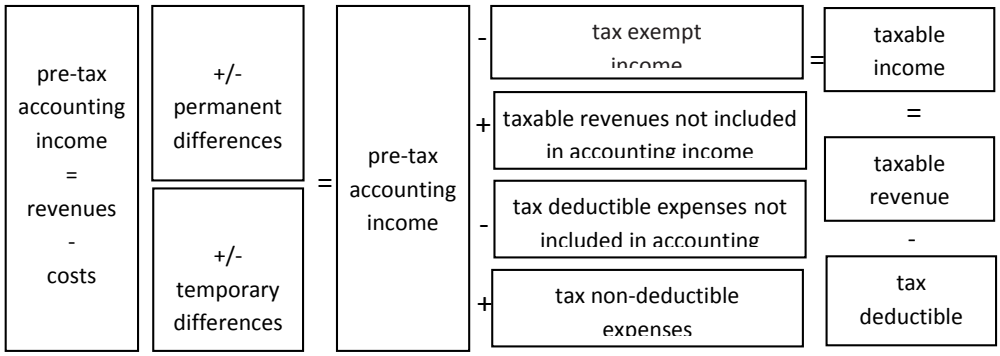


Figure. 5. Reconciliation of the profit before tax and taxable income that will include those differences

Non-deductible tax expenses contain costs of representation and private placement advertising, catering services, donations, penalties, fines, interest for late payment of taxes and social insurance, and others. Permanent differences are items used for computing taxable income that never comes into the calculation of profit before tax or, more typically, items of profit before tax that never come into the calculation of taxable income. Thus, permanent differences do not reverse. Both timing and permanent differences are indicators of a lack of book-tax conformity. Since the latter is a non-reversing item, it affects the book-tax differential only once. In contrast, the timing difference affects the relationship both when it arises initially and when it reverses.

In almost every country, accounting results are the natural starting point for the computation of taxable income. However, the degree of the connection between taxation and financial reporting greatly differs between countries because of the type and the number of adjustments to accounting profit required by tax law (Gavana *et al.*, 2013). Besides rule differences in the accounting and tax reporting systems, earnings management and tax avoidance are factors that generate a level of book-tax differences that a firm reports (Hanlon & Heitzman, 2010; Tang & Firth, 2011, 2012; Wilson, 2009).

4. Hypotheses development

My research concentrates on the impact of debt financing on the link between tax law and the accounting (measured by book-tax conformity) of Polish private firms whose shareholders take a more active role in management, reducing their reliance on financial statements for monitoring managers. Private firms are typically more closely held and their shareholder turnover is lower. The financial reporting of private companies is more likely to be influenced by income tax law. Relative to public companies, the demand for financial reporting in private firms arises less from reducing information asymmetry between managers and other stakeholders (lenders, shareholders, suppliers, and customers) and more from tax, dividend, and compensation payment policies (Ball & Shivakumar, 2005). The influence of tax policy on private firm financial reporting would arise from the lower benefit, relative to cost, of keeping separate tax and financial reporting records. The demand for higher quality in public-company financial statements is reflected in the greater legal obligations of managers and auditors to recognise economic losses in a timelier fashion, and in the litigation costs of failing to do so. Managers and auditors of private firms implicitly or explicitly contract for a lower level of financial reporting quality, and face lower litigation costs in supplying it.

Most studies have assumed that tax regulation influencing accounting income reduces accounting quality (Ali & Hwang, 2000; Hanlon *et al.*, 2008). Atwood *et al.*

(2010) suggest that low book-tax conformity gives management the flexibility to signal important information. Kvaal and Nobes (2012) agree with the view of the majority of researchers that the cost of tax influence on accounting income reduces the information content of financial reporting outweighing the benefit of reduced earnings management. However, low book-tax conformity is associated with higher financial reporting quality because it is caused when managers are forced to provide the sort of financial reporting numbers (e.g. fair values for marketable securities, impairments of assets, and recognized lease liabilities) that are more informative than the numbers used for tax purposes.

Polish GAAP allows fair value for investments in: financial assets, intangible assets, and real estate, and it uses discounted cash flows for leased items, money lent, and corporate bonds issued. These factors might all be contributory explanations for better earnings quality (Kvaal & Nobes, 2012). Most of these measurements are ignored for tax purposes, which was also noticed by Gee *et al*. (2010). This results in a lack of book-tax conformity when firms choose such an accounting policy. To the extent that measures of book-tax conformity detect how much tax influences accounting income, the higher book-tax conformity is evidence of the lower quality of financial reporting and lower earnings informativeness.

Hanlon *et al.* (2005) find that financial-statement-based estimates of taxable income in the U.S. are about 50% less informative to equity investors than a book income conforming to taxable income. Blaylock *et al.* (2016) argue that the decrease in earnings informativeness impacts debt holders less than equity holders because of the differences in payoff structures between debt and equity investments. These researchers exploited a natural experiment in the U.S. and found that firms facing an increase in required book-tax conformity (by an enactment of the Tax Reform Act of 1986) increase their leverage relative to other firms by 6.4% with, the corresponding cost increase of equity capital of 1.1%. These findings are consistent with increases in book-tax conformity raising the cost for firms of equity relative to debt capital, and the subsequent moving away from equity and towards debt financing by these firms. So, I hypothesize that firms are likely to respond to information loss resulting from increased conformity by using more debt in their capital structure.

Lenders are likely to be less concerned about the reduction in earnings informativeness brought about by higher book-tax conformity than equity investors (Plummer & Tse, 1999; Easton *et al.*, 2009). This results from the primary concerns of lenders, i.e., whether the value of a firm's assets fall below their liabilities (Black & Scholes, 1973), and whether the borrower's current and future cash flows are sufficient to meet their debt obligations (Jensen & Meckling, 1976) rather than its value relevance. Because tax rules allow for less managerial judgment than accounting rules, managers may be less able to engage in earnings management, even if they have the same incentives to manage earnings (Hanlon *et al.*, 2005). Here,

there is a need for more debt financing, as the cost of equity capital is likely to increase the incentive for income smoothing to reduce taxes (Hanlon *et al.*, 2005, 2008). Accounting and taxation rules tend to be more aligned within creditor protection-oriented accounting systems than in accounting systems designed primarily to satisfy the financial information needs of investors (Nobes, 2008). Based on the literature review and taking into account the regulatory and institutional setting (the bank-oriented financial system in Poland), I assume that bank borrowing increases book-tax conformity in Poland, thus:

H1: *Bank borrowing is positively associated with book-tax conformity.*

Bank loan agreements often stipulate the types of information that must be provided to the lender, both before loan initiation and throughout the life of the loan, including internal financial forecasts inventory aging, payable and receivable schedules, capital expenditure budgets, and others (Begley & Freeman, 2004). Before providing access to capital, banks-lenders require that entities supply audited financial statements and proprietary information such as business plans, in order to assess the borrower's ability to repay the debt (Armstrong *et al.*, 2010). In accordance with the *debt covenant hypothesis*, more indebted borrowers may use earnings management to improve their reported results and reduce debt covenant violation to avoid financial penalties, such as the possible acceleration of debt maturity, an increase in interest rates, or renegotiation of debt terms (Bikky & Picheng, 2002). Sweeney (1994) finds that debt covenant violations lead to an adoption of income-increasing accounting changes so that the default costs imposed by lenders are minimized. Therefore, there could be significant different impact of the *gaap_first* variable and the *tax_first* variable on the book-tax conformity of borrowers than non-borrowers.

H2: *Borrowers apply more advanced accounting practices than non-borrowers: they more often apply accounting standards and base their recording business operations less on tax law.*

Moreover, large book-tax differences are typical for greater tax avoidance behavior (Richardson *et al.*, 2016) and book-tax differences are assumed to reflect tax planning (Armstrong *et al.*, 2012). Tang (2015), Chan *et al.* (2010) and Atwood *et al.* (2012) confirmed that higher book-tax conformity is accompanied by less tax avoidance. Politicians and regulators (legislators) in the USA are calling for an increase in book-tax conformity in order to reduce aggressive tax optimization practices adopted by businesses (Blaylock *et al.*, 2016). This could be expected as borrowers' financial statements are subject to audit.

H3: *Tax avoidance applied by borrowers has a lower impact on book-tax differential than that of non-borrowers.*

5. Data and Research Design

5.1. Sample

I used data retrieved from the financial statements of 30,000 private non-financial limited liability companies and joint-stock companies that operated in Poland in the period 2003-2013. To mitigate the influence of outliers, I winsorized all continuous variables at the 1st and 99th percentiles. After these procedures, and as an inclusion in my analyses, explanatory variables based on changes in data from the financial statements between the two subsequent years, my research sample was limited to 162,496 firm-year observations of SMEs spanning 2003-2013. The main results are not affected by winsorization (neither the signs of the coefficients nor their significance change). However, without winsorization I received models with high R^2 close to 0.99 and insignificant control variables. Table 2 lists a complete description of variables used in the panel analysis of the book-tax conformity measured with lower book-tax differences. Before conducting the panel analysis, descriptive statistics of variables were determined (Table 3) and the correlation between explanatory variables was estimated. Detailed outcomes of the correlation of the explanatory variables are presented in Table 4.

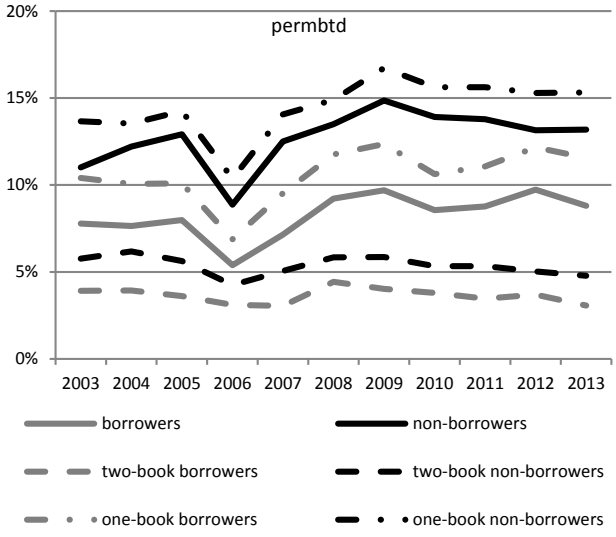
5.2. Book-tax Conformity Measures

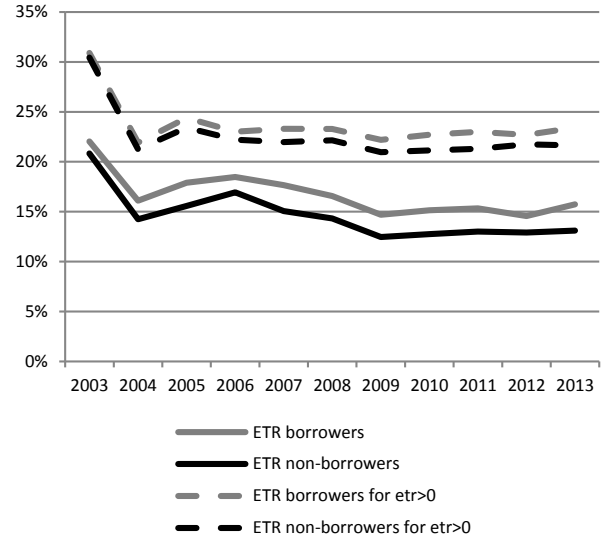
In this study I apply two measures of book-tax conformity as dependent variables. The first measurement $permbtd_{i,t}$ was introduced by Watrin *et al.* (2014) and is based on the absolute values of book-tax difference of firm *i* in year *t*, scaled by total assets, calculated as: $permbtd_{i,t} = ptbi_{i,t} - (taxation_{i,t} / tax\ rate_t)$, where $ptbi_{i,t}$ - the value of pre-tax book income of firm *i* in year *t*; $taxation_{i,t}$ covers current and deferred income tax of firm *i* in year *t*; and the tax rate is the nominal corporate income tax rate in year *t* equal to 19% for 2004-2014 and 27% in 2003. As the second dependent variable, I apply an alternative approach to measuring book-tax conformity ($btd_{i,t}$), proposed by Tang (2015), which captures permanent and temporary book-tax differences of firm *i* in year *t* scaled by total assets. This is calculated as: $btd_{i,t} = ptbi_{i,t} - (taxation_{i,t} - deftax_{i,t}) / tax\ rate_t$, where $deftax_{\mathbf{i,t}}$= (deferred tax liabilities$_{\mathbf{i,t}}$ - deferred tax assets$_{\mathbf{i,t}}$) / tax_rate$_{\mathbf{t}}$ (the other variables are the same as above). Both the $permbtd_{i,t}$ and the $btd_{i,t}$ variable indicate that the higher book-tax differential, the lower the book-tax conformity, and, the lower the book-tax differential, the higher the book-tax conformity.

In the opinion of Tang (2015), Watrin *et al.* (2012) overlook the fact that permanent book-tax differences can also be driven by earnings management and tax avoidance (Hanlon & Heitzman, 2010; Tang & Firth, 2011, 2012; Wilson, 2009). Therefore, the extent of conformity should be captured by both permanent and temporary book-tax differences. This is more important, as I detected that only 26% of companies in

the sample had recorded deferred tax to which I was thankful to be able to identify separate temporary book-tax differences. This low share results from the fact that in Poland only companies whose financial statements are subject to audit and are published are required to record deferred tax (according to the Polish Accounting Act, article 37, paragraph 10).

I created two explanatory variables that capture operation records according to GAAP standards (the *gaap_first* variable), and then separated these records in accordance with the tax rules reflecting the impact of tax law on the accounting practices of private companies (the *tax_first* variable). In particular, in the case of two-book accounting, while the *gaap first* category is associated with future tax-related cash flows that are realised upon reversal of deferred tax assets or liabilities, the *tax first* category is treated in a different way. New originating temporary differences do not offset the tax effects of reversing temporary differences (Guenther & Sansing, 2004; Laux, 2013). The *gaap_first* variable includes the recognition of transactions by the company based on accounting standards and the principles of prudence and matching. This variable, in particular, takes into account pensions, provisions for employee benefits, other provisions, the revaluation of non-financial assets, and, the negative effects of revaluation of financial investments, all deflated by total assets. These operations result in a book-tax differential, as they are not recognized for tax purposes in the current year. In contrast, the *tax_first* variable measures the recognition of business operations in accordance with tax regulations by: depreciation and amortization, long-term and short-term deferred costs, and other accruals (unearned deferred revenue) in relation to total assets. Earlier studies into the accounting policy of Polish SMEs listed on the NewConnect (an alternative stock exchange) show that the majority of companies use depreciation of fixed assets and amortization of intangible assets in accordance with tax regulations (Białek-Jaworska & Drązikowska, 2015). The items included in deferred costs and accruals are recognized earlier for tax income than for accounting income.


permbtd
20%
15%
10%
5%
0%
2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013
borrowers
non-borrowers
two-book borrowers
two-book non-borrowers
one-book borrowers
one-book non-borrowers


35%
30%
25%
20%
15%
10%
5%
0%
2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013
ETR borrowers
ETR non-borrowers
ETR borrowers for etr>0
ETR non-borrowers for etr>0

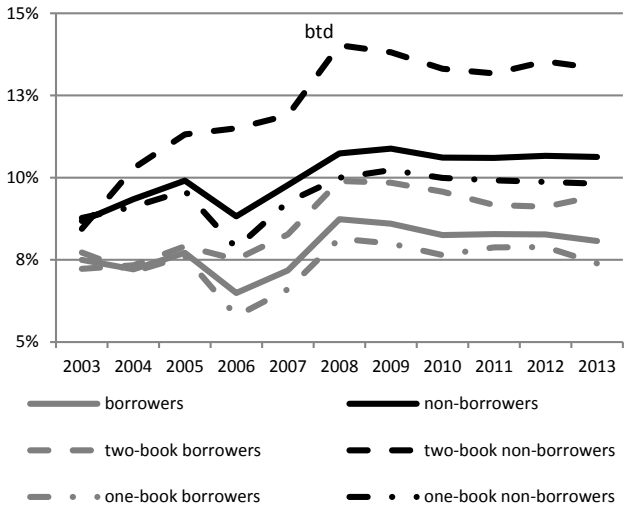


Figure. 6. Comparison of book-tax differences and effective tax rate between borrowers and non-borrowers

In the first figure I measured the book-tax differences as *permbtd* in accordance with Watrin *et al.* (2012) concept, while in the third figure I used the measure proposed by Tang (2015) - *btd*.

The *gaap_first* and *tax_first* variables are mutually exclusive, while their correlation coefficient is low (0.0602) for my total sample, and much lower for the one-book subsample (0.0254).

My model also adapts the Dechow (1994) and Guay *et al.* (1996) approach to incorporate the recognition of unrealised gains and losses via accruals and mitigates noise in cash flows from operations. Accruals are initially measured as a change in inventory, debtors, other current assets less change in creditors, other current liabilities, and depreciation and amortization, scaled by total assets, as follows

accruals = [⊿inventory + ⊿ short term receivables + ⊿ (other long term deferred costs + short term deferred costs) - ⊿ (short term liabilities - short term bank loans and borrowings - short term liabilities due to corporate bonds issue - other short term financial liabilities) - deferred income and accruals - depreciation and amortization] / total assets.

Since the cash basis is more characteristic for tax law than for accountancy, I expect that, as intended by the legislators and regulators, *accruals* increases book-tax conformity, i.e., this brings the book income closer to the taxable income (reducing the book-tax differential).

During the whole period of analysis (2003-2013) borrowers had a lower absolute value of book-tax differences for both *permbtd* and *btd* measures than companies that had not borrowed money from banks (non-borrowers) in any year. The same relationship, i.e., higher book-tax conformity, was observed for the total sample, both for the one-book and the two-book subsamples between borrowers and non-borrowers (Fig. 6). The highest book-tax conformity is observed for one-book borrowers in the case of the *btd* variable, while for two-book borrowers it is the *permbtd*. The lowest book-tax conformity (*btd*), which decreased till 2008, is characteristic for two-book non-borrowers. The significant differences between borrower and non-borrower book-tax conformity in the total sample, and the separate one-book and two-book subsamples, were confirmed by Bonferroni, Sidak and Scheffe tests after ANOVA analyses (not tabulated here). Additionally, borrowers have a higher average effective tax rate (*ETR*) than non-borrowers (Fig. 6), which could indicate a less important role of tax avoidance among borrowers.

5.3. Research Design

In the study, I use a within estimator for fixed effects regressions of unbalanced panels whose observations are unequally spaced over time. The Hausman specification test fixed versus random effects - indicates to us that I should choose the fixed effect estimator. The Breusch and Pagan Lagrangian multiplier test confirms the significance of random effects. The Wooldridge test for autocorrelation in panel data confirms that there is a problem with first-order autocorrelation AR(1) in the case of the total sample, and, both the one-book and the two-book system subsamples, whereas White's test for homoscedasticity indicates the heteroscedasticity in the panel data. Finally, after the diagnosis of the models, I evaluated them by using a two-step correlation estimation with the Theil fixed effects estimator adjusted for AR(1) disturbances (Theil type of rho estimator). This approach implements methods found in Baltagi and Wu (1999) that accommodate a variety of patterns of missing data and serially correlated errors of the AR(1) type. This is a form of the generalized least squares (GLS) estimation method that applies a transformation of the data that removes the AR(1) component. This way I receive a two-step efficient estimator. The final results of the fixed-effects regressions are shown in Tables 5-7. In my analysis, I break down the *leverage* variable into two components: the long-term and short-term bank loan share in the financing of assets (*bank_loan*) and the non-bank debt financing share in the company capital structure (*nonbank leverage*). This enables us to analyse how a company's bank debt, and the resultant monitoring by the lending bank, affects its book-tax conformity. The following two panel models were used to analyze the impact of non-bank and bank borrowings and various other company characteristics on the extent of book-tax conformity:

$$btd_{it} = \beta_0 + \beta_1 accruals_{it} \times borrower_{it} + \beta_2 gaap\_first_{it} \times borrower_{it} + \beta_3 tax\_first_{it} \times borrower_{it} + \beta_4 non\_bank\ leverage_{it} \times borrower_{it} + \beta_5 bank\_loan_{it} + \beta_6 one\_book_{it} \times borrower_{it} + \beta_7 TA_{it} \times borrower_{it} + \beta_8 control_{it} + v_i + \varepsilon_{it}$$

$$permbtd_{it} = \beta_0 + \beta_1 accruals_{it} \times borrower_{it} + \beta_2 gaap\_first_{it} \times borrower_{it} + \beta_3 tax\_first_{it} \times borrower_{it} + \beta_4 non\_bank\ leverage_{it} \times borrower_{it} + \beta_5 bank\_loan_{it} + \beta_6 one\_book_{it} \times borrower_{it} + \beta_7 TA_{it} \times borrower_{it} + \beta_8 control_{it} + v_i + \varepsilon_{it}$$

where:

btd_{it} - temporary and permanent book-tax differential as a measure of book-tax conformity, proposed by Tang (2015),

$permbtd_{it}$ - permanent book-tax differential as a measure of book-tax conformity, proposed by Watrin *et al.* (2014),

$accruals_{it}$, $gaap\_first_{it}$, tax_first_{it} - alternative measures of book-tax conformity, as described above,

$non\_bank\ leverage_{it}$ - non-bank borrowing measured as total liabilities / total assets - (long-term bank loans + short-term bank loans) / total assets,

$bank\_loan_{it}$ - bank borrowing equal to (long-term bank loans + short-term bank loans)/total assets,

one_book - a dummy variable equals to 1 when the firm's accounts are kept according to tax regulations with the consequence that there is a lack of deferred income tax. In the other case (*one_book* = 0) companies kept accounts according to accounting standards, and include adaptations stipulated in the tax regulation (two-book). The two-book accounting includes deferred income tax, commonly used for temporary book-tax differences,

TA - the difference between the statutory tax rate and the effective tax rate. The effective tax rate (*etr*) is the ratio of the current tax expense to gross profit. *Etr* is truncated to the range (0,1),

$control_{it}$ - control variables, as described below,

β_i - constant or coefficients of variables, v_i - units' individual characteristics, non-observable, but constant over time in the case of a fixed-effects model, $\mathcal{E}_{it}$ - purely random error.

Book-tax differences, by definition, reflect different reporting requirements for book and tax purposes, i.e., mandatory conformity reflected in the *gaap_first* and *tax_first* variables, as described earlier (see subsection 5.2). There is an asymmetry of information provided by these two different categories: the *gaap first* (associated with future tax-related cash flows) and the *tax first* category (without offsetting the tax effects of reversing temporary differences) (Laux, 2013). Opportunistic book and tax reporting undertaken by managers also yields variations in book-tax differences (Tang, 2015; Hanlon & Heizman, 2010). Therefore, I include in this study the

following as control variables: a firm's property, plant, and equipment deflated by total assets (*tangibility* that is influenced widely by tax law and in addition plays a role of a collateral for bank borrowings) and the difference between the statutory tax rate and the effective tax rate (a proxy for tax avoidance (*TA*)). The effective tax rate (*etr*) is the ratio of the current tax expense to gross profit. *Etr* is truncated to the range (0,1). Richardson *et al.* (2016) consider large book-tax differences as typical for greater tax avoidance behavior. Aggressive tax reporting cannot be directly observable, so measures of tax planning (e.g., tax avoidance) undoubtedly include measurement errors. In the U.S., book-tax differences are assumed to reflect tax planning (Armstrong *et al.*, 2012) while in Poland a large book-tax differential relates more to the legal differences between financial and tax accounting and/or results from a firm's poor financial situation (financial *loss* or *distress*). This explains why I analyze separate subsamples depending on the *loss* dummy variable (i.e., if companies have a positive or negative accounting income after tax). Then I control for firm *size* (measured by the natural logarithm of the firm's total assets) and return on assets (*roa*), measured by the ratio of gross profit to total assets (a proxy of profitability). The growth rate of sales is the change in sales from year *t-1* to year *t* deflated by assets (*growth (⊿ sales)*). These variables are often used as controls in empirical studies of earnings management. Due to increased public pressure, managers in larger organisations are expected to be less likely to manipulate financial results, which translates into a lower earnings management level (Grabiński, 2016) and, in consequence, higher book-tax conformity. Table 1 explains which part of the above panel model specification is relevant to which hypothesis and indicates the predictions in the context of a book-tax differential used as the dependent variable. In particular, the β_2, β_3, β_5 and β_7 coefficients are the basis for testing my hypotheses.

Table 1. Hypotheses and predictions in the context of panel model specifications

H1	Bank borrowing is positively associated with book-tax conformity (negatively associated with book-tax differential).	$\beta_5 < 0$
H2	Borrowers apply more advanced accounting practices (there is a higher impact of the *gaap_first* variable and a lower influence of the *tax_first* variable on the book-tax differential) than non-borrowers.	*Borrower's* β_2 > *Non-borrower's* β_2 *Borrower's* β_3 < *Non-borrower's* β_3
H3	Tax avoidance applied by borrowers has lower impact on book-tax differential than in the case of non-borrowers.	*Borrower's* β_7 < *Non-borrower's* β_7

Descriptive statistics show that 76% of companies in the research sample keep a one-book system and only 24% keep a two-book system, with deferred tax shown separately in the records (Table 3). The significant impact of tax law on accountancy is confirmed by *tax_first* being over six times higher than *gaap_first*. The noticeable difference between the mean (0.0145) and zero median for *gaap_first* confirms the positive skewness in this variable. This indicates that most firms in Poland follow tax regulations in their accounting books but don't use the fair value estimation, nor

do they test their assets for impairment at all. Even for the 90th percentile, the effect of valuation according to the accounting policy used is six times lower than that of tax regulations.

Table 2. Definitions of variables used in the panel analysis of the Book-Tax Conformity measured by lower book-tax differences

Variable	Definition of variables
permbtd	the absolute values of permanent book-tax difference of firm *i* in year *t* scaled by total assets calculated as: $\mathbf{permbtd_{i,t} = ptbi_{i,t} - (taxation_{i,t} / tax\ rate_t)}$ I apply the research approach proposed by Watrin, Ebert, Thomsen (2014). A higher book-tax difference (*permbtd*) indicates lower book-tax conformity. A lower book-tax difference (*permbtd*) indicates higher book-tax conformity.
ptbi	the value of pre-tax book income of firm *i* in year *t* scaled by total assets
taxation	total taxation (current and deferred) of firm *i* in year *t* scaled by total assets
tax rate	corporate income tax rate in year *t* equal to 19% for 2004-2014, 27% in 2003
btd	the absolute values of temporary and permanent book-tax difference of firm *i* in year *t* scaled by total assets, calculated as: $\mathbf{btd_{i,t} = ptbi_{i,t} - (taxation_{i,t} - deftax_{i,t}) / tax\ rate_t}$, where $deftax_{i,t}$=(deferred tax $liabilities_{i,t}$ - deferred tax $assets_{i,t}$) / tax_rate_t
accruals	accruals initially are measured as a change in inventory + change in debtors + change in other current assets - change in creditors and other current liabilities - depreciation and amortization, scaled by assets = [△inventory + △ short term receivables + △ (other long term deferred costs + short term deferred costs) - △ (short term liabilities - short term bank loans and borrowings - short term liabilities due to corporate bonds issue - other short term financial liabilities) - deferred income and accruals - depreciation and amortization] / total assets
one_book	indicator variable of firm *i* in year *t* equal to 1 if a company employs a one-book system (when there is neither deferred tax assets nor deferred tax liabilities), 0 otherwise
two_book	indicator variable of firm *i* in year *t* equal to 1 if a company employs a two-book system (when there is deferred tax assets or deferred tax liabilities), 0 otherwise
gaap_first	(pensions (provisions for employee benefits) + other provisions + revaluation of non-financial assets (included in other operating costs) + negative effects of revaluation of financial investments (included in financial costs)) / total assets
tax_first	(depreciation of property, plant, and equipment + amortization of intangibles + other long-term deferred costs + short-term deferred costs + other accruals (unearned revenue, deferred revenue)) / total assets
bank_loan	(long-term bank loans + short-term bank loans)/total assets
non_bank leverage	capital structure of firm *i* in year *t* after exclusion of bank loans calculated as total liabilities / total assets - (long-term bank loans + short-term bank loans) / total assets
loss	indicator variable of firm *i* in year *t* equal to 1 if a firm reports a loss after tax, 0 otherwise
size	size of firm *i* in year *t* calculated as the natural logarithm of the firm's total assets
distress	an indicator variable equal to 1 if firm *i* exhibits negative equity in year t, and 0 otherwise
tangibility	tangible assets / total assets

Variable	Definition of variables
TA	tax avoidance, TA = tax rate - etr, where etr - effective tax rate, etr = taxation/gross_profit. I replace etr=0 if etr<0 and etr=1 if etr>1. TA is truncated to the range <0,0.19>.
roa	return on assets, roa = gross profit / total assets
growth (∆ sales)	sales of firm *i* in year *t* / total assets - sales of firm *i* in year *t-1* / total assets in year *t-1*
borrower	dummy variable of firm *i* in year *t* equal to 1 if a company borrowed a bank loan and has at least one positive value among: long-term bank loans, short-term bank loans

Table 3. Descriptive statistics

Variable	Number of observations	10th Percentile	25th Percentile	Mean	Median	75th Percentile	90th Percentile
permbtd	179,395	0.0015	0.0068	0.1090	0.0246	0.0851	0.2516
btd	162,496	0.0021	0.0090	0.0755	0.0315	0.0919	0.2080
accruals	179,395	-0.2889	-0.1234	-0.0455	-0.0278	0.0514	0.1966
one_book	179,395	0	1	0.7619	1	1	1
two-book	179,395	0	0	0.2381	0	0	1
gaap_first	179,395	0.0000	0.0000	0.0145	0.0000	0.0024	0.0330
tax_first	179,395	0.0012	0.0217	0.0966	0.0560	0.1171	0.2244
leverage	179,395	0.0647	0.2458	3.4419	0.8461	2.2795	6.2747
non_bank leverage	162,496	0.0022	0.0763	0.1601	0.2248	0.4435	0.6676
bank_loan	162,496	0	0	0.1095	0	0.1491	0.3680
loss	179,395	0	0	0.2949	0	1	1
size	179,395	11.6307	13.0400	14.5833	14.5991	16.1344	17.4508
distress	179,395	0	0	0.1128	0	0	1
tangibility	179,395	0.0000	0.0088	0.2545	0.1457	0.4357	0.7063
tax avoidance (TA)	179,395	0	0	0.0811	0.0129	0.1900	0.1900
roa	179,395	-0.1679	-0.0134	0.0349	0.0409	0.1446	0.3000
growth (∆ sales)	139,845	-0.8093	-0.2548	-0.0537	0.0000	0.1646	0.6347
borrower	162,496	0	0	0.4732	0	1	1

Table 4. Pairwise correlations

total sample	accruals	one_book	gaap_first	tax_first	non_bank leverage	bank_loan	size	loss	distress
accruals	1.0000								
one_book	0.0109***	1.0000							
gaap_first	-0.0108***	-0.3030***	1.0000						
tax_first	-0.1426***	-0.0684***	-0.0602***	1.0000					
non_bank leverage	0.0633***	-0.0731***	0.0132***	-0.0126***	1.0000				

total sample	**accruals**	**one_book**	**gaap_first**	**tax_first**	**non_bank leverage**	**bank_loan**	**size**	**loss**	**distress**
bank_loan	0.0315***	-0.0053***	-0.0739***	0.0119***	-0.3111***	1.0000			
size	0.0137***	-0.5299***	0.2471***	0.0929***	0.1873***	0.0106***	1.0000		
loss	-0.1842***	0.0956***	-0.0088***	0.0004	-0.2423***	0.0854***	-0.2257***	1.0000	
distress	-0.1046***	0.0592***	0.0042*	0.0245***	-0.8705***	0.2012***	-0.1144***	0.2827***	1.0000
tang	-0.1102***	-0.1267***	-0.0007	0.1501***	-0.0452***	0.2820***	0.1369***	0.0322***	-0.0323***
TA	-0.0554***	0.1080***	-0.0535***	-0.0282***	-0.1895***	-0.0533***	-0.1762***	-0.4271***	-0.1939***
roa	0.2600***	-0.0210***	-0.0073***	-0.0589***	0.1919***	-0.1573***	0.1198***	-0.6305***	-0.2437***
growth (△ sales)	0.0044	-0.0173***	0.0253***	0.0485***	-0.0264***	-0.0096***	0.0561***	0.0107***	0.0211***

total sample	tangibility	TA	roa	growth
tang	1.0000			
TA	0.0121***	1.0000		
roa	-0.1343***	-0.2481***	1.0000	
growth (△ sales)	0.0395***	-0.0002	-0.0142***	1.0000

Significant at 1% - ***, 5% - **, 10% - *

Tax avoidance reaches 8 pp. compared to the 19% nominal tax rate and more than 25% of firms do not pay any income tax at all (TA equals 0.19 for those firms). The effective tax rate in more than 25% of firms exceeds the nominal tax rate, which is a result of non-tax-deductible expenses. Permanent differences (*permbtd*) are 40% higher on average than total permanent and temporary differences (*btd*). This indicates a significant share of negative temporary differences resulting from tax-deductible costs being deferred. Borrowers represent 47% of the research sample. On average, 11% of assets are financed by bank loans and 16% by other types of credit. Although the average leverage indicates that the share of debt in the capital structure is 3.5 times higher than that of equity, little debt is used (no more than 27% of assets). This may be partly due to financial losses that reduced the equity level. In the research sample losses were recorded by 29.5% of companies, and 11.3% showed a negative equity value (due to the share capital being outbalanced by accumulated losses of the current year and previous years). Financial losses additionally increased

book-tax differences. The average profitability of assets equals 3.5%, while more than half of firms had experienced a decrease in revenue from sales in year *t* against year *t-1*. Fixed assets – a potential bank loan collateral – accounted for 25% of total assets on average and 14.6% in the median value. The correlation matrix indicates that larger firms are less likely to avoid taxation, incur fewer financial losses and have *one-book* accounting less often, while showing a positive correlation with advanced accounting tools (*gaap-first*) to a greater degree than with tax regulations (*tax_first*) (Table 4). Furthermore, larger companies use more bank borrowing and non-bank borrowing. Financial losses are positively correlated with bank borrowing and negatively with non-bank external funding. A higher share of fixed assets used as debt collateral is positively correlated with bank loans, and negatively correlated using one-book accounting systems. Profitable firms have higher accruals and are less likely to avoid taxations (a negative correlation). There is a high correlation between the *distress* variable and non-bank leverage.

6. Results

The main results of the models estimation for both dependent variables: *permbtd* and *btd*, are summarised in Table 5. The main difference between these regressions identified by the results is that *one-book* companies have lower book-tax conformity when I consider permanent differences (*permbtd* - this is the measurement proposed by Watrin *et al.* (2014)), but higher book-tax conformity when I consider permanent and temporary differences together (*btd* - the measure proposed by Tang (2015)). For two-book borrowers this relationship is insignificant, while weaker (lower coefficients) for the *btd* variable, for one-book borrowers as opposed to non-borrowers. For the total sample (both profitable and unprofitable firms included) the rest of the findings are the same in the scope of the sign and significance of the coefficients for both variants of the dependent variable, except for the *size* variable. A higher share of *bank loans* in the capital structure, in relation to total assets, increase book-tax conformity. This indicates that there is no basis for rejecting hypothesis H1. These results confirm lower lenders demand for financial information relevant to shareholders and investors. Higher earnings informativeness is important to estimate future cash flow and evaluate the company's market value, whereas creditors are more interested in the company's liquidation value and its capability of paying its liabilities rather than the future growth in company value since they do not participate in any future profits. This could be explained by the asymmetry between the payments of investor and lender shares in profits earned on debt-financed investments (Black & Scholes, 1973). In the opinion of Blaylock *et al.* (2016), this asymmetrical share in the future profits of borrowers suggests that increasing book-tax conformity may potentially shift a company's capital structure towards the greater use of debt-based financing. However, these findings also signal that higher book-tax conformity results in a decrease in the borrower's earnings informativeness. Because higher non-bank borrowings (*non-bank leverage*) are also

negatively associated with the book-tax conformity, it appears that bank-lender expectations towards borrower's earnings informativeness do not differ from other creditors. Therefore, I decided to estimate the models separately for profitable and unprofitable firms to locate any disparity (Tables 6-7). The use of the accrual method increases book-tax conformity more in the case of borrowers. While making use of more advanced accounting practices and adhering to the *prudence principle* and the *matching principle* (the *gaap_first* variable) decreases book-tax conformity further in the case of borrowers. This allows lenders to learn more about borrower creditworthiness and ability to repay the bank loan thanks to more informative earnings. Recognizing and recording business operations in accordance with tax regulations (the *tax_first* variable) also decreases book-tax conformity. However, the coefficients at this *tax_first* variable are lower in the case of borrowers, irrespective of the model. This indicates that borrowers recognize business operations less according to tax law in contrast to non-borrowers. This confirms the hypothesis H2.

Tax avoidance (*TA*) leads to decreased book-tax conformity, less so in the case of borrowers, in accordance with the hypothesis H3. Higher book-tax conformity is accompanied by less tax avoidance (Tang, 2015, Chan *et al.*, 2010, Atwood *et al.*, 2012). Politicians and regulators (legislators) in the USA are calling for an increase in book-tax conformity, in order to reduce aggressive tax optimisation practices adopted by businesses (Blaylock *et al.*, 2016).

Table 5. Results of the panel analysis of determinants of book-tax conformity measured with the use of permanent book-tax differences (*permbtd*) and temporary & permanent book-tax differential (*btd*)

		btd	**permbtd**
		total sample	total sample
accruals x borrower	0	-0.0097***	-0.0110***
		(0.0017)	(0.0016)
	1	-0.0328***	-0.0318***
		(0.0022)	(0.0020)
gaap_first x borrower	0	0.4050***	0.2031***
		(0.0151)	(0.0137)
	1	0.4734***	0.2529***
		(0.0175)	(0.0159)
tax_first x borrower	0	0.0406***	0.0298***
		(0.0050)	(0.0046)
	1	0.0200***	0.0152***
		(0.0052)	(0.0046)
non-bank leverage x borrower	0	-0.0226***	-0.0195***
		(0.0011)	(0.0010)
	1	**-0.0308*** **	**-0.0286*** **
		(0.0010)	(0.0009)
bank loan		**-0.0296*** **	**-0.0219*** **
		(0.0031)	(0.0028)
one_book x borrower	0 1	-0.0009	0.0009

		btd total sample	**permbtd** total sample
		(0.0017)	(0.0016)
	1 0	-0.0343***	0.0113***
		(0.0016)	(0.0014)
	1 1	-0.0268***	0.0113***
		(0.0019)	(0.0017)
TA (tax avoidance) x borrower	0	0.0358***	0.0469***
		(0.0024)	(0.0023)
	1	**0.0305*** **	**0.0350*** **
		(0.0022)	(0.0020)
size		-0.0006	-0.0012***
		(0.0004)	(0.0003)
tangibility		-0.0206***	-0.0152***
		(0.0021)	(0.0019)
roa		-0.1585***	-0.1258***
		(0.0021)	(0.0019)
growth (△ sales)		0.0021***	0.0020***
		(0.0002)	(0.0002)
_cons		0.1035***	0.0601***
		(0.0068)	(0.0057)
Number of observations		114,741	114,741
Number of groups		23,459	23,459
R^2 within		0.1973	0.2021

Significant at 1% - ***, 5% - **, 10% - *, standard errors in brackets below the estimated coefficients

Control variables are significant in all models and show the same direction of influence, no matter if deferred tax is recorded in the books or not: negative for *size*, *roa* and *tangibility*, and positive for *growth (⊿ sales)*. Larger companies (*size*) show higher book-tax conformity than smaller ones. As the subject literature shows, there may be a correlation between the higher book-tax conformity of larger companies and lower or less frequent tax planning, and the lower demand for information relevant to owners or investors interested in the future growth of the company's value. The higher share of fixed assets in total assets (*tangibility*) reflects a greater consistency in accounting and tax regulation, including those applicable to depreciation and to historical cost valuation. This increases book-tax conformity. Increase in return on assets (*roa*) is associated with the higher book-tax conformity.

Companies that experience a sales boost (*growth (⊿ sales)*) show less book-tax conformity, which may be due to earnings management or differences in the time of revenue and cost recognition for book-related and tax-related purposes. The lower book-tax conformity that accompanies sales growth may also follow when taxable income is reduced by tax losses of previous years, or when other tax optimization measures are taken in order to reduce the tax burden despite growing sales.

The results of the models estimation for both dependent variables: *permbtd* and *btd* for unprofitable SMEs (with financial losses), are summarised in Table 6. The *one-book* unprofitable non-borrowers have lower book-tax conformity for the measurement proposed by Watrin *et al.* (2014) (*permbtd*), but higher book-tax conformity for the measure proposed by Tang (2015) (*btd*), whereas *two-book* borrowers have higher book-tax conformity for the *btd* dependent variable. This allows confirmation for the hypothesis **H1** for unprofitable two-book borrowers (with financial losses)**.**

Table 6. Results of the panel analysis of determinants of book-tax conformity measured with the use of permanent book-tax differences (*permbtd*) and temporary & permanent book-tax differential (*btd*) for private firms with financial losses

		btd	**permbtd**
accruals x borrower	0	0.0063*	-0.0032
		(0.0034)	(0.0029)
	1	-0.0051	-0.0059*
		(0.0044)	(0.0037)
gaap_first x borrower	0	0.1361***	-0.0275
		(0.0326)	(0.0248)
	1	0.0768**	0.0196
		(0.0311)	(0.0246)
tax_first x borrower	0	0.0014	0.0220**
		(0.0104)	(0.0076)
	1	-0.0031	-0.0023
		(0.0110)	(0.0080)
non-bank leverage x borrower	0	-0.0028*	-0.0002
		(0.0015)	(0.0011)
	1	**-0.0042*** **	**-0.0038*** **
		(0.0014)	(0.0010)
bank loan		-0.0015	-0.0007
		(0.0055)	(0.0039)
one_book x borrower	0 1	**-0.0184** **	-0.0093
		(0.0083)	(0.0065)
	1 0	**-0.0648*** **	**0.0163*** **
		(0.0035)	(0.0023)
	1 1	-0.0737***	0.0083
		(0.0082)	(0.0062)
TA (tax avoidance) x borrower	0	-0.2410***	-0.3121***
		(0.0273)	(0.0203)
	1	**-0.1901*** **	**-0.2700*** **
		(0.0292)	(0.0250)
size		0.0049***	0.0037***
		(0.0005)	(0.0003)
tangibility		-0.0029	-0.00003
		(0.0039)	(0.0026)
roa		-0.9618***	-0.9478***
		(0.0057)	(0.0046)

	btd	permbtd
growth (△ sales)	0.0004	0.0001
	(0.0003)	(0.0001)
_cons	0.0526***	0.0018
	(0.0083)	(0.0018)
Number of observations	18,240	18,240
Number of groups	8,956	8,956
R^2 within	0.7806	0.8598

Significant at 1% - ***, 5% - **, 10% - *, standard errors in brackets below the estimated coefficients

The higher book-tax conformity of borrowers with poor financial standing results in the decrease in their earnings informativeness for lenders. However, the impact of separate *bank loan* variable is insignificant in these models for unprofitable firms. Therefore, the conclusions for the hypothesis **H1** are not clear in the case of *one-book* and total unprofitable borrowers. A higher share of non-bank borrowings in the capital structure (*non-bank leverage*) increases book-tax conformity in the case of borrowers.

It is worth noting that companies with losses are likely to not pay any income tax and therefore often show zero taxable income and non-zero (negative) accounting income. As a consequence, their book-tax differences are equal to the absolute value of their accounting income. It could be expected that limited liability companies and joint-stock companies facing the risk of bankruptcy due to equity decrease or a negative equity value show higher differences between their pre-tax income and taxable income. The lower book-tax conformity may be due to the financial losses recorded in the current year or due to the deduction of tax losses incurred in previous years. In Poland, tax losses may be deducted from taxable income over 5 years and no more than 50% of a given year's annual tax loss.

The use of the accrual method increases book-tax conformity in a degree of permanent book-tax differences in the case of borrowers, while decreasing non-borrowers book-tax conformity for total book-tax differential (*btd*). Whereas making use of more advanced accounting practices (the *gaap_first* variable) decreases book-tax conformity less in the case of borrowers than non-borrowers (for the *btd* dependent variable). Recognizing and recording business operations in accordance with tax regulations (the *tax_first* variable) is insignificant for unprofitable borrowers, irrespective of the model. While for unprofitable non-borrowers this factor decreases book-tax conformity in an extent of the permanent book-tax differential. These signal that unprofitable borrowers recognize business operations more according to accounting standards as the impact of tax law is insignificant. These only allow the partial confirmation of hypothesis H2. Tax avoidance (*TA*) leads to an increase in book-tax conformity, less so in the case of unprofitable borrowers than non-borrowers with financial losses, in accordance with hypothesis H3. Out of control variables only *size* and *roa* are significant in all models. The *size*

variable shows the opposite direction of influence than for the total sample. Larger unprofitable firms show lower book-tax conformity than smaller ones with poor financial standing.

The results of the models estimation for profitable SMEs for both dependent variables: *permbtd* and *btd*, are summarized in Table 7. The main difference between these regression findings and models estimated for the total sample (Table 5) constitute the opposite impact of the *accruals* and *roa*. The profitable *one-book* borrowers have lower book-tax conformity when I consider permanent differences (*permbtd*), but higher book-tax conformity when I take into account the total book-tax differences together (*btd*) apart from *two-book* profitable borrowers.

The non-bank borrowings share in the capital structure (*non-bank leverage*) increases book-tax conformity, whereas a higher share of *bank loans* is correlated with higher book-tax conformity solely for the *btd* dependent variable. This indicates that there is no basis for rejecting hypothesis H1 for the total temporary and permanent book-tax differences (*btd*) of profitable borrowers. These results show lower lenders demand for earnings informativeness as previous studies have proved that an increase in book-tax conformity results in the reduced informativeness of earnings (Hanlon *et al.*, 2008; Atwood *et al.*, 2010). The use of the accrual method decreases solely a nonborrower's book-tax conformity. Making use of more advanced accounting practices and adhering to the *prudence principle* and the *matching principle* (the *gaap_first* variable) decreases book-tax conformity more in the case of borrowers when consider the *btd* variable. This allows lenders to learn more about borrower creditworthiness and the ability to repay the bank loan thanks to more informative earnings for the *btd* measure of book-tax conformity. The opposite conclusions are given for the *permbtd* dependent variable. Recognizing business operations in accordance with tax regulations (the *tax_first* variable) also decreases book-tax conformity, however, the coefficients at this *tax_first* variable are lower in the case of borrowers, irrespective of the model. This indicates that borrowers recognize business operations less according to tax law contrary to non-borrowers. This confirms the hypothesis H2. However, the findings for the *permbtd* variable are weaker than for the alternative measure proposed by Tang (2015) (*btd*). In the case of profitable SMEs, tax avoidance (*TA*) leads to a decrease in book-tax conformity, less so in the case of borrowers, in accordance with the hypothesis H3.

Control variables are significant in all models except for the *size* variable. The firm *size* variable shows the negative influence for the *permbtd* variable, whereas is insignificant for the *btd* variable. Larger companies (*size*) show higher book-tax conformity than smaller ones in the case of permanent book-tax differences. The *roa* variable indicates the opposite direction of influence than in models for the total sample. More profitable companies have a lower book-tax conformity and provide lenders and non-bank creditors with more informative earnings. The outcomes for the *tangibility* and *growth* variable are in line with findings for the total sample that consists of profitable and unprofitable firms.

Table 7. Results of the panel analysis of determinants of book-tax

		btd loss=0	**permbtd** loss=0
accruals x borrower	0	0.0030**	0.0009
		(0.0016)	(0.0014)
	1	0.0004	0.0019
		(0.0020)	(0.0017)
gaap_first x borrower	0	0.4047***	0.1921***
		(0.0135)	(0.0110)
	1	**0.4230*** **	0.1895***
		(0.0167)	(0.0137)
tax_first x borrower	0	0.0482***	0.0217***
		(0.0045)	(0.0038)
	1	0.0262***	0.0158***
		(0.0046)	(0.0038)
non-bank leverage x borrower	0	-0.0049***	-0.0022*
		(0.0015)	(0.0012)
	1	**-0.0077*** **	**-0.0056*** **
		(0.0015)	(0.0013)
bank loan		**-0.0059** **	0.00004
		(0.0030)	(0.0024)
one_book x borrower	0 1	0.0033**	0.0024*
		(0.0015)	(0.0013)
	1 0	-0.0303***	0.0024**
		(0.0013)	(0.0012)
	1 1	-0.0218***	0.0031**
		(0.0017)	(0.0015)
TA (tax avoidance) x borrower	0	0.3025***	0.4206***
		(0.0025)	(0.0048)
	1	**0.1734*** **	**0.2695*** **
		(0.0054)	(0.0045)
size		-0.0006	-0.0025***
		(0.0004)	(0.0003)
tangibility		-0.0080***	-0.0045**
		(0.0019)	(0.0016)
roa		0.1319***	0.1489***
		(0.0022)	(0.0018)
growth (△ sales)		0.0008***	0.0006***
		(0.0002)	(0.0002)
_cons		0.0479***	0.0354***
		(0.0062)	(0.0045)
Number of observations		83,122	83,122
Number of groups		20,309	20,309
R^2 within		0.1223	0.2083

Significant at 1% - ***, 5% - **, 10% - *, standard errors in brackets below the estimated coefficients

The higher share of fixed assets in total assets (*tangibility*) reflects a greater consistency in accounting and tax regulation, including those applicable to depreciation and to historical cost valuation (a fair value is not permitted for tangible assets under local GAAP). Companies that experience a sales boost (*growth (⊿ sales)*) show less book-tax conformity, which may be due to earnings management or differences in the time of revenue and cost recognition for book-related and tax-related purposes.

Table 8 presents a comparison of accounting policy applied by borrowers and non-borrowers which confirms that more borrowers (22.5%) use items of advanced accounting policy included in *gaap_first* than non-borrowers (18%). However, total exceptional items (calculated as a difference between financial revenues from revaluation of financial investments and the sum of financial costs of revaluation of financial investments and other operating costs of the revaluation of non-financial assets) are negative for all borrowers contrary to non-borrowers. This confirms that borrowers applied more conservative accounting than non-borrowers. More borrowers recognize the short-term provisions and negative effects of a revaluation of non-financial assets. Although more borrowers recognize items of accounting policy included in the *tax_first* variable, the 99th percentile of their relative value is much lower than in non-borrowers, except for long-term other accruals.

Table 8. Comparison of accounting policy applied by borrowers and non-borrowers

		N	**%**	**10P**	**99P**
total exceptional items	non-borrower	1796	18.06 %	-0.0037	0.0007
	borrower	2229	**22.45 %**	-0.0056	0
		N	**%**	**90P**	**99P**
positive effects of revaluation of financial investments (included in financial revenues)	non-borrower	2004	2.02%	0	0.0170
	borrower	1879	1.89%	0	0.0248
items of advanced accounting policy included in *gaap_first*		**N**	**%**	**90P**	**99P**
revaluation of non-financial assets (included in other operating costs)	non-borrower	1584	16%	0.0102	0.4136
	borrower	2046	**21%**	0.0123	0.2551
negative effects of revaluation of financial investments (included in financial costs)	non-borrower	2596	2.61%	0	0.0323
	borrower	3089	**3.11%**	0	**0.0851**
pensions	non-borrower	1796	18.06 %	0.0085	0.1275
	borrower	1819	**18.33 %**	0.0053	0.0672
provisions	non-borrower	2197	22.10 %	0.0147	0.1778
	borrower	2225	**22.42 %**	0.0080	0.0940
long-term provisions	non-borrower	3028	3,04%	0	0.0329

		N	%	10P	99P
					0.020
	borrower	3220	**3,24%**	0	3
	non-	1863	18,74		0.141
short-term provisions	borrower	3	%	0.0089	2
		1995	**20,10**		0.071
	borrower	5	**%**	0.0055	5
items of accounting policy included in *tax_first*		**N**	**%**	**90P**	**99P**
	non-				0.052
other long-term deferred costs	borrower	9193	9,24%	0	2
		1593	**16,05**		**0.073**
	borrower	0	**%**	0.0019	**1**
	non-	8255	83,01		0.287
short-term deferred costs	borrower	1	%	0.0429	7
		8863	**89,28**		0.250
	borrower	9	**%**	0.0377	3
	non-	4090	41,14		0.494
other accruals (unearned revenue, deferred revenue)	borrower	8	%	0.0710	2
		5229	**52,67**		0.426
	borrower	1	**%**	0.0904	4
	non-	1154	11,61		0.247
long-term other accruals	borrower	6	%	0.0018	4
		2537	**25,56**		**0.290**
	borrower	4	**%**	0.0439	**1**
	non-	3276	32,95		0.347
short-term other accruals	borrower	5	%	0.0291	0
		4242	**42,73**		0.252
	borrower	1	**%**	0.0237	2

7. Conclusions

This paper investigated how bank lending affects the link between tax law and the accounting income, and the extent to which their financial results and taxable income mirror each other (measured by book-tax conformity), focusing on Polish private SMEs complying with local GAAP in 2003-2013. The results offer compelling evidence that private firms recognize more conforming income when they are larger, more indebted to non-bank creditors, profitable and more indebted to the bank (except for the permanent book-tax differential) and have more tangible assets. Decreases in the book-tax conformity appear significantly related to the use of more advanced accounting practices by profitable borrowers, adhering to the *prudence principle* and the *matching principle* (more for the temporary and permanent book-tax differential). These allow bank-lenders to learn more about a borrower's future cash flows, creditworthiness and ability to repay the bank loan. The findings indicate that debt financing provided by banks influence the book-tax conformity of private SMEs in Poland. However, the findings indicate that lenders are not constantly interested in high book-tax conformity. The insignificant relationship between bank debt and book-tax conformity of unprofitable borrowers indicate that bank-lenders demand higher informative earnings when borrowers generate financial losses than in the case of profitable borrowers, at least to some extent. On the other hand, in the case of profitable firms, bank lending increases their book-tax conformity. Tax avoidance applied by borrowers has a lower impact on book-tax differential than in the case of non-borrowers.

Moreover, these findings confirm that monitoring by lenders forces companies to adopt more advanced accounting practices than non-borrowers, in particular, by the use of accounting standards, adhering to the *prudence principle* and the *matching principle*. These allow lenders to learn more about a borrower's ability to repay the bank loan thanks to more informative earnings. However, the main constraint is that only 22.5% of borrowers applied accounting standards, adhering to the *prudence principle* and the *matching principle*, that are not recognized by tax law, whereas the coefficient at the variable which measures recognizing and recording business operations in accordance with tax rules is lower in the case of borrowers, irrespective of the model. This indicates that borrowers recognize business operations less according to tax law, contrary to non-borrowers.

My findings contribute to recent research on the relationship between book-tax conformity and corporate capital structure (Blaylock *et al.*, 2016) by indicating the different impact of bank debt on the book-tax conformity of borrowers rather than non-bank borrowings. My research outcomes are relevant for the ongoing discussion on the advantages of book-tax conformity, which include dampening earnings management, and causing a decrease in the use of corporate tax shelters and other tax avoidance activities (Graetz, 2005; Chan *et al.*, 2010).

To conclude, I see several areas for improving accounting practices in the Polish market. Firstly, lowering the threshold for the mandatory keeping of accounts should increase the number of enterprises maintaining accounting books. This is important for countries such as Poland, where internal reporting systems are underdeveloped, as the financial accounting system may perform a highly influential role in guiding business decisions (Cascino *et al.*, 2014). Secondly, increasing the role of the accounting system could help companies to benefit from better access to external finance, and monitoring by lending banks and, as a consequence, higher lender demand for more informative earnings could force companies to adopt more advanced accounting practices. Sources of funding are an essential issue for enterprises, especially SMEs: because of the limited availability of external capital, the enterprises invest less, do not use leverage, and grow more slowly (Rajan & Zingales, 1995).

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