Accounting Regulation in the European Union

Abstract
We provide a comprehensive overview of accounting-related regulatory changes (financial accounting, auditing, tax, other disclosures) in the 27 EU countries and the UK since the EU's inception in 1993 (Maastricht Treaty) based on an extensive literature review, a survey, as well as input by country and topic academic experts. The accompanying website (http://www.eu-regulations.com) provides visual representations of these events by country, a short description of the regulation, links to selected relevant literature references, and to the regulations themselves. Our aim is threefold. First, we lower the cost for researchers, reviewers and editors to become acquainted with the rich regulatory setting of each EU country over time. For example, we describe the different layers of the regulatory framework, and variations across and even within Member States. Second, the overview of regulatory changes helps improve research designs by identifying events that may coincide with the regulatory event of interest. Third, we provide researchers with insight into available research opportunities to address their research questions when using the EU or a particular EU country as a laboratory.

Keywords: accounting regulation, European Union, financial accounting, tax, auditing, disclosure regulation

1. Introduction

The European Union (EU), a supranational political and economic union of Member States, has evolved into one of the world's leading economies. As of 2022, it boasts a GDP of 15.8 trillion Euros (Statista, 2023a), thanks to its integrated single market. With a very sizeable financial market, the EU has taken a leading role in financial regulation. Academics, standard setters, accounting practitioners and regulated entities are keenly interested in assessing the costs and benefits of those regulations (Leuz and Wysocki, 2016; Minnis and Shroff, 2017), along with their direct and indirect consequences (Brüggemann et al., 2013). However, the financial reporting, auditing and tax regulatory environment in the EU is exceedingly complex, making it very difficult for researchers, reviewers and editors to become steeped in it, and subsequently tackle important research questions. By providing a comprehensive overview of accounting-related regulatory changes in the 27 EU countries and the UK since the EU's inception in 1993 (as declared by the Maastricht Treaty) based on an extensive literature review, a survey, as well as input by country and topic academic experts, we offer a go-to reference resource that lowers entry barriers for researchers and stimulate more research in these important settings. All regulations are depicted and classified on the paper's accompanying website (http://www.eu-regulations.com).

Our aim is threefold. First, as a complement to the website, in this paper, we take a higher-level perspective on EU accounting regulation. We delve into the various layers of accounting regulation, and discuss how they differ among countries, evolve over time, and impact different types of firms. Second, the overview of regulatory changes helps improve research designs by identifying events that may coincide with the regulatory event of interest. Third, we provide researchers with insight into available research opportunities.

The accounting regulatory environment is complex. The financial accounting function is affected not only by financial accounting regulation and enforcement, but also by auditing and auditor oversight, by taxation (e.g., due to book-tax conformity and tax incentives), by stock market regulations (for listed firms), and by other regulations at various levels. This holds true for any developed market worldwide, but it is particularly salient in the European Union, where the number of regulatory and enforcement bodies affecting firms' accounting practices in 27 Member States is large and stems from many different origins: EU Regulations, EU Directives, Member States' laws, private bodies that are usually given authority by the EU or Member States (e.g., the International Accounting Standards Board (IASB), private local enforcement bodies, or private organizations writing and overseeing state-level audit regulations), and stock market regulators.

Furthermore, this patchwork of regulations applies to different sets of firms. As a first example, EU-rules governing publicly listed firms only apply to firms listed on EU-regulated markets, whereas other rules may apply to public firms listed on exchange-regulated markets (e.g., firms listed on exchange-regulated markets are mostly not required to use the International Financial Reporting Standards (IFRS)). Similarly, most non-listed firms in the EU apply local Generally Accepted Accounting Principles (GAAP), but some Member States permit or even require certain non-listed firms to apply IFRS[1]. As another example, what constitutes a public interest entity (PIE) is defined at country-level. Commonly the definition includes public firms listed on EU-regulated markets, banks and insurance companies, but different sets of firms are additionally covered by the definition in different countries. As a result, EU regulations for PIEs may affect different types of firms depending on the country-level definition of what constitutes a

[1] We provide more detail on this in Section 3.2.1.

PIE. Naturally, some regulations apply to all firms, albeit with size thresholds varying by country and by regulator.[2]

Additionally, it may be difficult for an expert in a topical area (e.g., financial accounting) to be fully familiar with the coinciding events in other topical areas that may be correlated with the outcome variable of interest, and hence be confounding. For example, disclosure and earnings management are not only affected by the respective local GAAP or IFRS, but also by the tax code, audit enforcement and oversight, local stock market regulations that often require more frequent disclosures in quarterly reports, and any other regulations that affect disclosure and earnings management incentives. Furthermore, most researchers are topic experts rather than country experts and additionally not familiar with all countries in the EU. This regulatory complexity increases the barriers to entry for researchers and limits the pool of reviewers with both the broad topical and country expertise needed.

On the flip side, the EU accounting regulatory environment also provides an interesting setting with lots of variation and many regulatory changes to study. Furthermore, the amount of data available on EU firms typically exceeds that for firms based in other geographical areas due to mandatory filings for public and private firms, making the EU very amenable to executing empirical research projects. With 14.8 million unique company observations, the EU accounts for 59.1% of all worldwide observations with detailed information in Bureau van Dijks' Orbis database.[3] As a point of comparison, Compustat North America provides data for 80,000 active and inactive companies.[4]

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[2] The next section highlights differences between the US and the EU setting.
[3] Source: Bureau van Dijk (accessed 02/06/2022).
[4] Source: https://www.marketplace.spglobal.com/en/datasets/compustat-fundamentals-(8) (accessed on 02/19/2022).

Our first aim is to lower the barriers to entry and stimulate research in the EU setting. Therefore, we provide a comprehensive overview of accounting-related regulatory changes in the (current) 27 EU countries and the UK since the EU's inception in 1993 (as declared by the Maastricht Treaty) based on an extensive literature review, a survey of authors, as well as input by country and topic academic experts. We classify all regulatory events in a framework that captures the topic being regulated as well as the set of firms to which the regulation applies. The accompanying website (http://www.eu-regulations.com) provides a timeline that captures these regulatory changes visually by country, adding a short description of the regulations, links to the literature references we identified as elaborating on these regulations and to the regulations themselves, as well as some further visual representations that depict the number of regulatory changes by year and the number of topical areas covered.

To further lower entry barriers, section 2 provides a brief history of the EU, including the decades culminating in the 1993 Maastricht Treaty. It explains why it is important to study accounting regulation in the EU and highlights the key differences between the EU and the US settings. In section 3, we draw attention to the different layers of accounting regulation in the EU, and the variation this creates along four dimensions: cross-sectionally across countries, longitudinally over time, to the set of firms to which regulations apply, and in the intensity with which regulations are implemented and enforced. Section 4 explains the methodology and the classification scheme used to put together the accompanying website.

Our second aim is to improve research designs by identifying events that may coincide with the regulatory event of interest. Section 5 summarizes numerically how frequently regulatory changes coincide in the same time period. On average across all countries and years, we find that more than eight regulatory events occur in a typical difference-in-difference design that looks at

event year t=0 and includes a pre- and post-period of each two years. We document that they frequently coincide across disciplinary boundaries and highlight regulatory periods where replication may be valuable if these coinciding events are judged to be confounding.

Finally, our third aim is to present promising research opportunities. Beyond the research opportunities offered by the various regulatory layers described in section 3, section 6 highlights EU countries that have only rarely been studied even if they contribute substantially to EU GDP and firm-level data is widely available, and discusses under-researched regulations that may provide interesting research opportunities. This section also highlights five characteristics of the institutional environment in the EU that make it particularly interesting to use as a research setting. The seventh section briefly summarizes important regulations soon to be implemented, and the last section concludes.

2. The European Union

The European Union is a supranational political and economic union of Member States, which was formally established with the Maastricht Treaty at the end of 1993, which is where our regulatory overview starts. However, the roots of this Union go much further in history, dating back to the end of World War II, when European countries were trying to come together to ensure lasting peace on the continent. In 1952, Belgium, France, Italy, Luxembourg, the Netherlands and West Germany established the European Coal and Steel Community to integrate the coal and steel industries in Western Europe. From there, the same six countries created the European Economic Community (EEC) in 1957 in the *Treaty of Rome*. The EEC paved the way to a customs union, where by 1968 all signatories were charging the same tariff to goods entering the EEC regardless of from which country they entered (Center for European Studies, 2023). To facilitate the economic union, progress was being made on common agricultural and transportation policies. In

1973, the first wave of enlargement took place, with 3 countries joining. By 1985, there were ten Member States in the EEC. Five of these signed the Schengen Agreement, gradually abolishing checks at their common borders.

Twelve Member States signed the *Treaty of Maastricht* in February 1992 (effective from November 1993) and formed the European Union: Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, Portugal, Spain, the Netherlands and the United Kingdom. This treaty officially established the single market, permanently eliminating any trade barriers within the EU, and hence moving beyond being solely a customs union and a free trade zone. The single market is based on four principles: freedom of movement of people, goods, services, and money. It aims to remove barriers and harmonize regulations to facilitate trade and economic cooperation within the EU. The Financial Services Action Plan, launched in 1999 with various Regulations and Directives we will discuss later, made a big leap in delivering the integrated European financial sector and capital markets.

A core tool that was developed in phases as part of the European single market is "passporting" which is in effect across the European Economic Area (EAA) and allows a firm registered in an EAA country to do business in any other EAA Member State without needing further authorization from that other Member State (Investopia, 2023).[5] "Passporting" is of particular importance for the financial services sector and allows for a more integrated and competitive financial market. Upon withdrawal of the United Kingdom from the EU (Brexit) in January 2020, losing "passporting" negatively impacted the London financial sector (Reuters, 2023).

[5] The European Economic Area includes all EU member states, as well as Iceland, Liechtenstein and Norway.

The *Treaty of Maastricht* legally comprised three pillars: the European Communities pillar dealing with economic, social and environmental policies, the Common Foreign and Security Policy overseeing foreign policy and military issues, and the Police and Judicial Cooperation in Criminal Matters coordinating the fight against crime. In 2009, the *Lisbon Treaty* changed the legal structure by merging these three pillars into one single legal entity. The treaty also significantly increased the power of supranational European institutions, such as the European Parliament and European Council (Center for European Studies, 2023), the latter with Herman Van Rompuy, then prime minister of Belgium, as its first president. These institutions can set supranational directives and regulations that are then translated into national legislation. There were several waves of enlargement of the EU, most notably the inclusion of several Eastern European countries during the first two decades of the 2000s, and one defection when the United kingdom left the EU in 2020. Currently, the EU has 27 Member States.

The EU is a top-three player in the global economy, as evidenced by the following metrics. In 2022, the GDP of the US stood at 26.95 trillion USD (International Monetary Fund, 2023a), while that of the EU was approximately 25.43 trillion USD (International Monetary Fund, 2023b), with Germany, France, Italy and Spain the largest contributors (Statista, 2023a). The IMF indicates that the US accounts for 15.4% of the world's GDP, while the EU accounts for 14.6%, ranking second and third respectively behind China at 18.8% (International Monetary Fund, 2023c). In 2022, the EU counted 447 million inhabitants (Statista, 2023b) while the US population stood at 338 million (Worldometer, 2023). In per capita GDP, with 12.5K USD, China ranks a distant third behind the US (80K USD) and EU (41K USD) (International Monetary Fund, 2023d).

Because regulation has been a key tool to advance European integration, EU institutions have pursued an ambitious regulatory agenda. This had the ancillary effect of establishing the EU

as a global regulatory power, promoting its regulatory framework internationally (Bradford, 2019). For example, the EU took the lead in promoting EU data privacy laws as a benchmark for global standards, resulting in the General Data Protection Regulation 2016/679 (GDPR) in 2018 (European Parliament, 2016). Because of its economic influence, the size of its financial markets, and its comprehensive regulatory framework, the EU has become heavily involved in global *financial* and disclosure regulation.[6] The EU participates in international bodies such as the Financial Stability Board, has a partnership with the World Bank, and all its individual Member States are members of the International Monetary Fund. The EU promotes bilateral agreements with other countries such as Canada, the USA, Switzerland and Japan to facilitate cooperation and coordination in financial market regulation and supervision (European Commission, 2023). The EU also advocates for the integration of Environmental, Social and Governance factors in disclosures, which has important knock-on effects in other countries in which multinationals have a presence (Lexology, 2023).

Several aspects add striking complexity to the *accounting* regulatory environment in the EU compared to that of the US and most other jurisdictions, but at the same time also offer interesting opportunities for researchers, which we discuss later in detail, when using the EU as their research setting. First, EU Member States have much more independence from the EU than US states have from the US federal government. For example, taxation is regulated mostly at the Member State-level. As another example, while the EU provides regulations and directives about GAAP and disclosure, each state can, within those constraints, define its own local GAAP. We will develop on these various layers of regulation in the next section.

[6] For example, a recent Wall Street Journal article calls for the SEC to copy European climate disclosure regulations (Kiernan, 2023).

Second, the Euro was introduced for financial and commercial transactions in 1999 as a single currency, and Euro notes and coins were introduced in 2002. The Euro's monetary policy is governed by the European Central Bank. Unlike in the US where all states use the common US Dollar, however, currently, only 20 out of 27 EU countries use the common Euro as their currency; other countries use their local currency (European Union, 2023). Some of the countries that joined the EU after 2002 have not yet adopted the Euro but must do so once they have met the necessary conditions lined out in the Maastricht Treaty: Bulgaria, Czechia, Hungary, Poland, Romania and Sweden. Denmark is an exception. While it joined the EU in 1973, it has negotiated an opt-out from adopting the Euro and continues to use the Danish Krone. Sweden held a referendum in 2003, where a majority voted to not adopt the Euro. Sweden has not joined the European Exchange Rate Mechanism that ties currencies of EU countries outside the eurozone to the Euro, thereby deliberately not fulfilling all conditions that would require it to adopt the Euro. Obviously, the UK – no longer an EU member – continues to use the British Pound.

Third, there are 24 official languages spoken in the EU. While the EU has Member States that rank at the very top of the English language proficiency index (the Netherlands, Austria, Denmark and Belgium), France, Spain and Italy, three of the region's largest economies, still lag behind their neighbors (Education First, 2022). All EU Directives and Regulations need to be translated into the local languages. The EU Commission's spending on translation increased from Euro 26.5 million in 2012 to Euro 35.8 million in 2023 (Politico, 2023). For decades the EU has defended this multilingualism rather than moving to the English language only. The linguistic diversity within the EU also significantly influences the cross-border operations of auditors and accountants, despite the substantial harmonization of accounting and auditing rules (see for more detail below). This diversity also impacts the language choices firms make in their reporting.

3. Layers of regulatory framework

In the EU, the accounting landscape is shaped by various regulatory bodies, with EU legislation, country-specific laws, and exchange-specific rules being the most significant (European Commission, 2020). While EU legislation aims to harmonize and standardize accounting and audit practices among Member States, the unique regulations at the country and exchange levels introduce a degree of variability, both across and even within these states. In this section, we dissect these different regulatory layers, highlighting key examples from each layer and emphasizing the variations in these regulations that make these settings intriguing for research. We will then use these variations in the regulatory layers as the foundation for our classification scheme on the accompanying website.

3.1 EU legislation – Accounting regulation and the EU single market

3.1.1 A brief history of accounting regulation in the EU

The EU single market established a common framework and legal basis for financial reporting and disclosure requirements, fostering transparency and simplification of cross-border transactions. The European Parliament and Commission passed multiple Directives and Regulations that affected company reporting and auditing, company law, and security markets; we highlight a few below. EU Regulations have immediate binding legal force throughout all Member States, while EU Directives include certain goals that all Member States are obligated to reach. For EU Directives, Member States bear the responsibility of transposing these goals into national laws and can exert some decision-authority in how and when to implement such transposition. Member States often also issue national legislation to transpose EU Regulations, defining the local enforcement agencies, inspection and sanctions on the topic. Overall, enforcement of EU

Directives and Regulations is mostly left to the Member States, resulting in important variation (see below).

In the early years of the EU, all Member States had their own local GAAP. The first major step towards harmonization was the 4th Company Law Directive 78/660 (Council of the European Union, 1978) which introduced the requirement to prepare unconsolidated (individual) financial statements in 1978. From 1983 onwards, the 7th Company Law Directive 83/349 (Council of the European Union, 1983) also introduced the requirement to prepare consolidated financial statements for companies (parents) that control another entity (subsidiary). Therefore, all limited liability companies in the EU must prepare financial statements, independent of their listing status. One of the most notable, and widely studied, regulations that shaped company reporting is the International Financial Reporting Standards (IFRS) Regulation (1606/2002), which adopted IFRS for the preparation of consolidated financial statements by firms listed on EU-regulated public markets in 2005 (European Parliament, 2002). The current accounting rules are laid down in the Accounting Directive 2013/34 (European Parliament, 2013a), which increased the comparability of local GAAPs within the EU (European Parliament, 2013a), given that local GAAP remains broadly used next to IFRS.

While taxation is regulated mostly at Member State level, two examples of EU-level tax regulation are the Value Added Tax (VAT) Directive (European Parliament, 2006a) and the parent-subsidiary Directive (European Parliament, 2011). The VAT Directive harmonized the VAT system across the EU, while the parent-subsidiary Directive aimed to exempt dividends and other profit distributions paid by subsidiary companies to their parent company from withholding taxes, eliminating the double taxation of such income at the level of the parent company.

As a result of how financial accounting and tax are regulated in the EU, companies often effectively report under a three-book system: First, firms listed on EU-regulated markets prepare their consolidated statements in line with IFRS. Second, in most countries, the unconsolidated statements of the parent and all its subsidiaries must be prepared in line with local GAAP. Third, with tax mostly regulated at Member State level, firms must file tax returns that differ from IFRS and local GAAP.

Examples of important audit legislation are the Statutory Audit Directive 2006/43 and the Audit Regulation 537/2014. The Statutory Audit Directive 2006/43 sets minimum requirements for statutory audits, such as the engagement of approved auditors and disclosure of the responsible auditor's identity (European Parliament, 2006b). The Statutory Audit Directive has been amended by the Audit Directive 2014/56, which established uniformity in the rules concerning the independence and professional ethics of auditors. Almost simultaneously, Audit Regulation 537/2014 improved the statutory audits of public-interest entities, enhancing transparency in the audit market.[7] It introduced measures like mandatory audit firm rotation, the publication of significant risks (key audit matters), and the separation of audit and non-audit services (European Parliament, 2014a).

3.1.2 IFRS endorsement process

The IFRS are developed by the *International Accounting Standards Board* (IASB), a part of the IFRS Foundation. For an overview of the due process that the IASB exerts in the development of these standards, and the various parties involved, we refer to Deloitte (2023). After the IASB publishes a final draft of a new standard or a revision of an existing standard, the EU needs to endorse it before it comes into force. After the IASB's publication, the *European*

[7] The Audit Directive 2014/56 and Audit Regulation 537/2014 are often jointly labelled as 'EU Audit Legislation'.

Financial Reporting Advisory Group (EFRAG), a non-profit organization operating under Belgian law, steps in to evaluate the standards. EFRAG assesses whether the standards meet the criteria for endorsement, as outlined in Article 3(2) of Regulation 1606/2002. For example, IFRS can only be adopted if ‘they meet the criteria of understandability, relevance, reliability and comparability required of the financial information needed for making economic decisions and assessing the stewardship of management” (Article 3(2) 1606/2002). To ensure the impartiality and objectivity of EFRAG's assessment, the *Standards Advice Review Group* (SARG) of the EU verifies if EFRAG has conducted its evaluation without bias and according to established guidelines.

Upon receiving the advice from EFRAG and the opinion of SARG, the European Commission prepares a draft endorsement of the IFRS standards. This draft is voted on by the *Accounting Regulatory Committee* (ARC) as defined in Article 6 of Regulation 1606/2002. If accepted, the EU Parliament and the Council of the European Union are granted a three-month period to review and potentially oppose the Commission's draft endorsement. If no objections are raised, the Commission's draft is officially published in the 'Official Journal', making them applicable and legally binding within the EU Member States.

It is important to note that the endorsed ‘EU-IFRS’ are not necessarily the same as the IFRS issued by the IASB. First, there is a timing difference between the IASB publication and the EU endorsement. Second, the EU can reject or only partially adopt IFRS and leave out certain aspects (‘carve-outs’). For example, the EU adopted IAS 39 (Financial Instruments: Recognition and Measurement) except for certain provisions on the use of the full fair value option and on hedge accounting (EY, 2022). Conversely, Dobler (2020) describes that the ‘top-up’ in the endorsement of ‘Amendments to IFRS 4’[8] is effectively an unprecedented ‘carve-in’.

[8] The ‘top-up’ "extends the scope of an optional temporary exemption from IFRS 9 from predominate insurers to the insurance sectors of EU-based financial conglomerates” (Dobler, 2020).

3.1.3 Security Markets Regulations

The EU also significantly shaped the securities markets across the Member States. The groundwork was laid in the Financial Service Action Plan (1999 – 2004), which included over 40 regulatory changes to create a single market for financial services (Byard et al., 2021). The four so-called Lamfalussy Directives, named after the former chair of the EU Advisory Committee Alexandre Lamfalussy, constitute the core of the action plan: The Market Abuse Directive 2003/6 aims to prevent insider trading and market manipulation (European Parliament, 2003a), the Prospectus Directive 2003/71 increased IPO prospectus disclosure (European Parliament, 2003b), the Markets in Financial Instruments Directive (MiFID I) 2004/39 was the culmination of the "passporting" efforts discussed above in that it created a single European financial service market (European Parliament, 2004a), and the Transparency Directive 2004/109 harmonized transparency requirements for firms listed on EU-regulated markets, and included the introduction of mandatory quarterly reporting for publicly listed firms (European Parliament, 2004b).[9] The *European Securities and Markets Authority* (ESMA) monitors Member State enforcement activities and collects data on the number of examinations performed and the number of actions taken by local enforcers, but there exists no EU-wide enforcement body.

3.2 Member State-specific rules - variation across countries

Although the EU standardizes numerous aspects of accounting and audit regulation, Member States legislators and authorized private entities play a crucial role in shaping these regulations and their enforcement. These private bodies, often empowered by Member States, include local enforcement agencies responsible for licensing accountants and private organizations that develop and oversee state-level accounting and audit regulations. This leads to four distinct

[9] Directive 2013/50 amended the Transparency Directive and quarterly reports are no longer mandated by the EU (European Parliament, 2013b).

types of variations in accounting and auditing regulations across Member States: (1) differences in the set of firms to which regulations/directives apply, (2) variations in the intensity of implementation and enforcement, (3) variations in implementation dates, and (4) the issuance of rules that are Member State-specific and not originating from the EU. We will explain each source of country-level variation in more detail below, as well as highlight some important examples of such variations.

3.2.1 Variation in the set of firms to which regulations / directives apply

EU Regulations and EU Directives specify the set of firms that are subject to their legislation. However, they frequently grant Member States the discretion to expand the scope of these laws to include additional firms or to restrict certain exemptions, leading to more stringent requirements being applied in some Member States. A prime example of this principle is the Accounting Directive 2013/34, which primarily aims to alleviate administrative burdens, especially for businesses categorized as 'micro-undertakings.'[10] However, the Directive also specifies that the discretionary authority to exempt micro-undertakings from certain obligations resides exclusively with Member States, and that Member States can choose to apply it partially, fully, or not at all. Similarly, the Directive allows medium-sized firms to file abridged financial statements and allows small companies an exemption from the obligation to file income statements.[11] However, these strategies to reduce administrative burden are not uniformly applied across the Member States; for instance, Italy mandates that even small firms must file income statements. This variation in the set of firms to which EU directives/regulations apply leads to

[10] In order to be considered a micro-undertaking, two of the following conditions must not be exceeded: balance sheet (€350,000), net turnover (€700,000), average employees (10).

[11] Small firms must not exceed the limits of at least two of the following criteria: (1) EUR 4,000,000 total assets; (2) EUR 8,000,000 net turnover, and (3) 50 average employees. Medium-sized firms must not exceed the limits of at least two of the following criteria: (1) EUR 20,000,000 total assets; (2) EUR 40,000,000 net turnover; and (3) 250 average employees. Firms exceeding these criteria are classified as large.

notable differences across countries in terms of which firms provide income statements (Beuselinck et al., 2023). Literature has exploited size-dependent disclosure regulations to cleanly identify causality (e.g., Breuer et al., 2018).

Under the provisions of IFRS Regulation 1606/2002, firms listed on EU-regulated markets are mandated to prepare their consolidated financial statements in accordance with IFRS. Article 5 of the regulation elaborates on this requirement, stipulating that Member States may permit or necessitate these firms listed on EU-regulated markets to also prepare their *un*consolidated accounts (individual accounts) in alignment with IFRS. With respect to firms not listed on EU-regulated markets, Article 5 further states that "Member States may permit or require other firms to prepare their consolidated accounts and/or annual (unconsolidated) accounts in accordance with IFRS." This provision furnishes Member States with the discretion to opt between IFRS and local GAAP for various categories of firms. Such discretion engenders disparities in accounting practices and comparability across different jurisdictions in the EU. These distinctions not only manifest in the choice between different types of firms but also in the type of accounts (consolidated vs. unconsolidated), rendering cross-country comparisons of unlisted firms within the EU a complex undertaking. While all countries permit IFRS for consolidated accounts of unlisted firms (and some require it for certain types of firms such as banks and insurance companies), it is not permitted in some countries for *un*consolidated accounts (e.g., Austria, Belgium, and Germany). An overview delineating the types of firms that are either disallowed, permitted, or required to use IFRS can be found in André (2017) and on our accompanying website.

Another example of variation in the set of firms to which legislation applies is the country-specific definition of public-interest entities (PIE). Many European legislations, for example, the Audit Regulation 537/2014 or the Non-Financial Reporting Directive 2014/95, only apply to PIEs,

which consist of all firms that are admitted to trading on a regulated market, credit institutions, insurance companies and firms that are "designated by Member States as public-interest entities, for instance undertakings that are of significant public relevance because of the nature of their business, their size or the number of their employees" (Audit Directive 2014/56). Consequently, EU Member States have the autonomy to enforce stricter requirements on firms they consider to be of public importance, a designation that varies from country to country. For example, some countries define pension funds, investment companies, state-owned companies, or firms that pass certain size-thresholds as a PIE. Additionally, countries might change this definition when new Directives are issued (Federation of European Accountants, 2014).

3.2.2 Variation in the intensity of implementation and enforcement

EU Directives necessitate transposition into national law by each Member State, creating variation in how they are incorporated into their legal frameworks. Such variations emerge as Member States adapt Directives in alignment with their distinct legal and administrative systems, and potentially even political considerations may influence the manner of implementation. While the European Commission is overseeing the implementation of Directives, as one area of variation in intensity of application, the responsibility for enforcement within national jurisdictions resides with the Member States, leading to divergent levels of compliance across Member States.

Despite the Accounting Directive 2013/34 specific aim to "ensure the clarity and comparability of financial statements" (European Commission, 2022), the flexibility afforded in local GAAP results in another particular area of variation in the intensity of application. This variation emanates from the individualized systems within each Member State concerning the development of local GAAP and the assignment of responsibility for this task. Consequently, there are substantial differences across countries in the national transposition of Directives and

important differences in local GAAPs. For example, Spanish GAAP is based on the General Chart of Accounts (*Plan General de Contabilidad*) issued by the Accounting and Auditing Institute (*Instituto de Contabilidad y Auditoría de Cuentas*) (Mora, 2017). In Germany, local GAAP is mainly described in the German Commercial Code (*Handelsgesetzbuch*, HGB) (Fülbier et al., 2017), and UK GAAP is embodied in the *Companies Act 2006* (Collis et al., 2017).

In contrast to EU Directives, EU Regulations do not have to be transposed into national law, although many Member States often do so to define the competent national authorities (i.e., the local enforcement agencies), inspection and sanctions on the regulated topic. Nevertheless, also EU Regulations may not be applied uniformly across countries. For example, the IFRS Regulation 1606/2002 states that Member States "are required to take appropriate measures to ensure compliance with international accounting standards." However, there is substantial variation in how Member States design enforcement of this exemplar EU Regulation. Countries like Germany[12], Austria, and Sweden have special enforcement agencies, while for other countries the securities market regulator or the central bank might be responsible.

The *European Securities and Markets Authority* (ESMA, introduced in Section 3.1.3) only monitors local enforcement activities and publishes guidelines on enforcement. Local enforcers are required to confirm in writing to the ESMA whether they comply, intend to comply, or do not (intend to) comply with the guidelines. Currently, Austria, Bulgaria, and the Netherlands are not fully compliant, and Greece, Hungary and Malta intend to comply in the future (European Securities and Markets Authority, 2023a). Since enforcement is not harmonized, enforcement

[12] The 2004 Bilanzkontrollgesetz (balance sheet control act) introduced the German Financial Reporting Enforcement Panel (FREP), a private-law entity. However, as a result of the Wirecard scandal, the FREP stopped its activities and the Federal Financial Supervisory Authority (BAFIN) is solely responsible for examining the financial statements of publicly listed firms since January 2022. Heese (2022) attributes some of the FREP's weakened oversight to it allowing its senior regulators to serve on boards of public firms during their FREP tenure.

actions vary among Member States. In 2022, enforcers undertook 640 examinations (16% of issuers whose securities are admitted to trading on European regulated markets), which led to 225 enforcement actions, mostly requiring a correction in future financial statements (179), and in a few cases a public corrective note (30) or a re-issuance of financial statements (16) (European Securities and Markets Authority, 2023b). However, the percentage of issuers examined in EU countries varies between 5.9% (Croatia) and 67.9% (Slovakia). Similarly, the percentage of actions taken varies between zero percent (Croatia, Estonia, Latvia, and Slovenia) and 15.8% in Luxembourg. Lastly, the proportion of actions taken per examination ranges between zero percent (again, Croatia, Estonia, Latvia, and Slovenia) and 100% (Romania). Table 1 provides details by country.

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The auditing profession is almost entirely organized on the national level, and hence variations across Member States exist. For example, while the Audit Directive 2006/43 is the basis for access requirements to the audit profession, these EU-level requirements are minimal and there are considerable differences as to who can become an auditor across Member States. The approval and registration of statutory auditors are among the most frequently delegated tasks. For example, ten Member States allow access to the auditing profession even without a university degree, and in these cases, the necessary practical training period varies between 5 and 15 years (Jahn and Loy, 2023).

3.2.3 Variation in implementation dates

Some EU Regulations and Directives may not lead to an implementation in a Member State, because a Member State may have already instituted a specific measure for unrelated reasons, making further implementation unnecessary. For example, Regulation 537/2014 requires

the publication of key audit matters for all public interest entities since 2016, but France already had a similar rule in place since 2003 (Bédard et al., 2019), the Netherlands since 2014 (Woudenberg et al., 2021), and the UK since 2013 for firms listed on EU-regulated markets (Gutierrez et al., 2018; Porumb et al., 2021) and since 2017 for firms listed on the Alternative Investment Market (Gutierrez et al., 2022a). Similarly, the regulation requires mandatory auditor rotation, which Italy has had in place since 1975 every nine years (Cameran et al., 2016, 2015; Horton et al., 2021). Another example is the requirement to take appropriate measures to ensure compliance with the IFRS Regulation (1606/2002). Christensen et al. (2013) argue that only a few countries (e.g., Finland, Germany, the Netherlands, Norway, and the UK) made substantive changes to the enforcement of financial reporting as a result.

Conversely, most Directives require transposition into national law by a stipulated deadline, and factors such as national legal processes, political priorities, and administrative capacities may influence the pace of this process (Christensen et al., 2016). While some Member States may complete the transposition prior to the deadline, others may do so only just-in-time, or even subsequently. Consequently, implementation dates frequently diverge from the formal transposition deadlines. This temporal variation can and has been used by researchers in their research designs. For example, the Transparency Directive 2004/109 was implemented between 2007 and 2009, and the Shareholder Rights Directive 2007/36 between 2009 and 2012 (Bonetti et al., 2020). Christensen et al. (2016) is another example of a research paper that has exploited these timing variations.

3.2.4 Country-specific rules

Country-specific rules, by definition, create variation across EU Member States. For example, with some EU-level exceptions, tax policy remains largely the sole responsibility of the

Member States. Member States are free to set the statutory tax rates for corporate taxation or tax-loss offsetting rules. However, the EU has established some measures to prevent double taxation or double non-taxation (i.e., the case in which profits are not taxed at all). Furthermore, there are many bilaterally negotiated double-tax treaties between Member States.

The 2013 "Say-on-Pay" regulation that mandated enhanced disclosure of executives' renumeration and the 2010 UK Bribery Act are examples of regulations that were implemented at the country level in the UK. Other examples include the 2014 anti-takeover law in France, the 2023 supply-chain act in Germany, changes in audit size thresholds in Italy in 2020, and the introduction of a minimum tax in Slovakia in 2014, which was again abolished in 2018. Furthermore, some countries (e.g., Czech Republic, Hungary, Italy) also introduced a requirement for EU-regulated listed firms to prepare unconsolidated statements using IFRS.

3.3 Exchange-specific rules - Variation across/within countries

3.3.1 Variation in the set of firms to which regulations / directives apply

Variations across countries and even within countries can stem from exchange-specific rules. Most stock exchanges in Europe distinguish between EU-regulated market segments and exchange-regulated market segments, and stock exchanges are free to choose if a market segment is EU-regulated or not.[13] This distinction is important as many EU Regulations and Directives only apply to firms listed on EU-regulated markets. For example, the Market Abuse Directive[14], Transparency Directive, and IFRS Regulation only apply to EU-regulated markets. Thus, firms

[13] The list of EU-regulated exchanges can be found here: https://finance.ec.europa.eu/publications/list-eu-regulated-markets_en. Note that the stock exchanges typically have multiple segments, some of which can be EU-regulated and some of which can be exchange-regulated.

[14] The Market Abuse Directive was replaced by the Market Abuse Regulation 596/2014 in 2016 (European Parliament, 2014b). The Market Abuse Regulation expands the scope of the Market Abuse Directive to non-regulated markets. The aim is to prevent insider trading and market manipulation.

listed on market segments that are exchange-regulated are not required by the European Commission to prepare their consolidated accounts in accordance with IFRS.

However, some stock exchanges allow or even require IFRS for some of these exchange-regulated markets (Byard et al., 2021; Pierk, 2018), which leads to differences across and within countries in whether publicly-listed firms apply IFRS. For example, firms listed on the 'Scale' market segment of the Frankfurt Stock Exchange can voluntarily adopt IFRS, but firms listed on the Alternative Investment Market at the London Stock Exchange have been required to use IFRS since 2007. Similarly, Audit Regulation 537/2014 does not apply to exchange-regulated markets, but the London Stock Exchange has required expanded auditor reports since 2017 (Gutierrez et al., 2022b).

3.3.2 Variation in the intensity

Stock markets often require more detailed or more frequent disclosure for some of their stock market segments than what is required by the EU. For example, the Transparency Directive 2004/109 required quarterly reporting for firms listed on EU-regulated markets. However, these reports were only required to include an explanation of material events and a general description of the financial positions (Article 6). The Transparency Directive Amendment Directive 2013/50 made even those interim reports no longer mandatory. Yet, Bornemann et al. (2023) show that most firms continued to file quarterly after the interim report mandate was abolished, but most firms reduced the amount of disclosure. However, certain stock exchanges continue to mandate quarterly reports, primarily for their main market segments where the largest firms are typically listed and which are often also EU-regulated. These quarterly reports can range in complexity, from relatively rudimentary overviews highlighting significant events and key financial positions,

to comprehensive, fully audited quarterly reports. It’s worth noting that within the EU, the requirement to publish any quarterly information, whether audited or not, no longer exists.[15]

4. Methodology, accompanying website and classification

4.1 Methodology to identify relevant regulatory changes

Our strategy to identify relevant regulatory changes is as follows: First, we consider all publications included in the Scopus database in the top-15 accounting journals and *Accounting in Europe* between 1993 and 2021.[16] Within these 15,048 publications, we initially screen for all country names and ‘Europe’, and variations thereof (e.g. 'Denmark' and 'Danish'), in the title, abstract, or keywords. In total, we identified 2,660 unique papers that include these search terms, with some papers mentioning multiple countries, resulting in 3,342 paper-country combinations. We systematically review these papers to identify regulatory changes. Second, we screen the last 5,000 publications in the SSRN accounting research network (originally posted between March 2021 and January 2022) to identify recent institutional changes described in working papers that are not yet published. Since the data is not available in a database, we gathered the title, abstract and keywords from each publication. Within these 5,000 working papers, we identify 455 unique papers that include country names in the title, abstract, or keywords.

[15] An overview of the quarterly reporting requirements for 15 European countries can be found in Table 2 of Hitz and Moritz (2019).

[16] Top-15 accounting journals are selected based on the 2020 impact factor ranking of journals with at least a 4-year impact factor history. In alphabetical order: Accounting and Business Research, Accounting, Auditing, and Accountability Journal, Accounting and Finance, Accounting Horizon, Accounting in Europe, Accounting Organization and Society, British Accounting Review, Contemporary Accounting Research, European Accounting Review, International Journal of Accounting Information Systems, Journal of Business Finance & Accounting, Journal of Accounting and Economics, Journal of Accounting and Public Policy, Journal of Accounting Research, Review of Accounting Studies, and The Accounting Review. We acknowledge that other journals have published research studies using regulatory changes in the EU. We believe that the next steps in our process likely identify the most relevant studies in journals not included in our initial selection.

Third, for every relevant regulatory change identified in one country, we also checked if it is applied in other countries. Fourth, we contacted all national representatives of the *European Accounting Association* to request their input on whether we have missed an important regulatory change in their country or an important paper that studies any of the regulations in their country's context, incorporating any feedback we got. Fifth, we contacted the authors of all cited papers on the website with a link to an online questionnaire to ask for additional input on references that our screening algorithms may have missed, with a particular focus on the country where they are experts. The response rate was approximately 38% (92 out of 255 active email addresses), but it is possible that authors did not respond if they did not notice any missing regulation. Sixth, of the 2,660 unique papers we identified that mentioned our search terms, 753 were published in the last 5 years, and hence are presumably written by researchers still actively publishing accounting research. Approximately 1,500 unique authors contributed to these papers. To the extent possible, we collected the email addresses of these authors, and sent out a mailing to refer those researchers to the paper and the website, accompanied by an online questionnaire should they have additional input[17]. Seventh, we identified countries for which we did not receive much input and we further contacted local accounting experts in those to identify relevant changes not mentioned in existing publications and scoured practitioner resources for these countries.

Not included are regulation changes specific to a certain industry. For example, banks, utilities, non-profit and governmental agencies, real estate, and agriculture are highly regulated sectors, that face a lot of additional regulatory requirements specific to only that sector, warranting to be studied separately. Additionally, we did not include regulatory spillover from other

[17] The main aim of this emailing phase was to raise awareness of the website and the paper. Therefore, the response rate in this stage is low, as we do not explicitly ask recipients to fill out the survey yet only use it should they note a missing regulation or have further feedback.

jurisdictions such as EU-based subsidiaries of U.S.-listed firms subject to the Sarbanes-Oxley Act. Lastly, we subjectively determined if changes were minor, and excluded those. For example, we excluded corporate tax rate changes below 3%.

4.2 Classification of regulatory changes

We classify every regulatory change along two dimensions. The first dimension is the topical domain and uses four categories: *Financial Accounting* (*FA*), *Audit*, *Tax*, and *Other*. The first topic (*FA*) covers changes to the financial accounting system, which includes, for example, changes in recognition and subsequent measurement of assets and liabilities as well as disclosure rules. Regulatory changes are mostly due to EU Regulations and EU Directives, changes to the local GAAP system, or disclosure rules of the stock market regulators. The second topic (*Audit*) includes changes to audit regulations and audit oversight. Regulatory changes are mostly either due to EU Regulations and EU Directives, or changes to the audit system. The third topic (*Tax*) is related to changes in corporate taxation, for example, major tax rate changes or changes in tax-loss offsetting rules. Regulatory changes are often country-level. All accounting regulatory changes that do not fall into the previously mentioned categories are classified as *Other*, e.g., regulations related to corporate governance, initial public offerings (IPO), or mergers and acquisitions (M&A).

The second dimension of our classification considers the set of affected firms. Following our discussion in Section 3 of the layers of regulation that apply to different sets of firms, we classify regulations according to the set of firms they affect into four categories: *All Firms*, *Public Interest Entities (PIE)*, *Firms listed on EU-regulated markets (Public-EU)*, and *Firms listed on exchange-regulated markets (Public-Other).* The first category includes regulatory changes that apply to all firms (*All Firms*), albeit with varying size thresholds, sometimes excluding the smaller private firms. The second category (*PIE*) includes regulatory changes that apply specifically to

Public Interest Entities, which in most countries include public firms listed on EU-regulated markets, banks and insurance companies, and often large private firms. The definition of PIEs is country-level, and therefore may include any company that the country classifies as such. The third category includes regulations that apply only to firms listed on EU-regulated markets (*Public-EU*). The fourth category shows regulations that apply only to firms listed on exchange-regulated markets (*Public-Other*).

4.3 Accompanying website

The accompanying website providing a comprehensive overview of accounting regulation in the EU is available at http://www.eu-regulations.com. For each country, we provide the following information. First, the website presents a graphical overview of the regulatory changes over time for each country. This graphical overview uses a color-coding that classifies the topic of the regulation as *Financial Accounting* (purple), *Auditing* (blue), *Tax* (green) and *Other* (red). It uses shape-coding to indicate the application of regulations to *All* firms (circle), *PIE*s (triangle), *Public-EU* (square) and *Public-Other* (plus sign). Regulations affecting public firms only are indicated above the timeline on the website, while regulations affecting a broader set of firms are below the timeline.

Second, below the timeline for each country is a list of all regulatory changes with a brief description. We do not discuss each regulation in detail but include links to the respective official documents, EU regulations (if applicable), and a paper that discusses the respective change (if available) where the interested reader can take a deeper dive. If official documents are not available, we refer to secondary sources.[18] The papers mentioned cover the respective country if

[18] The transposition of EU Directives often affects several local laws. If the transposition affects three or fewer local laws, we list these, separated by three slashes ('///'). If more than 3 are affected, we state 'National transposition into several laws' and link to the EU Directive itself.

such paper is available. However, in the case of EU Directives and EU Regulations, the papers might mention the Directive and national transposition into another country if no country-specific paper is available. For EU Directives, we included the official transposition deadline as reported by the European Commission, unless we found the entry-to-force date in the literature (denoted with a * on the website). The “papers” and “SSRN” tabs list the full references of, respectively, published and working papers on accounting in the respective country. Note that this list is compiled by searching accounting journals for country names, so many of the papers do not concern a change in an accounting regulation.

Third, the tab “number of regulations” provides a graphical overview of the number of regulatory changes 5 years around a respective year (-2, -1, 0, +1, +2) in the country. Fourth, the tab “number of categories” provides a graphical overview of the number of different topical areas (Financial Accounting, Auditing, Tax and Other) in which regulatory changes happen for 5 years around a respective year (-2, -1, 0, +1, +2) in the country. The next section will explain how we use the information in these last two graphical overviews to identify coinciding and hence potentially confounding events in research studies on a specific regulation, and specifically the role that interdisciplinary (i.e., regulations in another sub-discipline of accounting) may play in researchers’ awareness of coinciding events.

5. Improving research designs: coinciding regulatory events

5.1 General trends

The overview of regulatory changes over time per country helps authors, reviewers, and editors to see which events may coincide with the regulatory event of interest. If these coinciding events also affect the outcome of interest, beyond the hypothesized effect of the regulatory event of interest, they are confounding events, threatening the validity of a finding that connects the

regulatory event of interest to the outcome of interest. Of course, not every coinciding regulatory event is a confounding regulation. For example, the coinciding regulatory event may not affect the outcome of interest, or treatment and control firms may be affected equally. Nevertheless, it is important to be aware of potentially confounding events and we hope our regulatory overview will be useful in helping authors think through which events may or may not be confounding, thereby avoiding wrong conclusions in their research findings.

Our work shows that the number of coinciding regulations may be large. We start with aggregating the data on the country websites by counting the number of regulations implemented in the EU countries and the UK over time, using the framework of a typical difference-in-difference design that looks at event year t=0 and includes a pre- and post-period of each two years. Figure 1 plots the average number of accounting regulations implemented across all countries over the period t-2 to t+2 in year t=0. We observe a very noticeable peak in the 2005-2008 period, with an average of more than 13 regulations in the 5-year period around each of those years.

Figure 2 plots this average number of accounting regulations over the 5-year period by category (Financial Accounting, Auditing, Tax, and Other). As can be seen in Figure 2, a big part of the 2005-2008 peak is driven by Financial Accounting regulations. In this period, we saw the rollout of the IFRS Regulation (European Parliament, 2002), as well as a bundle of Directives tied to the Financial Services Action Plan (e.g., the Transparency Directive (European Parliament, 2004b), which introduced mandatory quarterly reporting for publicly listed firms, the Market Abuse Directive, and the IPO Prospectus Directive 2003/71 (European Parliament, 2014c)). In auditing, the Statutory Auditing Directive (European Parliament, 2013a) was implemented. The Value Added Tax Directive was the most important regulatory change in tax during this period. An important 'other' disclosure regulation during this peak regulatory period was the Mergers and

Acquisitions Directive 2005/56 (European Parliament, 2012). Additionally, the enforcement of IFRS increased in some, but not all, countries (Christensen et al., 2013), and some stock market regulators established new market segments on which IFRS is still voluntary (Byard et al., 2021; Pierk, 2018). Member States varied in their approach to IFRS adoption by private firms, with some making it mandatory, others allowing it as an option, and yet others prohibiting it altogether (André, 2017). Lastly, other local regulatory changes took place.

The second, albeit a bit lower, peak of regulatory activity occurred between 2014 and 2018. As Figure 2 indicates, auditing regulation contributed proportionally more to this increased volume of regulation than in the prior peak. This later period, in particular, saw the Audit Directive 2014/56 (European Parliament, 2014c) and the Audit Regulation 537/2014 (European Parliament, 2014a) that improved the transparency of the audit market. On the Financial Accounting front, this period saw the Accounting Directive 2013/34 (European Parliament, 2013a) and the abolishment of mandatory quarterly reports. In terms of other disclosure regulations, the most important one during this period was the Non-Financial Reporting Directive 2014/95 (European Parliament, 2014d). Tax regulation, including major tax rate changes, happens more uniformly over time.[19] Partly contributing to these peaks are the waves of EU enlargement with 10 countries joining in 2004[20], two in 2007 (Bulgaria and Romania), and one in 2013 (Croatia). These countries must, upon joining the EU, implement many regulations in a very short time period to "catch up" on previously issued EU legislation.

<<< Insert Figures 1 and 2 about here. >>>

Table 2 presents information on the average number of accounting regulations over the 5-year period by country-year. The *column* labeled "avg" is the average across all countries over

[19] A country-specific version of Figure 2 is available on the website for each country.
[20] Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia.

time, as plotted in Figure 1. Countries have an average of 8.6 regulatory events per year, ranging between 7.5 for Croatia and 11.4 for Germany.[21] The *column* labeled "1" indicates the count of countries in which in the five years around that year (from t-2 to t+2) only 1 regulatory event occurred and would hence surely provide a clean treatment in a research design. There are 70 such country-years, which make up less than 9% of all country-years covered (70/784). Noticeably, those country-years tend to be early years after the formation of the EU, and there have been no such definite clean treatment country-years since 2003. The *row* labeled "1" indicates similarly the count of clean treatment years for each country over time. It averages 2.5 years across countries and ranges between 0 (no 'clean setting' for France, Germany, Poland, Romania, and the UK) and 8 (Croatia). Note that these tabulated "clean treatment country-years" provide a lower bound on the number of country-years that are not impacted by confounding events, as these are calculated on the assumption that every regulation happening in this country over the 5-year period is assumed to also affect the outcome of interest. Careful consideration of the various regulatory events will most likely lead authors to conclude that some of these regulations are *not* impacting the outcome of interest, and hence are not to be considered confounding events.

The last *column* labeled "0" indicates the count of countries in which in the five years around that year (from t-2 to t+2) no regulatory events occurred and would hence provide an entirely clean control group in a research design. There are 16 such country-years, which make up around 2% of all country-years covered. Again, they are concentrated in the early years after the formation of the EU and there have not been such fully clean control country-years since 2002. Lastly, the *row* labeled "0" indicates similarly the count of clean control years in each country. It

[21] We acknowledge that, although we applied an extensive search and feedback process, we may have missed some regulations in some countries, and that there may be some bias in this measurement error given it is harder to identify the regulatory changes in understudied countries.

averages 0.57 and ranges between 0 (Belgium, Bulgaria, Cyprus, Czech Republic, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Poland, Romania, Slovakia, Slovenia, and the UK) and 4 (Malta).

<<< Insert Table 2 about here. >>>

5.2 Interdisciplinarity

One of the challenges we previously highlighted is that researchers tend to be topical experts and may therefore be less aware of the institutional detail outside their main area of expertise. For example, a financial accounting researcher may not be up to date on tax regulatory changes, or a tax researcher may not be aware of changes to auditing regulation. Yet, presumably, researchers should be familiar with changes to regulation within their own discipline. To understand how large the potential of coinciding events that cross disciplinary lines is, and hence unfamiliarity likely a larger problem, we repeat the analysis of Table 2, but now count the number of different categories of regulations that would be changing in a difference-in-difference design over a 5-year period (from t-2 to t+2) for a given country-year. Given that we capture 4 categories of accounting regulation (Financial Accounting, Auditing, Tax and Other Regulations), this number ranges from 0 to 4. Table 3 shows this analysis. As the column labeled "avg" shows, the average number of categories affected across years is 2.9, indicating that coinciding events cross between 2 and 3 disciplinary lines, and making it likely that specialized researchers may not be fully aware of these events. Figure 3 graphs this average over time. Notably, during the two previously identified peak regulatory periods (2005-2008 and 2014-2018) we see that on average 4 or close to 4 different disciplinary categories are affected. Also, the average never drops to 1 or below 1.[22] Coinciding regulatory events in accounting are interdisciplinary by nature.

[22] A country-specific version of Figure 3 is available on the website for each country.

<<<< Insert Table 3 and Figure 3 here. >>>

The column in Table 3 labeled "1" indicates the count of countries in which in the five years around that year (from t-2 to t+2) only 1 discipline within accounting regulation was affected. There are 94 such country-years, entailing that only in around 12% of country-years (94/784) a specialized researcher is likely aware of all the regulatory changes, and again highlighting the need for interdisciplinary expertise, beyond the multi-country institutional knowledge needed when using a sample that pools multiple EU Member States. Years where under two disciplines were affected by regulation are in the early years after the formation of the EU. The row in Table 3 labeled "1" indicates the count of years by country in which in the five years around that year only 1 discipline within that country's accounting regulation was affected. The average is 3.4 (94 / 28 countries), indicating that over the 28 years covered from 1995 to 2022, on average a country has just under 4 periods of 5-year spells where regulatory changes only affect one discipline within accounting. This number ranges between 0 periods (Germany, Greece, Poland) and 8 periods (Croatia), indicating that it is less important for researchers doing a country-level study in Croatia to have interdisciplinary knowledge than for those in Poland.[23]

5.3 Specific highlights

Our analysis serves to illuminate specific country-years where the assumptions of a difference-in-difference design may not hold if the coinciding events are judged to be also confounding, pinpointing areas in which replication studies could be instructive. It should be noted that our objective is not to target any singular study for replication nor to undertake such replication ourselves within the confines of this paper. A fair and just examination of such exercise would necessitate a focused exploration of a single setting, requiring a level of detail that diverges from

[23] Note that Croatia only joined the EU in 2013, which is explains why there was less regulatory activity before then and why Table 2 shows a large catch-up effort on EU regulation reaching a count of 25 for the years 2014-2015.

the broader perspective that we offer in the paper. Moreover, we acknowledge that many studies examining specific regulations have appropriately controlled for potential confounding events, and we do not assert otherwise here. Furthermore, we want to reiterate that it is conceivable that not all coinciding regulations are pertinent in every context, and that for certain research questions, neither the treatment nor control group may be affected by a particular regulation. Nevertheless, based on the guidance our work offers in identifying potential concerns, future studies may re-evaluate specific previous studies and their conclusions. Additionally, our paper can help researchers anticipate which alternate regulations a reviewer or editor may be concerned about and explain why these are not confounding events. If coinciding events are judged to be confounding, the researcher may attempt to find an alternate setting to study the research questions, or, at a minimum, acknowledge the confounding events.

Nevertheless, we now turn our attention to two specific cases where we observe a heightened number of coinciding events. First, the 2005 introduction of IFRS represents one of the most scrutinized regulatory shifts in accounting research.[24] Many studies have attributed important economic outcomes to IFRS adoption; however, there were simultaneous changes that may complicate these interpretations. These concurrent shifts could either affect whether a firm genuinely reports under IFRS, creating potential measurement error, or influence the economic outcomes themselves, creating potential confounding events problems. An illustration of the former concern centers on many stock exchanges introducing new market segments in which firms were able to choose whether they followed local GAAP or IFRS around the time of the IFRS introduction. For example, the New York Stock Exchange opened the market segments “Alternext Brussels” in Belgium, “Alternext Paris” in France, “Alternext Amsterdam” in the Netherlands, and

[24] For a comprehensive literature review of the IFRS adoption literature, we refer the reader to De George et al., (2016).

“Alternext Lisbon” in Portugal in May 2005. The Frankfurt Stock Exchange opened the market segment “Entry Standard,” and the Luxembourg Stock Exchange opened the market segment “Euro MTF”, both in October 2005. None of these new market segments require compliance with the IFRS regulation and firms can choose to follow local GAAP or IFRS.

Examples of other coinciding changes encompass significant regulatory events that occurred around the same time as the IFRS introduction. These include the 2006 Disclosure Directive which introduced penalties for non-disclosure of financial statements, increasing the number of firms that have transparent financial information (Bernard, 2016); the 2007 Transparency Directive, introducing mandatory quarterly reporting for publicly listed firms, increasing the frequency with which information comes to the market (Ernstberger et al., 2017); and the 2007 M&A Directive, harmonizing the legal basis for cross-border mergers in the EU, thereby facilitating economic activity. Thus, in this intricate regulatory environment, a pre-post analysis employing a difference-in-difference design may oversimplify the setting and economic outcomes could be erroneously attributed to the IFRS regulation, overlooking the confluence of influential factors that shaped the accounting landscape during this period.[25]

Second, while it is a common assumption that all EU publicly listed firms began using IFRS in 2005 and that hence post-2005 is the IFRS period, Pownall and Wieczynska (2018) show that this assumption is inaccurate. Some firms used the option to defer IFRS by two years, and other firms are not required to use IFRS since they do not provide consolidated statements or are not listed on an EU-regulated market. Nobes and Stadler (2023) show that this non-adoption is *not* non-compliance. Furthermore, many take the entire post-2005 IFRS period to be somewhat “fixed” over time, even though it is clear from the timelines that IFRS is constantly changing with IFRS 7

[25] Two examples of papers that carefully revisited effects of IFRS are Byard et al., (2021) and Christensen et al., (2013).

through 17 introduced between 2007 and 2023. The various country-level timelines also show that local GAAP is changing a lot over this time period. The EU Directive 2013/34/EU aimed to increase the comparability of local GAAP within the EU as well as between local GAAPs and IFRS. However, with that much change in both IFRS and the various local GAAPs, it is difficult to study the effect of this Directive in ensuring comparability longitudinally. Private equity firms are aware of this lack of comparability over time and make adjustments to facilitate comparability with prior similar transactions (Bourveau et al., 2023); for example, they adjust for IFRS 16 (the new leasing standard) to ensure that the estimated multiples in their valuations are comparable over time.

6. Opportunities for research

While the prior section urges researchers to exert caution when using the various regulatory changes in research designs, this section highlights the various interesting opportunities for research we see. First, we classify further research opportunities along two dimensions: understudied countries and previously unexplored regulations. Next, we provide our more subjective perspective, highlighting a set of further research opportunities.

6.1 Under-researched countries

Echoing Leuz and Wysocki's (2016) observation of an overemphasis on the US in accounting research, with unequal attention paid to other countries, we also notice a similar imbalance within the European Union, where accounting research studies disproportionately focus on certain Member States. First, while some countries (e.g., the UK) are widely studied, other economically important countries within the EU are rarely studied although data is widely

available. For example, 13 counties were added to the EU in 2004/2007/2013[26] that account for 11.1% of the EU's GDP in 2020 and 23.6% of all firm observations from the EU in Bureau van Dijks' Amadeus database in 2019 (with non-missing total assets).[27] However, Table 4 shows that these countries are covered in only 3.31% of the EU studies. One potential issue of interest here is that late joiners must translate a lot of the earlier EU Regulations and Directives in a very short time span, with often regulatory changes happening all at once. For example, Croatia exhibits a notable peak in regulatory activity at the time of joining the EU (2013) (http://www.eu-regulations.com/croatia.html).

<<< Insert Table 4 about here. >>>

As a statistic to measure the amount of research attention relative to the economic importance of a Member State, we calculate the number of publications per one billion GDP, and report this metric in Table 4. For the average country, we find 0.115 publications per one billion GDP, with a minimum of 0.027 (Luxembourg) and a maximum of 0.359 (UK). We classify countries as understudied when the ratio of publications per one billion GDP is below 0.05. These countries are Austria, Bulgaria, Hungary, Luxembourg, Poland, Romania, and Slovakia. For most of the countries, the Bureau van Dijk Amadeus database provides data on more than 100,000 firms (with a maximum of 736,154 for Romania).[28] These countries make for interesting research settings in their own right as well as for useful research laboratories. It may be interesting to replicate other papers in these settings to address their generalizability and support local policy makers in these countries with research insights relevant to their countries. Should results not

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[26] 2004 EU enlargement: Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia. 2007 EU enlargement: Romania and Bulgaria. 2013 EU enlargement: Croatia.
[27] Accessed via WRDS on 2/5/2022.
[28] Romania is the second largest economy (measured in GDP) in Eastern Europe, after Poland. It is expected to outpace neighboring Eastern European countries in growth, partly because of foreign direct investment driven by reshoring from Russia and Ukraine (Ilie and Szakacs, 2023).

replicate, it would become an interesting exercise to understand what may be different about the institutional, cultural or economic conditions of these countries that cause that observation. Rykaczewski et al. (2022) provide a detailed overview of the English-language accounting literature on Eastern European countries, pointing out how their Communist past and delayed process of joining the EU makes accounting in these countries quite different from accounting in their Western European counterparts. They also highlight a general lack of auditing research in Eastern European countries, even as their auditing markets and auditor supply vary substantially.

6.2 Under-researched regulations

While the first step of our methodology relied on an extensive search of the academic literature, we also identified several regulatory changes that have not or barely been studied by, for example, contacting local accounting experts and surveying the authors of papers cited on the accompanying website. We do acknowledge that, while we analyzed the journals with the largest impact, other journals may have published such research studies, and we did not become aware of these papers during the process. Research on local GAAP, audit, tax or other disclosure regulatory changes in smaller countries may be more likely to be published in journals not on our list (including journals published in local languages), so our process could have exhibited a bias against identifying the existence of this research. Note that, while any regulation on the website for which we do not cite an academic reference is technically an "under-researched regulation," we do not wish to encourage a "matrix" approach to research where the lack of academic research on a topic indicates it must be researched. Instead, we aim to highlight more subjectively where important research opportunities arise, motivated by the importance of the regulation or the setting.

The first under-researched regulatory change we wish to highlight is the Accounting Directive 2013/34, which had to be transposed into national law by the end of 2015. This directive

aimed to reduce administrative burdens for smaller firms and increase the comparability of local GAAP within the EU (André, 2017). With more than 24 million SMEs (defined as having fewer than 250 employees) in the European Union in 2023, employing almost 85 million people, producing almost 56% percent of total value added in the EU and making up 99.8% of the enterprises in the non-financial business economy of the EU (Statista, 2023c), the effect of accounting regulatory changes on SMEs is easily identified as an important research area. Several questions, similar to those asked around the introduction of IFRS for public firms in 2005, arise: Did the Directive indeed reduce the administrative burdens for these SMEs, and is the effect different in countries that translated the Directive in significantly different ways into local regulation? Is comparability achieved or do specific Member State options and other institutional differences (e.g., variation in auditing standards, variation in local enforcement, etc.) hinder comparability? Next, what are the consequences? Does the Accounting Directive reduce the cost of capital? Does it facilitate cross-border trade and labor mobility? Are the consequences stronger for SMEs than for larger firms?

The Shareholder Rights Directive II (2017/828) that was implemented in 2019 is a second under-researched Directive, in that we did not locate any accounting research papers on this, despite its importance in encouraging "long-term shareholder engagement to ensure that decisions are made for the long-term stability of a company and take into account environmental and social issues" (Directive (EU) 2017/828). The directive "facilitates shareholder identification and information flows between the shareholders and the company, improves the oversight of directors' remuneration, regulates related party transactions, and introduces greater transparency" (Directive (EU) 2017/828).

Third, the Audit Directive 2014/56 and Audit Regulation 537/2014 form one legislative package. While the primary objective of the Accounting Directive 2014/56 is to establish uniformity in the regulations concerning independence and professional ethics, Audit Regulation 537/2014 emphasizes the need for a distinct set of guidelines for PIEs, fostering consistency in application and contributing to a more efficient internal market. Some authors have studied these reforms. Horton et al. (2018) study market reactions to these reforms, Willekens et al. (2019) study their effect on market concentration, and Moroney et al. (2021) cover the introduction of key audit matters. We see further avenues for research into these auditing reforms. For example, it is unclear if harmonization across Member States is achieved or if differences in transposition, e.g., related to differences in mandatory auditor rotation for PIEs, remain large. Can the Audit Directive obtain such harmonization if the auditing professions are still largely nationally organized? If the reforms indeed harmonized auditing practices (to a large extent), how is financial reporting affected? Do the legislations affect capital allocation? Are the effects different for private firms for which only the Directive applies, in contrast to larger PIEs?

Fourth, each Member State of the EU has its distinct tax policy, and the EU offers a dynamic environment when it comes to tax policies and tax rate variations. This is in stark contrast to the US, where the corporate tax rate is fairly stable over time, except for the 2017 Tax Cuts and Jobs Act (TCJA) which reduced the corporate tax rate from 35% to 21%.[29] Data availability in the European Union in combination with the many tax policy changes can therefore serve as a laboratory for answering country-specific as well as broader research questions. For example, recent examples of tax rate changes in the EU include Belgium in 2020 (-4.4), France in 2021 (-3.6), Greece in 2018 (-5.0), Hungary in 2017 (-10.0), and Latvia in 2018 (+5.0).

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[29] The TCJA included not only a tax rate change, but a whole range of policy changes. For example, the TCJA implemented a shift from a worldwide tax system to a territorial tax system for multinational corporations.

Fifth, the extended Market Abuse Regulation that came into effect in 2016 and replaced the Market Abuse Directive of 2005 seems under-researched given the sweeping additions to the exchanges and financial instruments covered. Previously, the Market Abuse Directive only applied to EU-regulated exchanges, but in 2016 issuers of securities on previously unregulated exchanges also became obligated to increase disclosures such as of insider lists and dealings by senior managers and subject to prohibitions against insider dealing and unlawful disclosure of inside information as well as market manipulation in respect to a much wider range of securities (Taylor et al., 2016).

Sixth, Brexit, the United Kingdom's withdrawal from the European Union, could provide interesting research opportunities. Brexit marks the first, and so far only such withdrawal. For example, have firms altered their reporting to address uncertainties and risks associated with the new regulatory landscape? Have firms adjusted their internal control systems and governance structures? Currently, it is unclear to what extent the UK will deviate its reporting practices from the EU's, which might affect the comparability of accounting standards. For example, from January 1st, 2021, firms listed on a UK-regulated market need to prepare their financial statements using UK-adopted IFRS, not IFRS as endorsed by the E.U.

6.3 The EU as a setting

At least five aspects of the institutional context of the EU make it very interesting to use as a research setting. First, since all limited liability firms, independent of their listing status, are required to file financial statements, and Bureau van Dijk data collects this information[30], the European Union is particularly suitable for researching private firms. Since private firms represent close to 43% of corporate assets and employ the majority (61.8%) of the total workforce in Europe

[30] For the European Economic Area, the Amadeus data base maintained by Bureau van Dijk consists of 99.87% private firms (Beuselinck et al, 2023).

(Beuselinck et al., 2023), and the vast majority of these firms use local GAAP, understanding the determinants and consequences of changes in local GAAP is as important as examining the determinants and consequences of IFRS.[31] Additionally, since the vast majority of public firms' subsidiaries are privately owned, this setting and data provide ample opportunity to also study group structures. We refer to Beuselinck et al. (2023) for an overview of research opportunities on private firms using a three-pronged structure: (1) research opportunities understanding private firms per se (e.g., the role of financial accounting in the valuation of private M&A targets (Armstrong et al., 2006; Hand, 2005)), (2) research opportunities to understand the difference between private and public firms (e.g., depending on the stakeholder structure), and (3) using private firms as a research setting (e.g. only few studies use private firms as a control group when studying public firms (Cascino and Gassen, 2015; Indjejikian and Matějka, 2009)).

Second, as previously explained, companies listed on exchange-regulated markets operate under a different regulatory framework. Although their shares are publicly traded, they are not subject to most security market Directives and the IFRS regulation. While a few firms may choose to adopt IFRS or offer supplementary information, there remains a gap in our understanding of the demand and supply of accounting information within these markets. Consequently, further research is essential to gain a deeper insight into the significance of accounting and auditing in this context.

Third, the layered framework of regulation in the EU creates, as we mentioned before, substantial variation in the intensity of implementation and enforcement. We only have a limited understanding of why countries choose certain options allowed within the Directives, such as

[31] Consistent with that, several papers have already honed in on country-specific major local GAAP changes: Germany in 2010 (Pierk and Weil, 2016), Ireland in 2015 (Arafat et al., 2020), Malta in 2009 (Alexander and Micallef, 2011; Micallef, 2017), Portugal in 2010 (Guerreiro et al., 2015; Isidro and Pais, 2017), Sweden in 2003, Spain in 2008, and the UK in 2015 (Arafat et al., 2020).

which firms are allowed or required to use IFRS, or why countries exempt smaller firms from some administrative burdens or choose not to do so, or why countries choose different levels of enforcement[32]. Potential differences might be explained by differences in legal systems, administrative processes, tax considerations, and differences in funding opportunities or shareholder composition. Furthermore, new EU regulation builds on both the existing local GAAP regulation as well as prior EU regulation implemented with varying degrees of intensity. Therefore, the change brought on by new regulation is not uniform across all Member States, and more work is needed to understand the effect of differing existing regulatory environments, making it crucial to develop proxies comparing local GAAP across Member States. For example, prior evidence suggests that regulations aiming at the convergence of practices across jurisdictions will not necessarily lead to convergence but rather to divergence based on initial differences in the quality of institutions and enforcement (Christensen et al, 2016). As another example, EU regulation may potentially lead to different effects in code versus common law countries. After Brexit, Ireland is the only remaining member of the EU that is governed under common law.

Fourth, there are 24 official languages spoken in the EU, making it a very interesting setting to study the importance of commonality or lack thereof in languages spoken on the financial accounting, auditing and tax functions, as well as on the accessibility of financial statements by audiences of differing language ability. Jeanjean et al. (2015) find that firms issuing an annual report in English in addition to the local-language report is associated with a decrease in information asymmetry and an increase in analyst following. In an experiment where participants had to classify a person as a related or non-related party following the relevant accounting standard

[32] To our knowledge, there are not currently any good proxies available for the intensity of enforcement that can be easily compared across different Member States, exactly because enforcement is organized differently in each Member State. Further research constructing such empirical proxies would be highly valuable.

where they were given either the English-language or translated into local language version of the text of the standard, Holthoff et al. (2015) find that the use of the mother tongue version of the standard improved the classification, potentially affecting both the provider and the auditor of this financial information. Understanding that languages may create barriers in audits of multi-nationals, global audit firm networks may employ bilingual professionals during a group audit (Deloitte, 2021). A particular regulation that researchers could investigate is Denmark, allowing English-only annual financial reports in 2014.[33]

Fifth, as mentioned before, currently only 20 out of 27 EU countries use the common Euro as their currency; other countries use their local currency. The functional currency of an entity is determined based on the primary economic environment where it operates and generally a foreign currency transaction is recorded using the spot conversion rate on the date of the transaction (IAS 21). To include entities with a different functional currency in consolidated financial statements, the functional currency will be translated into the reporting currency. Foreign currency translations are hence an interesting topic to research in this setting. For example, Hribar and Collins (2002), show that errors in estimating accruals are large in the presence of foreign currency translations.

7. Upcoming regulations

Soon, several new accounting regulations will roll out, hence providing new opportunities for research once data becomes available. Furthermore, firms may already be making changes to their accounting now, in anticipation of the proposed regulations taking effect (Chang et al., 2023). The taxonomy regulation that requires large PIEs to disclose to what extent their economic activities qualify as environmentally sustainable has been in effect since the start of 2022. The

[33] Language differences are also correlated with culture differences. The EU is a setting with major across and within country variability in culture (Kaasa et al., 2014). This provides for interesting research opportunities such as on the effect of culture on teamwork in the auditing process or on tax compliance.

Corporate Sustainability Reporting Directive (CSR) 2022/2464 (European Parliament, 2022a) is an important upcoming regulation in the European Union's ongoing commitment to corporate sustainability and responsibility.[34] The CSR Directive mandates that companies produce regular reports concerning the social and environmental risks they encounter, as well as the effects of their operations on people and the environment ("double materiality"). Companies are required to provide detailed reports on environmental, social, and governance (ESG) issues, aiming to enhance transparency and comparability in these important domains. The CSR Directive will be implemented in different stages. First, starting financial year 2024, it applies to companies already subject to the Non-Financial Reporting Directive (PIEs with more than 500 employees). By the financial year 2025, it extends to other large companies, and by the financial year 2026, listed Small and Medium-sized Enterprises (SMEs) are included. The CSR Directive provides ample research opportunities: To what extent does the Directive improve and harmonize sustainability reporting? How will CSR reporting affect capital allocation by investors? How will CSR reporting affect decision-making within the firm (e.g., their investments)? Will this increased reporting burden place European firms at a competitive disadvantage due to higher costs compared to less strict sustainability reporting regimes with single materiality[35], or will it make these firms more attractive to a wide range of stakeholders including investors, employees, and customers?

The rollout of the global minimum tax (Pillar 2), and its implementation via Directive 2022/2523 (European Parliament, 2022b), will be interesting to tax accountants and economists. Companies with a global turnover above EUR 750 million will be subject to a minimum effective

[34] Published 16. December 2022 in Official Journal of the *European Union.*

[35] Double materiality considers both how sustainability impacts the financial performance of the firm, as well as the firm's impact on society and environment. Sustainability reporting standards with single materiality mainly focus on the investors' perspective and, therefore, only focus on how sustainability-related risks might affect financial performance (e.g., the standards issued by International Sustainability Standards Board (ISSB)).

tax rate of 15%. Lastly, mid 2024, country-by-country reporting for every tax jurisdiction comes into effect for large multinationals. Since both the global minimum tax as well as country-by-country reporting will be major shifts in taxation and reporting thereof, we expect that accounting researchers with a focus on corporate taxation will play a major role in understanding the consequences of these regulatory changes.

8. Conclusion

In this paper, we provide a comprehensive overview of accounting-related regulatory changes in the 27 EU countries and the UK based on an extensive literature review, a survey, as well as input from country and topic academic experts. We classify all regulatory events in a framework that captures the topic being regulated (financial accounting, auditing, tax, other disclosures) as well as the set of firms to which the regulation applies. The accompanying website (http://www.eu-regulations.com) provides visual representations. The website and this paper should lower the cost for researchers, reviewers and editors to better understand the regulatory setting of the EU generally and each Member State over time. We also provide researchers with insight into available research opportunities to address their research questions when using the EU or a particular EU country as a laboratory.

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Figure 1: Average number of regulations implemented in the EU countries and the UK 5 years around a respective year t (from t-2 to t+2)

Figure 2: Average number of regulations 5 years around a respective year t (t-2 to t+2) by category (Financial accounting, Audit, Tax, Other disclosures)

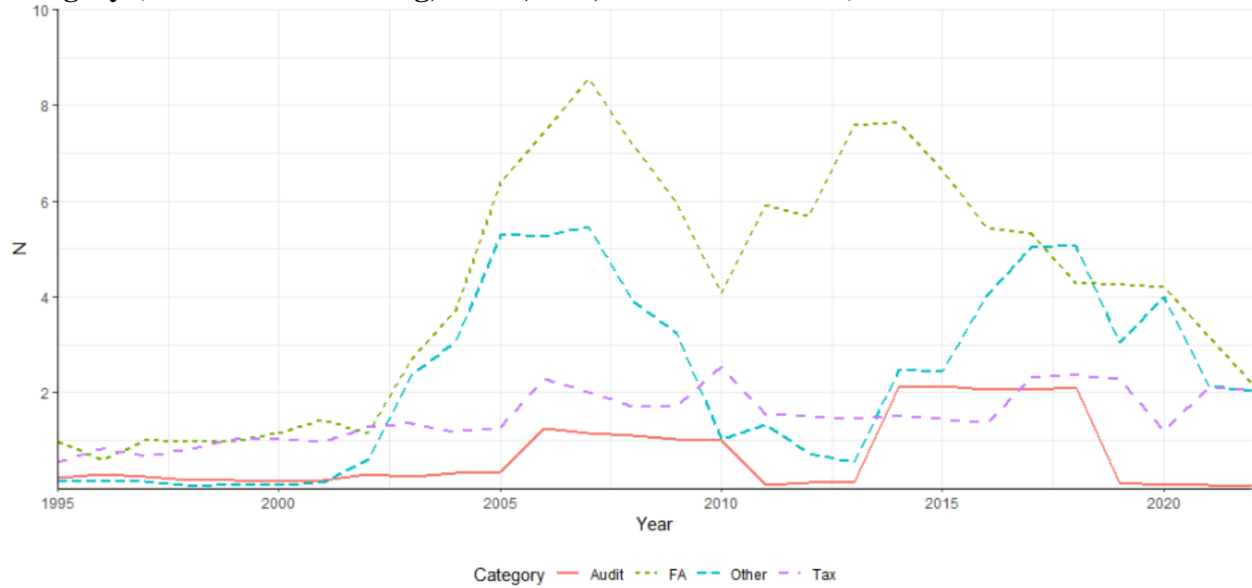

Figure 3: Average number of different categories of accounting regulations affected in 5 years around year t (from t-2 to t+2)

Note: We define 4 categories of accounting regulations (Financial Accounting, Auditing, Tax, and Other Disclosures). Therefore, the number of categories affected range between 0 and 4.

Table 1: European Securities and Markets Authority (ESMA) Enforcement Actions

Country	Issuer	Examinations	Actions	% Examinations	% Actions	%Actions/Examinations
Austria	81	22	5	27.2%	6.2%	22.7%
Belgium	112	18	6	16.1%	5.4%	33.3%
Bulgaria	294	44	9	15.0%	3.1%	20.5%
Croatia	102	6	0	5.9%	0.0%	0.0%
Cyprus	68	11	2	16.2%	2.9%	18.2%
Czech	72	13	7	18.1%	9.7%	53.8%
Denmark	138	14	4	10.1%	2.9%	28.6%
Estonia	31	5	0	16.1%	0.0%	0.0%
Finland	152	19	6	12.5%	3.9%	31.6%
France	403	72	44	17.9%	10.9%	61.1%
Germany	416	34	8	8.2%	1.9%	23.5%
Greece	150	23	5	15.3%	3.3%	21.7%
Hungary	48	4	3	8.3%	6.3%	75.0%
Iceland	36	6	0	16.7%	0.0%	0.0%
Ireland	89	17	10	19.1%	11.2%	58.8%
Italy	223	59	7	26.5%	3.1%	11.9%
Latvia	16	7	0	43.8%	0.0%	0.0%
Lithuania	29	6	3	20.7%	10.3%	50.0%
Luxembourg	112	29	17	25.9%	15.2%	58.6%
Malta	72	7	2	9.7%	2.8%	28.6%
Netherlands	179	28	4	15.6%	2.2%	14.3%
Norway	273	9	4	3.3%	1.5%	44.4%
Poland	364	56	25	15.4%	6.9%	44.6%
Portugal	48	8	4	16.7%	8.3%	50.0%
Romania	89	11	11	12.4%	12.4%	100.0%
Slovakia	28	19	4	67.9%	14.3%	21.1%
Slovenia	21	3	0	14.3%	0.0%	0.0%
Spain	132	28	12	21.2%	9.1%	42.9%
Sweden	395	62	23	15.7%	5.8%	37.1%
TOTAL	4,173	640	225	15.3%	5.4%	35.2%

Note: Source: Own computations based on https://www.esma.europa.eu/sites/default/files/2023-03/ESMA32-63-1385_2022_Corporate_Reporting_Enforcement_and_Regulatory_Activities_Report.pdf . The number of covered issuers is counted in 2021, whereas the number of examinations are those concluded in 2022. %Examinations is calculated as the number of examinations divided by the number of issuers. %Actions is calculated as the number of actions divided by the number of issuers. The UK is no longer covered by ESMA, but other EAA countries are included.

Table 2: Number of regulations implemented 5 years around a respective year t (t-2 to t+2) over time and across countries

	AT	BE	BG	HR	CY	CZ	DK	EE	FI	FR	DE	GR	HU	IR	IT	LV	LT	LU	MA	NL	PO	PT	RO	SK	SI	ES	SE	UK	avg	'1'	'0'
95	6	2	1	0	1	1	2	2	4	2	3	2	2	1	1	1	1	2	1	1	2	1	3	1	2	2	2	3	**1.9**	**11**	**1**
96	6	1	2	1	1	2	1	2	4	2	4	2	2	1	2	1	1	2	1	0	2	0	3	2	2	1	2	2	**1.9**	**9**	**2**
97	5	2	2	1	1	1	1	1	5	3	5	2	1	3	3	1	0	3	1	1	2	1	4	1	1	2	2	3	**2.1**	**12**	**1**
98	4	3	2	1	2	3	1	1	3	2	5	2	0	4	4	1	0	3	0	1	2	1	2	2	1	1	1	4	**2.0**	**9**	**3**
99	2	3	3	2	1	3	0	1	2	3	7	3	1	5	5	0	2	3	0	1	3	1	4	2	1	1	0	4	**2.3**	**7**	**4**
00	1	2	3	2	1	5	1	1	1	3	7	2	1	6	5	1	2	3	0	3	4	2	4	3	1	1	0	2	**2.4**	**9**	**2**
01	1	3	4	1	3	4	1	4	1	4	7	2	1	6	3	2	3	2	0	4	4	2	4	3	1	1	1	3	**2.7**	**8**	**1**
02	0	2	5	1	4	7	2	5	1	4	11	3	3	5	3	4	5	1	2	4	6	2	2	5	3	0	1	2	**3.3**	**4**	**2**
03	5	7	7	1	7	7	6	7	5	9	14	7	7	8	7	8	7	5	5	10	8	7	4	7	7	4	6	4	**6.6**	**1**	**0**
04	7	10	7	2	9	11	8	9	7	10	15	9	8	9	9	10	7	8	7	11	8	9	3	10	10	5	8	6	**8.3**	**0**	**0**
05	12	15	16	2	13	13	13	15	14	15	19	15	13	14	14	14	13	11	12	16	11	13	12	15	17	10	14	12	**13.3**	**0**	**0**
06	15	18	17	4	16	17	16	15	18	16	22	18	17	16	20	16	16	15	17	18	14	16	15	17	20	14	16	15	**16.2**	**0**	**0**
07	17	19	18	4	17	17	16	16	19	16	20	18	17	17	22	16	17	18	18	20	15	17	18	19	20	16	17	17	**17.2**	**0**	**0**
08	12	13	16	4	13	15	13	13	15	12	18	15	14	13	19	12	16	14	15	15	11	13	16	16	16	12	13	14	**13.9**	**0**	**0**
09	10	10	15	2	11	11	11	12	13	11	15	13	12	12	16	10	14	11	13	14	10	12	15	13	13	12	11	13	**12.0**	**0**	**0**
10	7	8	7	3	9	9	7	8	8	8	13	9	9	8	14	7	10	9	10	9	8	10	10	9	7	10	7	9	**8.6**	**0**	**0**
11	8	7	7	18	7	8	8	9	7	8	11	9	8	8	11	7	9	8	8	9	8	11	10	10	7	9	8	10	**8.9**	**0**	**0**
12	7	7	6	19	6	6	9	8	7	10	8	9	7	7	9	7	7	6	6	9	7	10	8	8	6	8	8	9	**8.0**	**0**	**0**
13	9	9	8	21	7	8	10	10	9	11	9	10	8	11	9	9	9	8	8	10	9	10	10	10	8	10	9	12	**9.7**	**0**	**0**
14	13	13	12	25	12	12	14	13	13	15	13	14	12	14	13	13	13	12	12	14	13	14	14	14	13	14	13	17	**13.7**	**0**	**0**
15	12	11	12	25	11	11	13	12	12	14	11	13	13	13	12	12	12	11	11	13	12	12	11	13	12	12	12	17	**12.7**	**0**	**0**
16	12	13	13	12	12	12	13	12	13	15	12	13	15	14	13	14	13	12	12	14	13	12	12	14	13	12	11	15	**12.9**	**0**	**0**
17	14	16	15	14	14	14	14	14	14	16	14	17	17	16	15	15	15	14	14	14	14	14	14	15	15	14	13	18	**14.8**	**0**	**0**
18	13	16	14	13	14	13	13	13	13	15	13	16	16	13	16	14	13	13	13	13	13	14	13	14	14	13	12	17	**13.8**	**0**	**0**
19	9	12	10	9	9	9	9	9	9	11	11	11	12	9	12	10	9	9	9	9	9	9	9	10	9	8	8	12	**9.7**	**0**	**0**
20	9	12	9	9	9	9	9	9	9	11	12	11	10	9	11	10	9	9	9	9	9	9	9	10	9	8	8	10	**9.5**	**0**	**0**
21	7	9	7	7	7	7	7	7	7	9	11	9	7	7	9	7	7	7	7	7	7	7	7	7	7	7	7	9	**7.5**	**0**	**0**
22	6	8	6	6	6	6	6	6	6	7	10	6	6	6	8	6	6	6	6	6	6	6	6	6	6	6	6	5	**6.3**	**0**	**0**
avg	**8.2**	**9.0**	**8.7**	**7.5**	**8.0**	**8.6**	**8.0**	**8.4**	**8.5**	**9.4**	**11.4**	**9.3**	**8.5**	**9.1**	**10.2**	**8.1**	**8.4**	**8.0**	**7.8**	**9.1**	**8.2**	**8.4**	**8.6**	**9.1**	**8.6**	**7.6**	**7.7**	**9.4**	**8.6**	**0**	**0**
'1'	**2**	**1**	**1**	**6**	**5**	**2**	**5**	**4**	**3**	**0**	**0**	**0**	**4**	**2**	**1**	**5**	**2**	**1**	**3**	**4**	**0**	**4**	**0**	**2**	**5**	**5**	**3**	**0**		**70**	
'0'	**1**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**2**	**0**	**4**	**1**	**0**	**1**	**0**	**0**	**0**	**1**	**2**	**0**			**16**

Table 3: Number of categories of regulations implemented 5 years around a respective year t (t-2 to t+2)

	AT	BE	BG	HR	CY	CZ	DK	EE	FI	FR	DE	GR	HU	IR	IT	LV	LT	LU	MA	NL	PO	PT	RO	SK	SI	ES	SE	UK	avg	'1'
95	3	2	1	0	1	1	1	2	4	2	2	2	1	1	1	1	1	2	1	1	2	1	3	1	2	2	2	3	**1.6**	**13**
96	3	1	1	1	1	1	1	2	4	1	3	2	1	1	2	1	1	1	1	0	2	0	3	2	2	1	2	2	**1.5**	**14**
97	2	2	1	1	1	1	1	1	4	2	3	2	1	2	2	1	0	2	1	1	2	1	3	1	1	2	2	3	**1.6**	**13**
98	1	3	1	1	2	2	1	1	2	2	3	2	0	2	2	1	0	2	0	1	2	1	1	2	1	1	1	3	**1.5**	**12**
99	1	3	1	1	1	2	0	1	1	3	3	3	1	2	2	0	2	2	0	1	2	1	2	2	1	1	0	3	**1.5**	**11**
00	1	2	1	1	1	3	1	1	1	3	4	2	1	2	2	1	2	2	0	1	2	1	2	2	1	1	0	1	**1.5**	**14**
01	1	3	2	1	2	3	1	2	1	3	3	2	1	2	2	1	2	2	0	1	2	1	2	2	1	1	1	2	**1.7**	**11**
02	0	2	2	1	3	4	1	3	1	3	4	2	3	2	2	2	3	1	2	2	3	2	2	3	2	0	1	2	**2.1**	**5**
03	3	3	2	1	3	3	3	2	3	4	4	4	3	4	3	3	3	3	2	3	3	3	3	3	2	2	2	2	**2.8**	**1**
04	3	3	2	2	3	3	3	2	3	4	4	4	3	4	4	3	3	3	2	3	3	3	3	3	2	2	2	2	**2.9**	**0**
05	3	3	3	2	3	3	4	2	4	4	4	4	3	4	4	3	3	2	2	3	3	3	3	3	3	2	2	2	**3.0**	**0**
06	4	4	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	**4.0**	**0**
07	4	4	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	**4.0**	**0**
08	4	4	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	**4.0**	**0**
09	4	4	4	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	**3.9**	**0**
10	4	4	4	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	**3.9**	**0**
11	3	3	3	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	**3.1**	**0**
12	2	3	2	4	2	2	3	2	2	3	2	3	2	2	3	2	2	2	2	4	3	2	2	2	2	3	3	4	**2.5**	**0**
13	2	3	2	4	2	2	2	2	2	3	2	2	2	2	2	2	2	2	2	3	3	2	2	2	2	3	2	4	**2.3**	**0**
14	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	**4.0**	**0**
15	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	**4.0**	**0**
16	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	**4.0**	**0**
17	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	**4.0**	**0**
18	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	**4.0**	**0**
19	3	3	3	3	3	3	3	3	3	4	3	3	3	3	4	3	3	3	3	3	3	3	3	3	3	3	3	4	**3.1**	**0**
20	3	3	3	3	3	3	3	3	3	4	3	3	3	3	4	3	3	3	3	3	3	3	3	3	3	3	3	3	**3.1**	**0**
21	3	3	3	3	3	3	3	3	3	4	3	3	3	3	4	3	3	3	3	3	3	3	3	3	3	3	3	3	**3.1**	**0**
22	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	3	3	3	3	3	3	3	3	3	3	3	3	3	**3.0**	**0**
Ø	**2.9**	**3.1**	**2.7**	**2.5**	**2.9**	**3.0**	**2.8**	**2.8**	**3.1**	**3.4**	**3.4**	**3.2**	**2.8**	**3.0**	**3.2**	**2.7**	**2.8**	**2.9**	**2.5**	**2.8**	**3.1**	**2.7**	**3.1**	**3.0**	**2.8**	**2.7**	**2.7**	**3.2**	**2.9**	**0**
'1'	**4**	**1**	**6**	**8**	**5**	**3**	**7**	**4**	**4**	**1**	**0**	**0**	**6**	**2**	**1**	**6**	**2**	**2**	**3**	**6**	**0**	**6**	**1**	**2**	**5**	**5**	**3**	**1**		**94**

Note: We define 4 categories of regulations: financial accounting, auditing, tax and other disclosure regulations. Therefore, the numbers in the matrix range between 0 and 4.

Table 4: Country Overview

Country	Publications	SSRN	GDP	Publ./GDP	Firms
Austria	16	7	433.3	0.037	145,282
Belgium	56	5	521.9	0.107	458,034
Bulgaria	2	1	69.9	0.029	365,893
Croatia	3	1	57.2	0.052	128,858
Cyprus	3	0	24.6	0.122	625
Czech Republic	16	7	245.3	0.065	201,189
Denmark	45	8	356.1	0.126	300,280
Estonia	4	2	30.7	0.131	155,398
Finland	93	9	269.8	0.345	190,411
France	179	30	2,630.3	0.068	644,226
Germany	223	77	3,846.4	0.058	471,327
Greece	40	3	188.8	0.212	24,835
Hungary	7	3	155.8	0.045	434,752
Ireland	71	7	425.9	0.167	165,066
Italy	126	33	1,888.7	0.067	1,011,847
Latvia	3	1	33.7	0.089	113,226
Lithuania	3	1	56.5	0.053	78,270
Luxembourg	2	2	73.4	0.027	77,894
Malta	5	0	14.6	0.341	14,852
Netherlands	82	10	913.9	0.090	756,673
Poland	21	4	596.6	0.035	306,007
Portugal	26	5	228.5	0.114	398,688
Romania	11	1	248.7	0.044	736,154
Slovakia	3	1	105.2	0.029	218,510
Slovenia	9	2	53.6	0.168	74,092
Spain	113	22	1,281.5	0.088	804,257
Sweden	78	16	541.2	0.144	523,721
UK	993	99	2,764.2	0.359	3,172,200
Europe*	1,091	176			
European Union (+UK)			15,292.1		11,972,567

Notes: The column 'Publications' ('SSRN') shows the number of publications (SSRN working papers) for which the respective name was found in the title, keywords, or abstract. The column 'GDP' shows the 2020 gross domestic product in billion USD (Source: https://data.worldbank.org/indicator/NY.GDP.MKTP.CD, accessed on 2/2/2022). The column 'firms' shows the number of firms of the country as reported in Bureau van Dijk's database *Amadeus* accessed through the Wharton Research Data Service (WRDS) for the year 2019 (accessed on Feb 5, 2022). We keep only firms with non-missing and positive total assets.