Name and shame? Evidence from the European Union tax haven blacklist

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Abstract

I study publication of the European Union (EU) tax haven blacklist on December 5, 2017 to examine whether and how the use of recognized tax havens affects firm value. I find that the tax haven naming and shaming by the EU was associated with a negative stock price reaction of firms with tax haven affiliates. The largest reaction was for those tax havens, for which it was not foreseeable that they would be included in the blacklist. Retail firms experienced a larger decrease in share price than firms in other industries, which is consistent with a potential consumer backlash. Also more tax aggressive firms faced more negative returns, which suggests that investors expect firms might be audited or fined for past or overly aggressive tax avoidance. The negative reaction was less pronounced in countries with low levels of investor protection and weakly-governed firms with substantial conflicts of interest between principals and shareholders. This is consistent with increased scrutiny and potential for countermeasures associated with the blacklist, which reduce opportunities for managerial wealth diversion.

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1 Introduction

After months of screening of global tax policies, on December 5, 2017 the European Union (EU) finance ministers blacklisted 17 countries for refusing to cooperate with the EU's decade-long crackdown on tax havens.[1] The EU referred to the blacklist as list of non-cooperative tax jurisdictions, since the listed countries failed to make sufficient commitments in response to the EU's concerns. Large media sites, including the Financial Times, the Guardian, Thomson Reuters, among others, provided news coverage on the first-ever EU blacklist, naming and shaming tax havens. Before the blacklist was published the public was unaware of the countries featuring in the list and the potential EU sanctions. On the blacklist publication day it was revealed that, beyond being named, countries face few consequences for being blacklisted.[2] Since the blacklist does not have specific sanctions or financial penalties attached to it, it has been criticized as an insufficient response to the scale of tax evasion worldwide. Alex Cobham, the director of research at the Tax Justice Network (2017), commented that "tax avoiders and the countries that sponsor them will all be letting out a sigh of relief today".

In this study I examine the effect that publication of the EU tax haven blacklist had on share prices of firms with subsidiaries in the blacklisted countries. As there were no specific penalties associated with the blacklist, I expect that it worked mainly as a shaming mechanism, potentially inducing reputational costs for firms exposed to the blacklisted tax havens. Investors of the exposed firms may be concerned with damage to firms' brand value, losing customers to a boycott, diminished prospects for recruiting and retaining employees, and a weakened ability to raise capital (Klein, 2000; Baron, 2003; Sasser *et al.*, 2006). Hence, a negative market reaction towards the users of the exposed tax havens can be expected.[3]

My contribution to the existing literature on effects of blacklisting and shaming of tax havens is two-fold. First, this is the first paper to examine the publication of the first-ever EU tax haven blacklist, which was hotly anticipated by campaigners, lobbyists and politicians on both sides of the offshore debate. Second, the existing literature examines blacklisting effects on tax havens themselves, while I examine effects on firms that are users of the blacklisted tax havens. The analysis provides important policy implications on whether tax haven blacklisting and shaming affect firm value.

I find significantly negative abnormal stock price returns following publication of the EU tax haven blacklist for firms that are users of the recognized tax havens. The negative reaction increases with the proportion of tax haven affiliates the firm has, and the largest reaction is for those tax havens, for which it was not foreseeable that they would be included in the blacklist. To investigate the partial relationship between firm characteristics and stock price reaction to tax shelter news, I examine cross-sectional variation in the market reaction. I consider corporate citizenship, corruption, tax aggressiveness and expropriation as the potential mechanisms that can explain the negative market response to publication of the blacklist.

First, the possibility of negative consumer reaction to indication of bad corporate citizen-

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[1] The blacklisted countries were American Samoa, Bahrain, Barbados, Grenada, Guam, South Korea, Macau, the Marshall Islands, Mongolia, Namibia, Palau, Panama, St Lucia, Samoa, Trinidad and Tobago, Tunisia and the United Arab Emirates.

[2] The Guardian (2017) claims that the blacklist could be linked to EU legislation so that jurisdictions implicated would not be eligible for funds from the bloc except where to aid development. According to Cable News Network (2017) the potential punitive measures are related to foreign policy, economic relations and development cooperation. The penalties could include special documentation requirements and withholding tax measures. EU states have also been told to conduct audits and monitor transactions with the blacklisted countries.

[3] I call a firm "a user of tax havens" if it has affiliates (subsidiaries) in the blacklisted tax haven countries.

ship makes firms relatively vulnerable to news of their tax avoidance strategies, especially so for firms operating in the retail sector. In line with this, I find that retail firms experienced a larger stock price decrease than firms in other industries.

Second, firms with subsidiaries in the most corrupt countries, according to the Transparency International's Corruption Perception Index, might use tax havens as offshore vehicles to bribe foreign government officials. I find that such firms do not face more negative stock price reaction after publication of the blacklist.

Further, potential countermeasures should matter most for more tax aggressive firms, since they have more to lose if the tax haven preferential treatment is limited as a consequence of the blacklist. I find that the more tax aggressive firms (firms with low effective corporate tax rates) have more negative returns around publication of the EU tax haven blacklist. This result shows that investors expect firms might be audited or fined for past or overly aggressive tax avoidance. When I use cash effective tax rates to measure firm's tax aggressiveness, I find that the market reacts positively to evidence that a firm tries to reduce taxes (has a high percentage of tax haven affiliates), when its financial reports would lead one to believe the firm is not tax aggressive (has a high cash effective tax rate).

Finally, the underlying secrecy of tax havens can be used for expropriation purposes (Desai *et al.*, 2007). If investors suspect that managers who support tax avoidance activities might also be aggressive with reporting firm's accounting earnings, then the market may grow suspicious of accuracy of the company's financial statements.[4] Then, news on firm's tax avoidance might be perceived as evidence not only about firm's behaviour towards tax authorities, but also about insiders' willingness to be aggressive with investors as well.

I use firm-level and country-level evidence to study expropriation as the possible cost to shareholders of having tax haven affiliates. If the blacklist was a credible threat, blacklisting should contribute towards higher scrutiny and less shareholder expropriation in the future. Then, weakly-governed firms and firms in countries with high expropriation risk should be less negatively affected by publication of the blacklist than strongly governed firms. The results conform to these expectations and show less negative returns for firms facing high expropriation risk. This suggests that the potentially increased auditing, monitoring, scrutiny and transparency following publication of the blacklist reduce some of the expropriation cost associated with having tax haven subsidiaries. Another explanation for the finding is that public shaming matters less for firms that are already exposed to high expropriation risk, and they therefore react less to publication of the blacklist.

Overall, the results show that the EU was successful at shaming the users of tax havens, which resulted in negative market reaction towards the affected firms. The blacklist was considered as a credible threat to the retail firms and most tax aggressive firms, despite the lack of specific sanctions or financial penalties. The blacklist was perceived as positive news in weakly-governed firms and firms in countries with high expropriation risk. This is consistent with increased scrutiny by the EU and potential future countermeasures following publication of the blacklist, which should contribute towards less future expropriation of shareholders.

The set-up of the paper will be as follows. Section 2 presents the literature review, and section 3 discusses the institutional setting, data and methodology of the study. Section 4 presents the descriptive statistics, while section 5 discusses the results. Section 6 explores the cross-sectional variation in market reactions, and section 7 concludes.

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[4]Enron's chief financial officer used a sophisticated offshore web to tunnel $42 million out of the firm. Similarly, Parmalat's founder used offshore entities to expropriate $620 million from the firm.

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2 Related literature

Earlier literature has examined market price reaction to news regarding corporate fraud, including non-tax related fraud against the government. For example, Bosch & Eckard (1991) study the idea that future fines and penalties constitute part of the market's response. They argue that news of one type of aggressiveness could indicate shareholders that the company's management is aggressive with everyone. First, customers and suppliers might become suspicious of dealing with the firm, thereby increasing future transaction costs and perhaps causing customers and suppliers to deal with other companies instead (as in Klein & Leffler (1981)). Second, it might signal that the firm could be engaging in other unknown aggressive activity that could lead to future prosecution and associated costs. In addition, it may signal that the dishonesty extends to financial accounting statements, and the management lies to the shareholders (see Desai *et al.* (2007)). In sum, earlier literature has generally found negative stock market responses to corporate misdeeds, but has not investigated market responses to tax haven shaming.

While there are no previous analyses of stock market reaction to tax haven naming and shaming, there are several related studies. Desai & Dharmapala (2009) investigate how investors value managerial actions designed solely to minimize corporate tax obligations. They regress, over a cross-section of companies, Tobin's q (market value divided by replacement cost of assets) on a proxy for tax avoidance, measured as an estimate of the book-tax differences of the firm less an estimate of the portion of the book-tax differences arising from earnings management (total accruals of the firm). They find that their proxy for tax avoidance is positively related to firm value for well-governed firms, but unrelated to firm value for poorly-governed firms. The authors interpret their evidence as consistent with agency costs mitigating the benefits to shareholders of corporate tax avoidance. In other words, managers' tax sheltering decisions are related to their ability to divert value, so that in poorly-governed firms tax sheltering signals a higher likelihood of managerial wealth diversion and on net adds no value. In comparison with my study, Desai & Dharmapala (2009) is not an event study. My paper examines additional cross-sectional determinants beyond governance and uses the publication of the EU tax haven blacklist and the firm's exposure to the blacklisted tax havens to examine market's perception of the firm's behaviour. Nevertheless, findings of my paper correspond to those of Desai & Dharmapala (2009), since I find that poorly-governed firms reacted less negatively to publication of the blacklist than better governed firms.

I contribute to the literature that has asserted that tax planning may occur in combination with managerial opportunism (see e.g. Desai *et al.*, 2007; Kim *et al.*, 2011). Kim *et al.* (2011) use firm-level data to show that firms with higher tax-sheltering capabilities are more likely to experience future stock price crashes. The complex corporate structure arising from affiliates in many (secrecy) jurisdictions gives opportunistic managers the opportunity to stockpile negative news until a tipping point. In my setting this translates to rational expectations of a decrease in stock price following publication of the EU tax haven blacklist, especially so if the firm has a large proportion of affiliates in the blacklisted tax haven countries.

Recent literature has also shown that managers seem to be sensitive about engaging in tax planning. Evidence by Graham *et al.* (2014) shows that 69 percent of surveyed executives do not engage in tax planning because they are concerned about the firm's reputation. Akamah *et al.* (2018) discuss that such reputational concerns can cause managers to hide their haven affiliates in the guise of a more general geographic area (i.e. a subsidiary in Luxembourg would be reported as being in Europe). The authors find that there is indeed a reporting avoidance behaviour when tax and secrecy havens are implicated. Also my paper finds that the tax haven

naming and shaming by the EU was associated with reputational concerns of investors, and hence a decrease in firms' share price.

A strand of literature focuses on firms' reaction to news on their tax avoidance strategies. Hanlon & Slemrod (2009) study the stock price reaction to news about corporate tax aggressiveness and find that a company's stock price declines when there is news about its involvement in tax shelters. Also Dyreng *et al.* (2016) find that public pressure from outside activist groups can exert a significant influence on the behaviour of large, publicly traded firms. Similarly, Johannesen & Larsen (2016) show that tax evasion creates considerable rents for firms in extractive industries and that disclosure rules have the potential to reduce these rents. These results correspond to my findings which also show a negative market response following publication of the EU tax haven blacklist.

Mixed evidence exists on the effects of tax haven blacklisting on tax havens themselves. Sharman (2009) argues that public blacklisting by international organizations can be an effective means of bringing about compliance, since it damages countries' reputations among investors, and produces pressure to comply. Even despite the absence of military and economic coercion, development of a blacklist is in and of itself a powerful economic weapon. Tax havens place a big importance on preserving their international reputations, since it is their main point of competition (Sharman, 2006). This implies that inclusion in the blacklist should be an effective threat to tax havens themselves. On the contrary, Kudrle (2009) studies how blacklisting affects the volume of financial activity associated with tax havens, and finds that there is no substantial or consistent impact of blacklisting on banking investment in and out of the tax havens. Findings of these studies suggest that tax havens might respond to their inclusion in the blacklist. If investors expect that tax havens might agree to limit the preferential treatment of multinational firms, which could lower firms' future profits, investors are likely to react negatively to publication of the blacklist. This corresponds to findings in my paper.

3 Institutional setting, data and methodology

In this section I discuss the institutional background of publication of the EU tax haven blacklist. I then explain my data sources and empirical methodology.

3.1 EU tax haven blacklist institutional setting

In January 2017, 92 countries received a screening letter from the EU. They included some of the world's biggest countries, such as China, the United States and Japan; small European countries such as Monaco and Andorra; and tiny developing nations such as Niue in the Pacific. They were informed that they would be assessed against three broad criteria: tax transparency, fair taxation (not offering preferential measures or arrangements that enable companies to move profits to avoid taxes), and anti-profit-shifting measures (commitment to implement measures agreed by the Organisation for Economic Co-operation and Development (OECD) intended to stop countries stealing each others' tax bases). In October the commission wrote to 41 countries warning they had failed the test and were likely to be blacklisted, unless they promised to change their ways. Further, in a draft dated November 21, 36 countries were named, and the next draft on December 1 included about 20 jurisdictions.

On December 5, 2017 the news media started reporting about the first-ever EU tax haven blacklist, which named and shamed 17 countries in an attempt to suppress the billions of

dollars lost to aggressive tax avoidance every year. Countries that had said they would make reforms were put on notice and added to a so-called grey list of 47 jurisdictions.[5]

Some EU funding legislation includes reference to the blacklist with potential punitive measures related to foreign policy, economic relations and development cooperation. The guidelines provide information on how the EU's partners should assess funding projects that involve entities in jurisdictions listed by the EU as non-cooperative for tax purposes. The assessment includes a series of checks designed to pinpoint the risk of tax avoidance. For example, before funding is channelled through an entity, it should be established that there are sound business reasons for the particular structuring of a project, which must not take advantage of the technicalities of a tax system or of mismatches between two or more tax systems for the purpose of reducing the tax bill (Lomas, 2018). These guidelines should guarantee in particular that EU external development and investment funds cannot be channelled or transited through entities in countries on the EU's list (European Commission, 2018).

Moreover, as claimed by Luxembourg and Malta representatives in the EU finance ministers meeting in November 2017, any blacklisting sanctions would be unnecessary because investors would be deterred from putting money in the highlighted tax havens (Guarascio, 2017). This is in line with previous literature which claims that public blacklisting by international organizations can be an effective means of bringing about compliance, since it damages countries' reputations among investors, and produces pressure to comply. Moreover, public pressure could result in backlash against the firm or its products from investors, politicians and customers (Sharman, 2009; Graham *et al.*, 2014). Investors of the exposed firms may be concerned with damage to firms' brand value, losing customers to a boycott, diminished prospects for recruiting and retaining employees, and a weakened ability to raise capital (Klein, 2000; Baron, 2003; Sasser *et al.*, 2006). Blacklists are known to provide basis for extra scrutiny, compliance costs and outright boycotts of certain jurisdictions by investors (Narci, 2012).

Conforming to this, both tax havens and the countries exposed to the tax havens reacted to publication of the blacklist. As an example, South Korea's foreign ministry was determined to persuade the European Union to exclude it from the blacklist immediately after its publication, since the inclusion could tarnish its national brand (The Korea Herald, 2017). Also, before the blacklist was published, there were speculations about inclusion of specific countries in the blacklist, and Turkey was mentioned as one of the potential uncooperative jurisdictions. As claimed by Bloomberg (Chrysoloras & Dendrinou, 2017), while EU countries were split over whether financial sanctions should be used against such uncooperative jurisdictions, inclusion in the blacklist would result in reputational damage to Turkey and raise pressure on EU companies to hold back investment. Several states, including France, supported punitive measures, such as exclusion from international funding. Germany was exercising its influence with international development institutions to restrict financing to Turkey from the state-owned KfW bank, the European Investment Bank and the European Bank for Reconstruction and Development. German commercial banks were also reviewing their exposure to Turkey days after chancellor Angela Merkel said that the EU may cut pre-accession funding to Turkey.

Based on this evidence, I expect that investors reacted negatively to publication of the blacklist. The blacklisted tax havens face public shaming and potential future countermea-

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[5]The grey-listed countries were Albania, Andorra, Armenia, Aruba, Belize, Bermuda, Bosnia and Herzegovina, Botswana, Cabo Verde, Cayman Islands, Cook Islands, Curaçao, Faroe Islands, Fiji, Greenland, Guernsey, Hong Kong, Jamaica, Jersey, Jordan, Lichtenstein, Labuan Island, Former Yugoslav Republic of Macedonia, Malaysia, Maldives, Isle of Man, Morocco, Mauritius, Montenegro, Nauru, Niue, New Caledonia, Oman, Peru, Qatar, Saint Vincent and the Grenadines, San Marino, Serbia, Seychelles, Switzerland, Swaziland, Taiwan, Thailand, Turkey, Uruguay, Vanuatu and Vietnam.

sures, and might take commitments to change their tax laws and limit the preferential treatment of multinational firms in the future. Moreover, any funding projects involving entities in the blacklisted jurisdictions can be subject to auditing and assessment. This can jeopardize firms' tax saving strategies or lead to future audits of the firm. Investors are likely to react negatively to such news since firms' future reported earnings are likely to fall.

It is important to note that the EU refers to the blacklist as the list of non-cooperative tax jurisdictions, since the listed countries failed to meet agreed good tax governance standards. Most of the listed countries are small and might simply lack the administrative capabilities to deal with the EU's requests. The EU has received criticism for omitting the most notorious tax havens from the blacklist, instead placing them on the grey list of countries which have committed to improve their transparency standards.[6] The EU's response to this is that the list should raise the level of good tax governance globally and help prevent the large-scale tax abuse through tackling third countries that consistently refuse to play fair on tax matters. Therefore, even though many of the listed countries were not considered as tax havens previously, they were still shamed by the EU as being non-cooperative on tax matters and face potential sanctions. Since I am interested in the effect of EU shaming on the users of these jurisdictions, I still expect a negative investor reaction towards the exposed firms.

Finally, information about compilation of the EU tax haven blacklist was available to investors prior to December 5, 2017, and it was publicly known that the blacklist was due to be published by the European Union on December 5. Moreover, the announcement was hotly anticipated by campaigners, lobbyists and politicians on both sides of the offshore debate. A debate was on about inclusion of some devastated Caribbean islands, and the suggestion that no EU state will be included. It was also not yet clear what the penalty for failing to pass the test would be, with opinions varying on the severity of the necessary response. Moreover, ministers could still decide to postpone the adoption of the list, as the listing was far from a sure thing in November 2017. Nevertheless, the public awareness of the blacklist might cause an understatement of the economic impact that I find.

3.2 Data and variable construction

I obtain subsidiary and financial data of all listed multinational firms in Bureau van Dijk's Orbis database as of 2016.[7] Market data is obtained from Datastream and Orbis. I additionally rely on data from BNY Mellon, KPMG, Property Rights Alliance, PRS Group, RepRisk, Transparency International and the World Bank, among others. I focus on the main variables of interest and provide a complete list with variable definitions in Table A.1.

3.2.1 Exposure to tax havens

My first key variable of interest, *Has Tax Haven Exposure*, indicates whether (1) or not (0) the firm has at least 1 affiliate located in any of the blacklisted tax haven countries. I also consider the number of tax haven affiliates the firm has through variable *Number of Tax Havens*, and the proportion of tax havens, relative to all affiliates of the firm, through variable *Proportion of Tax Havens*.

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[6]Sources agree that the blacklist omits several major offshore hubs, such as Bermuda, British Virgin Islands and the Cayman Islands, as well as important European countries, such as Ireland, Luxembourg and the Netherlands.

[7]A firm is defined as multinational if it has at least one foreign subsidiary.

3.2.2 Measures of firm value

I measure the impact of publication of the tax haven blacklist on firm value using several alternative models. In my main specification, I use daily returns for $[-1;3]$ event window around December 5, 2017, since markets often need time to digest new information.

I obtain daily stock prices from Orbis and Datastream, and drop penny stocks (prices below \$0.10), stocks not actively traded (no price changes between December 4, 2017 and December 8, 2017), and firms with assets below \$5 million. I winsorize returns at the 1 and 99 percentiles to remove outliers. Besides using raw returns, I calculate one-factor alphas (abnormal returns or stock returns in excess of market returns after controlling for firms' exposure to the market index). Alphas are obtained from a one-factor model estimated from November 6, 2016 to November 5, 2017 (the year ending one month before the event date). I require stocks to have at least 100 non-missing return observations during that period. Local market indices and risk-free rates are not available for all countries in the sample. I therefore obtain stock prices in US dollars and use the US market index (MSCI USA Value Weighted Index) and US T-bill as market index and risk-free rate.

3.2.3 Other firm characteristics

Finally, I construct measures of firms' corporate citizenship, exposure to corruption, tax aggressiveness and the potential for firm- and country-level expropriation.

I predict that firms which are more vulnerable to public perceptions of corporate citizenship could be more negatively affected after publication of the blacklist because consumers might react to the firm not being a good corporate citizen. Therefore, I predict that firms in the retail industry that deal directly with consumers will have a more negative reaction than other firms. Retail firms may be more susceptible to being publicly perceived and penalized for being unconscionable or unpatriotic, since consumers might decide to boycott firms' products.[8] I set an indicator variable *Retail* equal to one if the firm operates within the retail sector.[9]

It is also likely that firms exposed to perceptively corrupt countries are more likely to be associated with corrupt practices themselves, including tax avoidance. In order to control for that, I construct *Corruption Exposure*, a dummy variable that is equal to one if the firm is exposed to the most perceptively corrupt tercile of countries using the Corruption Perception Index by Transparency International (2016).

Tax Aggressiveness is the residual of a regression of firm's *Tax Aggressiveness (unadj.)* on return on assets where *Tax Aggressiveness (unadj.)* is the statutory tax rate at the country level less firm's effective tax rate. The effective tax rate is defined as tax over earnings before interest and tax (EBIT), observations with negative EBIT are denoted as missing, in line with O'Donovan *et al.* (2017).[10] A variation of the measure additionally controls for industry and country fixed effects when constructing the residual and accounts for profitability and industry- and country-specific tax treatments.

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[8] In 2012 it was revealed that Starbucks had not paid corporate tax since its entry in the United Kingdom (UK). The firm was implicated in funnelling its revenues offshore, to a Dutch affiliate. These revelations resulted in a consumer boycott, which led to lower revenues for the Starbucks in 2012 and 2013.

[9] I also use an indicator variable *Brand value* equal to one if the firm was listed as having one of the top 100 brand names as ranked in Business Week magazine in 2017 (Interbrand, 2017). Business Week obtains the rankings from Interbrand, which ranks brands based upon the estimated amount the brand is likely to earn the firm in the future. The findings are similar if I use this corporate citizenship measure, instead of the *Retail* dummy.

[10] The findings are virtually unchanged if, instead of EBIT, I use EBITDA in the denominator to define the effective tax rate.

As another proxy for tax aggressiveness, I use the *Cash effective tax rate (ETR)* from firms' financial statements, which is calculated as cash taxes paid divided by pre-tax income. The variable directly measures the market's ex-ante perceptions regarding firms' tax aggressiveness. I expect that the higher the cash ETR, the less likely that the market would expect the firm to be sufficiently tax aggressive, and the more likely the market would react to a high firm's exposure to blacklisted tax havens as a positive signal of optimal aggressiveness. I expect that the higher the firm's cash ETR, the more positive (or less negative) the reaction upon publication of the blacklist.[11]

At the firm level, I use measures of firm governance to capture the degree to which monitoring affects conflicts of interest between principals and shareholders. I capture exposure to the US regulations and potential enforcement actions arising from having any US subsidiaries through *Has US subsidiary* dummy. Further, I use the *RepRisk index score* provided by RepRisk (2017) that dynamically captures and quantifies a company's exposure to environmental, social and governance (ESG) and business conduct risks. The higher the value, the higher the risk exposure.[12]

Engagement in tax avoidance can be facilitated by weak institutions and by lack of monitoring. At the country level, I measure this with commonly used indices, including protection of property rights (Property Rights Alliance, 2017), country risk ratings (PRS Group, 2017), the rule of law (La Porta *et al.*, 1998), and protection of minority shareholders (The World Bank, 2017). These measures capture the extent to which individuals are protected from expropriation by the government and insiders. For each index, I construct a dummy variable equal to one if a country ranks above the median (has low expropriation risk).

3.3   Methodology

I use the event study technique to examine the market response of firms connected to the blacklisted tax havens around the publication of the EU tax haven blacklist. For my baseline results, I run the following regression:

$$CAR_i = \alpha + \beta TaxHavenExposure_i + \mathbf{X}_i \gamma + \epsilon_i, \tag{1}$$

where CAR_i denotes the cumulative abnormal return of firm i around the publication of the tax haven blacklist, $TaxHavenExposure_i$ indicates the proportion of firm's affiliates that are located in the blacklisted tax haven countries, and $\mathbf{X}_i$ contains controls, including country and industry fixed effects. The coefficient of interest, β, captures whether exposure to the blacklisted tax havens impacts firm value. In parts of my analysis, I augment the equation (1) with other tax haven variables, additional firm characteristics and their interaction with $TaxHavenExposure_i$ to test whether certain types of activities are priced. Finally, I use two-way clustering and cluster the standard errors on country and industry.

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[11] In order to limit the influence of measurement error due to outliers, I reset any values of cash ETR greater than 0.5 to 0.5, and any values less than zero to zero.

[12] I also use *Foreign Institutional Ownership* as another variable for firm-level governance. Furthermore, I obtain cross-listings from BNY Mellon (2017), which subject firms to US regulations, and I split American depositary receipts (ADRs) into those that are unsponsored (*Has unsponsored ADR*) and subject to less stringent regulatory requirements and those that are sponsored (*Has sponsored ADR*) and subject to more stringent requirements. Results are virtually unchanged if I instead use these firm-level governance measures.

Table 1: Firms implicated by publication of the EU tax haven blacklist by country

Country	N Firms	Fraction tax haven exposure	Country	N Firms	Fraction tax haven exposure
South Korea	1 216	59.80 %	India	1 311	9.11 %
South Africa	98	39.16 %	Australia	392	9.11 %
Bermuda	149	36.87 %	Greece	65	8.51 %
Switzerland	98	33.57 %	New Zealand	41	6.78 %
Netherlands	82	25.83 %	Egypt	67	6.12 %
Ireland	36	25.00 %	Jordan	45	6.06 %
Saudi Arabia	81	24.58 %	Brazil	129	5.32 %
France	354	24.27 %	Russian Federation	65	5.32 %
Spain	80	21.37 %	Canada	78	4.42 %
Great Britain	557	21.06 %	Thailand	143	4.31 %
Germany	327	19.96 %	Turkey	152	3.62 %
Italy	152	19.37 %	China	1 929	3.38 %
Denmark	65	18.09 %	Pakistan	114	3.01 %
Hong Kong	76	18.02 %	Malaysia	229	2.99 %
Japan	2 262	16.76 %	Israel	209	2.30 %
Finland	79	15.65 %	Sri Lanka	36	1.92 %
Norway	67	15.31 %	Philippines	41	1.67 %
Belgium	68	15.15 %	Poland	250	1.37 %
Cayman Islands	356	14.67 %	Vietnam	265	0.00 %
Taiwan	920	14.63 %	Bangladesh	73	0.00 %
United States	744	12.83 %	Indonesia	41	0.00 %
Sweden	273	9.57 %	Rest of world	581	20.46 %
Singapore	158	9.13 %			
			Total	**14 551**	**18.56 %**

Notes: This table provides summary statistics of firms implicated by publication of the EU tax haven blacklist. It provides the number and fraction of firms by country for countries with at least 50 firms; countries with fewer than 50 firms are aggregated to *Rest of world.*

4   Descriptive statistics

Table 1 provides summary statistics for firms with and without exposure to the blacklisted tax havens, providing a breakdown by country, with countries ranked in declining order by fraction of implicated firms. I find that $2,700$ firms or 18.56% of listed multinational firms worldwide have affiliates in the blacklisted tax haven countries.

There is a substantial cross-country variation in the fraction of firms that have exposure to tax havens. At the top are South Korea, South Africa, Bermuda and Switzerland, with at least one in three firms being tax haven users.

The use of blacklisted tax havens extends across all industries, shown in Table 2. It is particularly pervasive in Shipbuilding and Railroad Equipment, and Defense industries, with at least one in three firms being tax haven users.

Furthermore, Table 3 shows which tax havens are more frequently used, as a proportion of all tax haven affiliates in the data. Almost 50% of tax haven affiliates are located in South Korea, and more than 15% of tax haven affiliates are located in the United Arab Emirates, followed by Marshall Islands and Panama.

Next, I compare characteristics of firms with and without exposure to the blacklisted tax havens in Table 4. Firms that have tax haven affiliates are substantially larger, have more

Table 2: Firms implicated by publication of the EU tax haven blacklist by industry

Industry	N Firms	Fraction TH exposure	Industry	N Firms	Fraction TH exposure
Shipbuilding, Railroad	41	33.90 %	Printing, Publishing	104	15.23 %
Defense	7	30.00 %	Wholesale	722	15.11 %
Electronic Equipment	981	27.10 %	Construction Materials	576	15.02 %
Apparel	164	25.52 %	Candy, Soda	66	14.58 %
Automobiles, Trucks	351	25.05 %	Construction	479	14.47 %
Measuring, Control	162	24.58 %	Pharmaceutical Products	603	14.01 %
Recreation	115	24.55 %	Electrical Equipment	306	13.90 %
Aircraft	34	24.49 %	Food Products	402	13.14 %
Transportation	461	24.44 %	Rubber, Plastic Products	205	12.75 %
Machinery	712	24.30 %	Personal Services	138	11.94 %
Tobacco Products	17	24.00 %	Metal Mining	154	11.61 %
Consumer Goods	302	21.14 %	Retail	526	11.49 %
Computers	190	20.65 %	Restaurants, Hotels	266	11.08 %
Chemicals	659	20.63 %	Fabricated Products	78	9.73 %
Steel Works	427	20.42 %	Agriculture	176	9.38 %
Shipping Containers	59	19.77 %	Textiles	304	8.58 %
Almost Nothing	31	17.78 %	Trading	612	8.08 %
Petroleum, Natural Gas	262	17.54 %	Utilities	308	7.57 %
Communication	326	16.84 %	Real Estate	551	5.49 %
Entertainment	165	16.67 %	Precious Metals	80	5.17 %
Computer Software	605	16.57 %	Insurance	29	4.76 %
Beer, Liquor	100	16.55 %	Healthcare	124	4.44 %
Medical Equipment	133	16.49 %	Banking	170	3.64 %
Business Supplies	192	16.43 %	Coal	43	3.23 %
Business Services	1 036	16.11 %			
			Total	**14 551**	**18.56 %**

Notes: This table provides summary statistics of firms implicated by publication of the EU tax haven blacklist. It provides the number and fraction of firms connected to tax havens by industry. Fama French 49 industry classifications are used.

Table 3: Number of affiliates in tax haven countries

	N Affiliates	Fraction of all affiliates
South Korea	6 934	47.65 %
United Arab Emirates	2 366	16.26 %
Marshall Islands	1 177	8.09 %
Panama	973	6.69 %
Tunisia	661	4.54 %
Namibia	470	3.23 %
Macau	467	3.21 %
Bahrain	406	2.79 %
Barbados	382	2.63 %
Samoa	337	2.31 %
Trinidad and Tobago	168	1.16 %
Mongolia	122	0.84 %
Saint Lucia	81	0.56 %
Grenada	7	0.05 %
Palau	1	0.01 %
Total	**14 551**	**100 %**

Notes: This table shows the number of affiliates located in each tax haven country, and also provides a fraction of the total number of tax haven affiliates that are located in the specific country.

Table 4: Univariate analysis

Firm characteristics	Firms with TH exposure		Firms without TH exposure		Difference all	Difference matched
	N firms	Mean	N firms	Mean		
Firm characteristics						
Total assets ($th)	2 700	8 786 724	11 851	1 835 130	6 951 594***	230 4115
N subsidiaries	2 700	81.41	11 851	18.54	62.88***	5.41
% foreign subsidiaries	2 700	0.61	8 991	0.49	0.12***	0.006
N foreign subsidiaries	2 700	52.02	11 851	7.67	44.35***	0.06
Retailer (1/0)	2 700	0.026	11 851	0.033	-0.007*	0.015
Corruption exposure (1/0)	2 700	0.62	11 851	0.23	0.40***	0.17*
Tax aggressiveness measures						
Statutory corporate tax rate	2 700	0.257	11 851	0.259	-0.002	-0.013
Effective tax rate	2 700	0.165	11 851	0.237	-0.07***	-0.03
Cash effective tax rate	2 700	0.209	11 851	0.216	-0.007	-0.005
Tax aggressiveness (unadj.)	2 700	0.094	11 851	0.02	0.0373***	0.0022
Tax aggressiveness (no FE)	2 678	0.031	11 481	-0.007	0.038***	0.015
Tax aggressiveness (FE)	2 554	0.026	10 978	-0.006	0.032***	0.028
Governance measures						
Foreign institutional ownership	2 477	0.57	8 690	0.50	0.08***	0.03
RepRisk index score	1 293	0.08	2 418	0.13	-0.04***	0.01
Has U.S. subsidiary (1/0)	2 700	0.60	11 851	0.25	0.35***	0.1*
Has sponsored ADR (1/0)	2 700	0.11	11 851	0.03	0.08***	0.01
Has unsponsored ADR (1/0)	2 700	0.17	11 851	0.05	0.11***	0.09

Notes: This table shows characteristics of firms with and without exposure to the blacklisted tax havens. The column labelled *Difference all* captures the difference in means between the two groups for the full sample of firms. The column labelled *Difference matched* captures the difference in means between firms with exposure and matched firms. Firms are matched by country and closest neighbour by number of foreign affiliates. Table A.1 provides detailed variable definitions. All continuous variables are winsorized at the 1% and 99% levels. *,**, and *** indicate statistical significance at the 10%, 5%, and 1% levels.

subsidiaries and are more exposed to foreign countries and corrupt countries. The exposed firms seem to be better governed and pay relatively lower effective corporate tax rates than firms without tax haven affiliates. Firms with the blacklisted tax haven affiliates also seem to be more tax aggressive.

Since firms implicated by publication of the EU tax haven blacklist are substantially larger, both by assets and number of (foreign) affiliates, I match firms by headquarter country and number of foreign affiliates (nearest neighbour matching).[13] For the matched sample, shown in the last column of Table 4, firms with exposure to tax havens are no longer substantially different from firms with no exposure to blacklisted tax havens. The only remaining differences stem from corruption exposure and whether the firm has a US subsidiary. To alleviate concerns that my results might be explained by firm size, I control for size (number of foreign affiliates) throughout my analysis and ensure that my results are robust for matched samples (matching on either firms' total assets or number of foreign affiliates). I also examine whether firms' corruption exposure or exposure to US regulations matter in my analysis in the cross-sectional tests.

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[13]The results are nearly identical if I match firms by headquarter country and total assets.

5 Market response to publication of the EU tax haven blacklist

In this section I begin by documenting the baseline effect of publication of the blacklist on firm value, using cumulative raw and abnormal returns, and provide some robustness tests.

5.1 Main result

Table 5 shows the results of examination of firms' exposure to the EU blacklisted tax havens. The dependent variable in the regressions is *Cumulative raw return* around the event date. The control variables of interest are *Tax Haven (TH) Exposure* that indicates whether (1) or not (0) a firm is connected to the EU blacklisted tax havens, *Percent of Tax Havens (THs)* that indicates the proportion of tax haven affiliates a firm has, and *Number of Tax Havens (THs)* that indicates the number of tax haven affiliates a firm has. All specifications include country and industry (49 Fama-French industries (French, 2018)) fixed effects. Also, specifications 2, 4 and 6 control for firm size (number of firm's foreign affiliates.)[14]

The results show that firms connected to the EU blacklisted tax havens face negative cumulative raw returns during the event window. In column 2 the raw returns are 0.13% lower for such firms than for same-country, same-industry firms without an exposure to tax havens, after controlling for firm size. Moreover, for a one percentage point increase in the percentage of tax havens a firm has, its raw returns decrease by 0.5-0.6%, as seen in columns 3 and 4. Similarly, for an additional tax haven affiliate, the firm's raw returns decrease by 0.01%, as seen in column 6.

Table 5: Cumulative raw returns of firms implicated by publication of the EU TH blacklist

	(1)	(2)	(3)	(4)	(5)	(6)
TH exposure	-0.00008	-0.00134***				
	(-0.073)	(-3.205)				
Percent of THs			-0.00510***	-0.00567***		
			(-3.627)	(-5.398)		
Number of THs					-0.00003	-0.00009***
					(-0.433)	(-3.118)
Log(Nr for aff)		0.00077**		0.000615**		0.000655**
		(2.623)		(2.577)		(2.645)
R^2	0.076	0.076	0.076	0.076	0.076	0.076
Observations	14537	14537	14537	14537	14537	14537

Notes: This table provides returns of listed multinational firms around publication of the tax haven blacklist. The dependent variable is *Cumulative raw return*. Returns are cumulated over days around the publication, the event window is [-1;3] with respect to this date. *Tax Haven (TH) Exposure* indicates whether (1) or not (0) a firm is connected to the EU blacklisted tax havens, *Percent of Tax Havens (THs)* indicates the proportion of tax haven affiliates a firm has, and *Number of Tax Havens (THs)* indicates the number of tax haven affiliates a firm has. Log(Number foreign affiliates) controls for firm size. Table A.1 provides detailed variable definitions. All continuous variables are winsorized at the 1% and 99% levels. All specifications include country and industry fixed effects (49 Fama-French industries). Standard errors are clustered at the country and industry level (2-way cluster). T-statistics are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

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[14]Results are robust to controlling for firm's total assets as a size control.

When I use *Cumulative abnormal returns* (alphas) as the dependent variable in Table 6, results are largely unchanged, and firms that have tax haven affiliates are still significantly negatively affected. I treat the column 4, -0.88%, as my baseline estimate.

Overall, firms connected to tax havens are adversely affected by publication of the tax haven blacklist. First, there are reputational effects of EU shaming of the blacklisted tax havens. Firms with a substantial share of the blacklisted tax haven affiliates face potential public pressure or backlash against the firm or its products (Graham *et al.*, 2014). Investors react negatively, since it can harm firms' future profits. Second, tax havens face potential future countermeasures by the EU. As the blacklisted tax havens might not be eligible for funds from the bloc except where to aid development and might face further sanctions, the tax haven countries might decide to take commitments to change their tax laws (Sharman, 2009). The adverse market reaction to publication of the blacklist suggests that tax havens help firms with saving taxes and generate firm value on average.

Table 6: Cumulative abnormal returns of firms implicated by publication of the EU TH blacklist

	(1)	(2)	(3)	(4)	(5)	(6)
TH exposure	-0.00031	-0.00145***				
	(0.272)	(-2.948)				
Percent of THs			-0.00707***	-0.00881***		
			(-3.244)	(-3.791)		
Number of THs					-0.00005	-0.00015***
					(-0.599)	(-3.370)
Log(Nr for aff)		0.00105**		0.00100**		0.00101**
		(2.670)		(2.602)		(2.526)
R^2	0.155	0.157	0.155	0.157	0.155	0.157
Observations	14537	14537	14537	14537	14537	14537

Notes: This table provides returns of listed multinational firms around publication of the tax haven blacklist. The dependent variable is *Cumulative abnormal return*. Returns are cumulated over days around the publication, the event window is [-1;3] with respect to this date. *Tax Haven (TH) Exposure* indicates whether (1) or not (0) a firm is connected to the EU blacklisted tax havens, *Percent of Tax Havens (THs)* indicates the proportion of tax haven affiliates a firm has, and *Number of Tax Havens (THs)* indicates the number of tax haven affiliates a firm has. Log(Number foreign affiliates) controls for firm size. Table A.1 provides detailed variable definitions. All continuous variables are winsorized at the 1% and 99% levels. All specifications include country and industry fixed effects (49 Fama-French industries). Standard errors are clustered at the country and industry level (2-way cluster). T-statistics are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

5.2 Robustness

Table 7 shows robustness tests of the main specification (Table 6, column 4). Column 1 shows the results of the main specification for the ease of comparison. Further, as shown in column 2 the coefficient of interest is larger than in the main specification when I repeat the analysis using a matched sample, matching by country and closest neighbour by number of foreign affiliates. Similarly, the coefficient is larger when I match firms by total assets in column

3. Moreover, the coefficient is larger than in the main specification when I exclude the size control and any fixed effects, as in column 4. This shows the importance of having both the size control and country and industry fixed effects in the regressions.

Furthermore, I examine whether investors reacted to the grey list of tax havens, which was published on the same day as the blacklist. Since the grey-listed countries committed to addressing deficiencies in their tax systems, according to the EU, I expect that there would be no significant shaming effect of firms with many affiliates in the grey-listed countries. Contrarily, as the EU said in a press release (Commission, 2017), "The EU listing process had a very positive impact as most jurisdictions engaged constructively with the EU during the listing process. Many made concrete, high-level commitments to improve their standards as a result of the EU screening exercise." Since the EU was not shaming the grey-listed tax havens, and they do not face sanctions or penalties of being included in the grey list, I expect the investors to be indifferent regarding firms' exposure to the grey-listed tax havens. In order to control for firms' exposure to grey-listed tax havens, I include a variable *Percent of grey THs*, equal to the percentage of grey-listed tax haven affiliates the firm has. As column 5 shows, controlling for firms' exposure to grey-listed tax havens does not affect the main coefficient of interest significantly. There seems to be a small negative effect of being included in the grey list; however, it is insignificant.

Table 7: Robustness

	(1)	(2)	(3)	(4)	(5)
	Main	Matched foreign	Matched assets	No controls	Grey list
Percent of THs	-0.00881***	-0.01230***	-0.01168***	-0.01282***	-0.00882***
	(-3.791)	(-7.279)	(-3.988)	(-4.564)	(-3.601)
Log(Nr for aff)	0.00100**	0.00117	0.00094		0.00128**
	(2.602)	(0.955)	(1.593)		(3.226)
Percent of grey THs					-0.00088
					(0.762)
Fixed effects	Yes	Yes	Yes	No	Yes
R^2	0.157	0.107	0.035	0.003	0.157
Observations	14537	485	3247	14551	14537

Notes: This table provides results of robustness tests of the main specification (Table 6, Column 4). The dependent variable is *Cumulative abnormal return. Percent of Tax Havens (THs)* indicates the proportion of tax haven affiliates a firm has. Column 1 shows the main specification (Table 6, Column 4). Column 2 matches firms exposed to the EU tax haven blacklist to non-exposed firms by country and number of foreign affiliates. Column 2 matches firms exposed to the EU tax haven blacklist to non-exposed firms by country and total assets. In Column 4 the main specification is estimated without controls. In Column 5 I control for firms' exposure to grey-listed tax havens. Table A.1 provides detailed variable definitions. All continuous variables are winsorized at 1% and 99% levels. While Columns 1 and 5 include country and industry fixed effects, columns 2 and 3 include only industry fixed effects. Column 4 does not include any fixed effects or controls. Standard errors are clustered at country and industry level (2-way cluster). T-statistics are in parentheses. *,**, and *** indicate statistical significance at the 10%, 5%, and 1% levels.

Finally, Figure 1 shows the raw returns before and after publication of the blacklist of firms exposed to the blacklisted tax havens (THs), firms exposed to the grey-listed tax havens

and firms not exposed to any of the mentioned tax havens.[15] Trends are similar both before and after the event period, and both the control group with no exposure to tax havens, as well as the firms with exposure to grey-listed tax havens face a small share price decrease after December 5. The decrease is; however, significantly larger for the treatment group with exposure to the blacklisted tax havens. Even though the grey list features some of the widely known tax havens, there was no share price impact for firms having subsidiaries in the grey-listed countries. This observation supports the supposition that the blacklist worked mainly as a shaming mechanism towards the firms significantly exposed to the blacklisted tax havens.

Figure 1: Pre- and post-trends
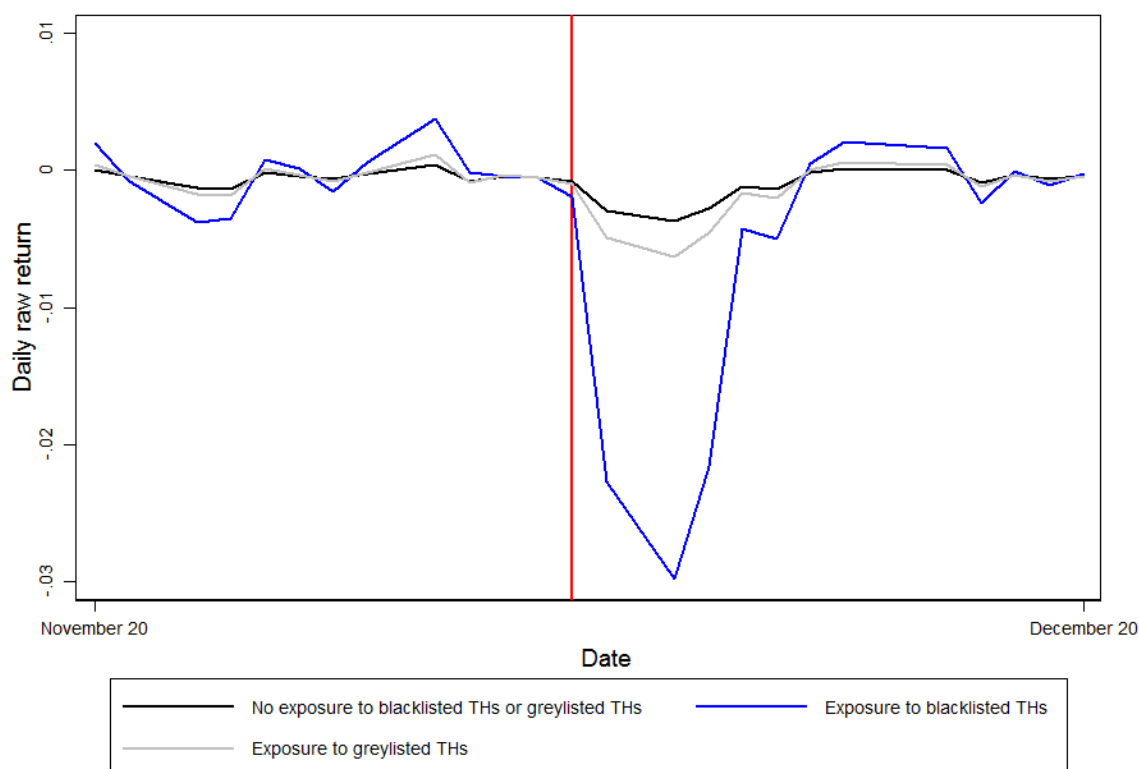
With these robustness tests in mind, I continue to use the specification in Table 6, column 4 as my main specification.

5.3   Interaction with previous tax haven lists

As discussed in the media, the EU tax haven blacklist is not exclusive, and the sources agree that it omits several major offshore hubs, such as Bermuda, British Virgin Islands and the Cayman Islands, as well as important European countries, such as Ireland, Luxembourg and the Netherlands that have been recognized as tax havens in other tax haven lists. As new research shows, Ireland is the biggest tax haven for multinationals (Tørsløv *et al.*, 2018). Moreover, the EU tax haven blacklist has been said to merely include non-cooperative jurisdictions, which

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[15]The graph shows similar trends for the daily abnormal returns.

are small and lack administrative capabilities to deal with the EU's request. Table A.2 in the Appendix shows the different tax haven lists that have been used in the previous literature, while Table A.3 compares countries represented in the previous lists with countries in the EU tax haven blacklist. The EU tax haven blacklist features Panama, which has appeared in all previous lists, and it also includes countries that have not appeared in any previous tax haven lists, such as Mongolia, Namibia and South Korea. Nevertheless, the EU blacklist does not include Cayman Islands and Isle of Man, which have been included in all previous tax haven lists. I expect that investor reaction to inclusion of particular countries in the blacklist could differ, based on whether these countries were previously known to be tax havens or not.

To examine whether investors reacted differently to different types of blacklisted tax havens, I split all tax havens into groups, based on how foreseeable they were to be included in the blacklist. If the tax haven was included in at least half of the previous tax haven lists (e.g. 3 lists), it is likely that it could be included in the EU blacklist as well. Similarly, if the haven was included in only 2 of the previous lists, it is less foreseeable it would be included in the EU tax haven blacklist. Based on this, I create 3 groups of countries - *Likely to be on EU list and was on EU list*, *Likely to be on EU list and was not on EU list* and *Not likely to be on EU list and was on EU list*. Similarly, I create another 3 groups of countries - *Was on all previous lists and was on EU list*, *Was on all previous lists and was not on EU list* and *Was on no previous lists and was on EU list*.[16] I then calculate each firm's exposure to the specific group through the percentage of affiliates the firm has in these countries. Finally, I regress the stock returns on the percentage of affiliates the firms have in the different groups.

The results are displayed in Table 8 and show that the larger the firm's exposure to the tax havens that were unlikely to be on the EU blacklist but were actually included, the worse the investor reaction. Similar results can be observed for firms with a large exposure to the tax havens that had never been on a blacklist before, but were included in the EU list. Since it was not foreseeable that these countries would be included in the blacklist and might face potential future sanctions and countermeasures, investors reacted negatively to the new information, which was immediately priced in the firm share price.

6 Cross-sectional variation in market reactions

To further examine the partial relationship between firm characteristics and investor reaction to publication of the blacklist, I next investigate the cross-sectional relation between firm characteristics and the event window returns. The results of the different specifications are displayed in Table 9.[17] Column 1 shows the results of the main specification for the ease of comparison (Table 6, column 4).

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[16]Composition of the groups can be found in Table A.3.

[17]The results also hold in the matched sample, matching on country and either total assets or number of foreign affiliates.

Table 8: Interaction with previous tax haven lists

	(1)	(2)
Likely to be on EU list & was on EU list	-0.00418	
	(-0.747)	
Likely to be on EU list & was not on EU list	-0.00271	
	(-0.637)	
Not likely to be on EU list & was on EU list	-0.00680***	
	(-9.162)	
Was on all lists & was on EU list		-0.003071
		(-1.318)
Was on all lists & was not on EU list		-0.00095
		(-0.092)
Was on no lists & was on EU list		-0.00632***
		(-6.478)
Log(Number of foreign affiliates)	0.00071	0.00070
	(1.440)	(1.543)
R^2	0.076	0.076
Observations	14537	14537

Notes: This table examines firms' reaction to the EU tax haven blacklist in relation to previous tax haven lists. The composition of the different groups can be seen in Tables A.2 and A.3. The variables represent each firm's exposure to the particular group. The dependent variable is *Cumulative abnormal return*. Log(Number of foreign affiliates) controls for firms' size. Table A.1 provides detailed variable definitions. All continuous variables are winsorized at the 1% and 99% levels. All specifications include country and industry fixed effects (49 Fama-French industries). Standard errors are clustered at the country and industry level (2-way cluster). T-statistics are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table 9: Firm-level cross-sectional variation

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Main	Retail	Corruption	Tax Agg w/ FE	Cash ETRs	US subsidiary	Governance
Percent of THs	-0.00881***	-0.00834***	-0.00944***	-0.00107***	-0.00887***	-0.00936***	-0.00683***
	(-3.791)	(-3.627)	(-3.730)	(-2.967)	(-2.985)	(-3.834)	(-3.93)
Percent of THs*Retail		-0.03570***					
		(-15.264)					
Percent of THs*Corrupt			0.00362				
			(0.646)				
Percent of THs*Tax agg				-0.01391***			
				(-2.884)			
Percent of THs*Cash ETR					0.03900***		
					(8.828)		
Percent of THs*Has US sub						0.00150	
						(0.409)	
Percent of THs*Governance							0.04843***
							(-3.21)
Log(Nr for aff)	0.00100**	0.00100*	0.00110**	0.00094**	0.00095**	0.00094**	0.00102
	(2.602)	(1.885)	(2.516)	(2.319)	(2.384)	(2.356)	(1.001)
R^2	0.157	0.157	0.157	0.157	0.158	0.158	0.157
Observations	14537	14537	14537	14537	14537	14537	14537

Notes: This table provides results of the analysis of firm-level cross-sectional variation. The dependent variable is *Cumulative abnormal return*. *Percent of Tax Havens (THs)* indicates the proportion of tax haven affiliates a firm has. Column 1 shows the main specification (Table 6, Column 4). *Retail* is a dummy variable equal to 1 if a firm operates within the retail sector. *Corruption* is corruption exposure, measured by a dummy variable that is equal to 1 if a firm is exposed to the most perceptively corrupt tercile of countries using Transparency International's Corruption Perception Index. *Tax Aggressiveness (with FE)* is the residual of a regression of firm's *Tax Aggressiveness (unadj.)* on return on assets, and country and industry fixed effects, where *Tax Aggressiveness (unadj.)* is the statutory tax rate at the country level less a firm's effective tax rate. The effective tax rate is defined as tax over EBIT, observations with negative EBIT are set to missing. *Cash ETR* is defined as cash taxes paid over total pre-tax book income. *Has US sub* is a dummy variable equal to 1 is a firm has a subsidiary in the US. *Governance* is the RepRisk score, related to ESG risk. Table shows only the variables of interest, the other variables are omitted. Table A.1 provides detailed variable definitions. All continuous variables are winsorized at 1% and 99% levels. All specifications include country and industry fixed effects. Standard errors are clustered at country and industry level (2-way cluster). T-statistics are in parentheses. *,**, and *** indicate statistical significance at the 10%, 5%, and 1% levels.

6.1 Corporate citizenship

Specification 2 of Table 9 examines corporate citizenship as an explanation for the negative market response to publication of the blacklist. The possibility of a negative consumer reaction to indication of bad corporate citizenship makes retail firms relatively more vulnerable to news of their tax avoidance strategies. The results show that investors of firms operating within the retail sector reacted more negatively, compared to firms in other industries. This is consistent with the potential consumer or taxpayer backlash, which can harm firms' future profits.[18]

I recognize that interpretation of the results is subject to the concern that engagement in tax shelters is endogenous. It is possible that retail firms are less likely to have affiliates in tax shelters but, if they do so, the expected benefit would be higher than otherwise in order to offset the higher expected costs. It is also possible that the type of shelters that retail firms engage in is systematically different than the type of shelters that are important in other sectors. The results should be interpreted with these caveats in mind.

6.2 Corruption

Specification 3 of Table 9 examines corruption as an explanation for the stock price reaction to publication of the blacklist. Firms with subsidiaries in the most corrupt countries might use tax havens as offshore vehicles to bribe foreign government officials. Moreover, after the matching analysis conducted in Table 4, corruption exposure was one of the variables that were still different between the two groups. To examine whether investors of more corrupt firms reacted differently to the blacklist, I interact the tax haven exposure variable with the corruption exposure. As the results show, having subsidiaries in most perceptively corrupt countries is not associated with more negative abnormal returns. Based on this, it seems that investors of relatively more corrupt firms did not react differently than those of less corrupt firms, and public shaming does not seem to matter more or less for firms more exposed to corruption.

6.3 Tax aggressiveness

Specifications 4 and 5 of Table 9 test whether tax aggressive firms were affected differently around publication of the EU tax haven blacklist than less tax aggressive firms. In column 4, I control for tax aggressiveness using an aggressiveness measure constructed with industry and country fixed effects. The results show that the more tax aggressive firms (firms with low effective corporate tax rates) have more negative returns around publication of the EU tax haven blacklist.[19]

The results are consistent with investors expecting that firms might be audited or fined for past tax evasion or overly aggressive tax avoidance. Even though the blacklist does not incorporate any specific sanctions or penalties, it was effective at shaming and increasing public scrutiny on the more tax aggressive firms to a larger extent than less tax aggressive firms. As tax saving strategies through the use of tax havens are most relevant for relatively tax aggressive firms, they would be more negatively affected if tax havens had to limit their preferential treatment. Investors react negatively to such information since firm's future profits are likely to fall.

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[18]Nearly identical results are obtained when, instead of using Fama French industry classification to define retail industry, I use NAICS or NACE industry classification. Similar results are also obtained when I use the *Brand value* as a measure for corporate citizenship.

[19]The results are robust to using a tax aggressiveness measure, constructed using no fixed effects.

These findings are in line with the previous literature on corporate tax abuse (Madhavan, 2002; Blank, 2009). Hedge funds and private equity funds own significant stakes in multinational firms, and fund managers spend significant time searching for information about corporate managers' tax planning behaviour. Many of the funds seek to maximize the economic return on their investment within a relatively short period of time. They may enjoy a firm's claimed tax benefits today; however, when they get to know that the tax authorities might audit or reject the firm's tax position, they would sell the stock.

As another test, in column 5 I look at cash effective tax rates as a measure of tax aggressiveness. The larger the cash effective tax rate, the less tax aggressive the firm is. The results show that the reaction is less negative for firms that are viewed to be generally less tax aggressive, controlling for the percentage of tax haven affiliates. This is consistent with market reacting positively to evidence that a firm tries to reduce taxes (has a high percentage of tax haven affiliates), when its financial reports would lead one to believe the firm is not tax aggressive (has high cash effective tax rate). The results also correspond to the previous literature (Hanlon & Slemrod, 2009), which claims that in order to maximize the value of the firm, shareholders would like to minimize corporate tax payments net of the private costs of doing so - they want the company to be optimally aggressive. Investors could consider this behaviour to be an attractive attribute of a corporation because it could increase the economic return on their investments in the corporation's stock. The publication of the blacklist could signal that the corporation's tax director was willing to claim risky tax positions that could generate substantial benefits for investors in the future. Investors often comment that they do not seek to invest in corporations whose tax directors break the tax law, but rather that claim tax positions that "push the envelope" (Blank, 2009). When a tax director pushes the envelope, he claims tax positions that technically appear to comply with the tax rules. Investors may respect this type of tax director for pursuing aggressive tax positions that yield economic returns on their investments, but refrain from violating explicit tax rules.

6.4 Firm-level governance

In specifications 6 and 7 of Table 9 I use measures of firm governance to capture the degree to which monitoring efforts reduce conflicts of interest between principals and shareholders. In poorly-governed firms managers find it easier to extract resources for their own gain. If tax havens are used to expropriate shareholders, I expect the publication of the blacklist and the resulting increased scrutiny to reduce such activities, particularly in weakly-governed firms. Thus, I expect weakly-governed firms to be less negatively affected by publication of the blacklist.

Specification 6 examines exposure to the United States legislation and regulations as an explanation for the market response. After the matching analysis conducted in Table 4, having a US subsidiary was one of the variables that were still different between the two groups. To examine whether firms with subsidiaries in the United States reacted differently to the blacklist, I interact the tax haven exposure variable with the US subsidiary dummy. As the results show, the main coefficient of interest is slightly larger, while the coefficient on the US subsidiary dummy is insignificant. The results suggest that having a subsidiary in the United States does not affect firm's reaction to publication of the blacklist.

Further, in specification 7 I interact the *Percent of Tax Havens (THs)* with RepRisk index score as a firm-level governance measure. The index gives a score that dynamically captures and quantifies a company's exposure to environmental, social and governance (ESG) and business conduct risks. The higher the value, the higher the risk exposure, so I expect a

positive sign for the interaction term. I observe evidence that worse governance is associated with less negative returns for firms that are exposed to the blacklisted tax havens.[20]

Another explanation for the results is that when the market learns of tax shelter activity for firms with good governance, it reacts negatively because this confirms the suspicion of poor governance that was previously thought not to be value-decreasing. On the other hand, the market price for firms with bad governance already reflects a reduction in value related to poor governance provisions, so investors do not react negatively (Hanlon & Slemrod, 2009).

Taken together, the results of the subsection are consistent with the view that weakly-governed firms may benefit from publication of the tax haven blacklist, since it potentially reduces expropriation. The results suggest that shareholders benefit from the potentially additional auditing, monitoring, scrutiny and transparency following publication of the blacklist, especially so in weakly-governed firms. Another explanation for the finding is that firms with worse firm-level governance seem to react less to EU shaming than well-governed firms.

6.5 Country-level governance

To support my interpretation of the firm-level results, I next turn to country-level evidence in Table 10. I expect that the use of tax havens comes at a particularly high cost in countries where investors face high expropriation risk and low levels of investor protection. Publication of the blacklist should make expropriation harder to maintain in the future, and therefore benefit outside shareholders, more so in countries with high expropriation risk. I test this by augmenting the main specification by several country-level measures associated with expropriation risk and investor protection. This set-up allows me to compare firms affected by publication of the blacklist to other firms headquartered in the same country.

The results suggest that the negative investor reaction is more pronounced for firms headquartered in countries with low expropriation risk and high investor protection. Specifically, firms both exposed to tax havens and high country-level governance are more adversely affected. The results correspond to my intuition in the firm-level governance analysis - the weakly-governed firms are likely to benefit from publication of the blacklist, while for the well-governed firms, the exposure to blacklisted tax havens confirms the suspicion of poor governance, which is then priced in firm's share price.

Importantly, I do not find a differential effect on firm value for firms in countries with higher economic development (column 6), suggesting that my measures of expropriation risk and investor protection do not merely reflect economic development.

In sum, the results of the subsection suggest that tax havens might be used for expropriation, at the cost of shareholders. Publication of the blacklist and the potential future countermeasures reduce some of that cost. Another explanation for the finding is that firms with worse country-level governance seem to react less to EU shaming than well-governed firms.

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[20]The results are robust to controlling for other firm-level governance characteristics, such as foreign institutional ownership or American depositary receipts.

Table 10: Country-level governance

	(1)	(2)	(3)	(4)	(5)	(6)
	Main	Property rights	Country risk	Rule of law	Minority shareholder protection	GDP per capita
Percent of THs	-0.00881***	-0.00118***	-0.00177***	-0.00665***	-0.00431***	-0.00829***
	(-3.791)	(-2.604)	(-2.798)	(-2.704)	(-4.939)	(-2.794)
Percent of THs*Governance		-0.01162***	-0.00831***	-0.00536***	-0.00517***	-0.00577
		(-3.450)	(-8.556)	(-3.797)	(-3.353)	(-1.556)
Log(Nr for aff)	0.00100**	0.00101**	0.00100**	0.00054	0.00100**	0.00054
	(2.602)	(2.633)	(2.533)	(1.076)	(2.464)	(1.320)
R^2	0.157	0.157	0.157	0.156	0.157	0.156
Observations	14537	14537	14537	14537	14537	14537

Notes: This table investigates the role of expropriation measured at the country level in explaining returns of publicly listed multinational firms around publication of the EU tax haven blacklist. The dependent variable is *Cumulative abnormal return*. *Percent of Tax Havens (THs)* indicates the proportion of tax haven affiliates a firm has. Column 1 shows the main specification (Table 6, Column 4). *Percent of THs*Governance* denotes the interaction between *Percent of Tax Havens (THs)* and the respective country-level governance measures. Countries are split into those with above-median and below-median scores, where above-median score indicates better governance. Measures include Property rights, Country risk index, Rule of law index, and Minority shareholder protection. In Column 6, the country-level measure of interest is a dummy equal to one if a firm is headquartered in a country with above-median GDP per capita. Table A.1 provides detailed variable definitions. All continuous variables are winsorized at 1% and 99% levels. All specifications include country and industry fixed effects (49 Fama-French industries). Standard errors are clustered at country and industry level (2-way cluster). T-statistics are in parentheses. *,**, and *** indicate statistical significance at the 10%, 5%, and 1% levels.

7 Conclusion

Consistent with the notion that firms use tax havens to create shareholder value, I find that publication of the EU tax haven blacklist on December 5, 2017 led to negative abnormal returns of firms with tax haven affiliates. The reaction was driven by the EU shaming of tax havens and by the potential future countermeasures and financial penalties associated with the blacklist. The largest reaction was for those tax havens, for which it was not foreseeable that they would be included in the blacklist. Investors reacted negatively to the new information, which was immediately priced in the firm share price. Further, I observe no share price impact of having subsidiaries in the grey-listed tax havens, since the EU was not shaming these countries and they do not face sanctions or penalties of being included in the grey list.

Firms operating within the retail sector faced particularly large share price decrease since consumers might react negatively to an indication of bad corporate citizenship. This is consistent with the potential consumer or taxpayer backlash, which can harm firms' future profits. Also more tax aggressive firms faced more negative returns, which shows that investors do expect that firms might be audited or fined for past or overly aggressive tax avoidance. Firms with relatively high cash effective tax rates had a less negative reaction, consistent with the market reacting positively to evidence that these firms were not as tax-passive as previously believed. The negative reaction was also less pronounced in countries with low levels of investor protection and weakly-governed firms with substantial conflicts of interest between principals and shareholders. The finding suggests that tax sheltering signals a higher likelihood of managerial wealth diversion, at the cost of shareholders. The increased auditing, monitoring, scrutiny and transparency following publication of the blacklist, as well as the potential for countermeasures reduce some of that cost.

The findings of my paper show that public tax haven shaming by international organisations and news media does matter for investors, which is the main policy implication of my study. Even despite the lack of any specific sanctions or penalties, the exposed firms faced negative returns after publication of the EU tax haven blacklist. The potential for negative investor reaction might deter firms' managers to engage in tax avoidance activities, or at least increase the costs associated with tax avoidance. What should matter most is whether these spotlights are actually followed by improvements in firms' corporate tax strategies and contribute towards less corporate tax avoidance in the future.

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A   Appendix

Table A.1: Data Appendix

Variable	Description	Source
Tax haven variables		
Tax haven exposure	A dummy variable equal to 1 if the firm has at least 1 affiliate located in any of the blacklisted tax haven countries.	Orbis
Number of tax havens	The number of blacklisted tax haven affiliates the firm has.	Orbis
Percent of tax havens	The proportion of blacklisted tax haven affiliates, relative to all affiliates of the firm.	Orbis
Percent of grey tax havens	The proportion of grey-listed tax haven affiliates, relative to all affiliates of the firm.	Orbis
Measures of firm value		
Cumulative abnormal returns [a;b]	Cumulative daily abnormal returns in % from closing on day a-1 to closing on day b relative to the event date. Daily abnormal returns (alphas) are obtained from parameters of a one-factor model estimated over days [-294; -41] relative to the event date. The factor is the excess return on the market of the local index in US dollars over and above the US risk-free rate.	Datastream, Orbis
Cumulative raw returns [a;b]	Cumulative daily stock returns in % from closing on day a-1 to closing on day b relative to the event date.	Datastream, Orbis
Tax aggressiveness measures		
Statutory corporate tax rate	Statutory corporate tax rate.	KPMG
Effective tax rate	The effective tax rate is defined as tax over EBIT. Observations with negative EBIT are denoted as missing.	KPMG, Orbis
Cash effective tax rate	The cash effective tax rate is defined as cash taxes paid over total pre-tax book income.	KPMG, Orbis
Tax aggressiveness (unadj.)	The statutory tax rate at the country level less firm's effective tax rate.	KPMG, Orbis
Tax aggressiveness (no FE)	The residual of a regression of firm's Tax Aggressiveness (unadj.) on return on assets. High values denote high tax aggressiveness.	KPMG, Orbis
Tax aggressiveness (FE)	The residual of a regression of firm's Tax Aggressiveness (unadj.) on return on assets, country fixed effects, and industry fixed effects. High values denote high tax aggressiveness.	KPMG, Orbis
Firm-level measures		
Total assets	Total assets. Regressions use the natural logarithm.	Orbis
Number of subsidiaries	Number of domestic and foreign subsidiaries.	Orbis
Brand value	Dummy variable equal to one if the firm was listed as having one of the top 100 brand names as ranked in Business Week magazine in 2017.	Interbrand
Retail	Dummy variable equal to 1 if the firm operates within the retail sector.	Orbis, Fama French Data Library
Number of foreign subsidiaries	Number of foreign subsidiaries outside of the parent's headquarter country. Regressions use the natural logarithm.	Orbis
% foreign subsidiaries	Fraction of firm's subsidiaries headquartered outside of its parent's headquarter country.	Orbis
Has US subsidiary	A dummy variable equal to 1 if a firm is not headquartered in the US and has a US subsidiary.	Orbis
Foreign institutional ownership	Fraction of shares held by foreign owners, calculated in terms of total ownership.	Orbis
RepRisk index score	Score that dynamically captures and quantifies a company's exposure to environmental, social and governance (ESG) and business conduct risks. The higher the value, the higher the risk exposure.	RepRisk
Has sponsored ADR	A dummy variable equal to 1 if a firm is not headquartered in the US and has a sponsored American Depositary Receipt (ADR).	BNY Mellon

Table A.1: Data Appendix

Variable	Description	Source
Has unsponsored ADR	A dummy variable equal to 1 if a firm is not headquartered in the US and has an unsponsored ADR.	BNY Mellon
Exposure to most corrupt tercile	A dummy variable that is equal to one if a firm is exposed to the most perceptively corrupt tercile of countries using Transparency International's Corruption Perception Index.	Orbis, Transparency International
Country-level measures		
Property rights	An assessment of the ability of individuals to accumulate private property, secured by clear laws that are fully enforced by the state. Regressions use dummy equal to one if country scores among the 50% of countries with weakest property rights.	Property Rights Alliance
Country risk	Country risk as per the International Country Risk Guide. Takes value between 0 and 100. Regressions use dummy equal to one if country scores among the 50% of countries with highest country risk.	PRS Group
Rule of law	Rule of Law from La Porta, Lopez-de-Silanes, Shleifer, and Vishny (LLSV; 1998). Regressions use dummy equal to one if country scores among the 50% of countries with weakest rule of law.	La Porta, Lopez-de-Silanes, Shleifer, and Vishny (LLSV; 1998)
Minority Shareholder Protection index	A measure of the strength of minority shareholder protection against misuse of corporate assets by directors, of shareholder rights, of governance safeguards, and transparency. Regressions use dummy equal to one if country scores among the 50% of countries with the lowest minority shareholder protection.	The World Bank
GDP per capita	Country-level GDP per capita. Regressions use the natural logarithm.	Orbis

Table A.2: Tax haven lists

Country	Hines and Rice (1994)	OECD's list of uncooperative tax havens (2000)	Stop Tax Haven Abuse Act (2009)	Johannesen and Zucman (2014)	Financial Secrecy Index (secrecy score>60) (2015)	EU tax haven blacklist (2017)
American Samoa	0	0	0	0	0	1
Andorra	0	1	0	0	1	0
Anguilla	0	1	1	0	1	0
Antigua and Barbuda	0	1	1	0	1	0
Aruba	0	1	1	0	1	0
Austria	0	0	0	1	0	0
Bahamas	0	1	1	0	1	0
Bahrain	0	1	0	0	1	1
Barbados	0	0	1	0	1	1
Belgium	0	0	0	1	0	0
Belize	1	1	1	0	1	0
Bermuda	1	1	1	0	1	0
Bolivia	0	0	0	0	1	0
Botswana	0	0	0	0	1	0
Brunei Darussalam	0	0	0	0	1	0
Cayman Islands	1	1	1	1	1	0
Chile	0	0	0	1	0	0
Cook Islands	1	1	1	0	1	0
Costa Rica	0	0	1	0	0	0
Curaçao	0	0	0	0	1	0
Cyprus	1	1	1	1	0	0
Dominica	1	1	1	0	1	0
Dominican Republic	0	0	0	0	1	0
Gambia	0	0	0	0	1	0
Ghana	0	0	0	0	1	0
Gibraltar	1	1	1	0	1	0
Great Britain	1	0	0	0	0	0
Grenada	1	1	1	0	1	1
Guam	0	0	0	0	0	1
Guatemala	0	0	0	0	1	0
Guernsey	0	1	1	1	1	0
Hong Kong	1	0	1	0	1	0
Ireland	1	0	0	0	0	0
Isle of Man	1	1	1	1	1	0
Jersey	0	1	1	1	1	0
Jordan	1	0	0	0	0	0
Latvia	0	0	1	0	0	0
Lebanon	1	0	0	0	1	0
Liberia	1	1	0	0	1	0
Liechtenstein	1	1	1	0	1	0
Luxembourg	1	0	1	1	0	0
Macau	1	0	0	1	1	1
Macedonia	0	0	0	0	1	0
Malaysia	0	0	0	1	1	0
Maldives	1	0	0	0	1	0
Malta	1	1	1	0	0	0
Marshall Islands	1	1	0	0	1	1
Mauritius	0	1	0	0	1	0
Monaco	1	1	0	0	1	0
Mongolia	0	0	0	0	0	1
Montenegro	0	0	0	0	1	0
Montserrat	1	1	0	0	1	0
Namibia	0	0	0	0	0	1
Nauru	0	1	1	0	1	0
Netherlands Antilles	1	1	1	0	0	0
Niue	0	1	0	0	0	0
Palau	0	0	0	0	0	1
Panama	1	1	1	1	1	1
Paraguay	0	0	0	0	1	0
Philippines	0	0	0	0	1	0
Saint Kitts & Nevis Anguilla	1	1	1	0	1	0
Saint Lucia	1	1	1	0	1	1
Saint Martin	1	0	0	0	0	0
Saint Vincent & Grenadines	1	1	1	0	1	0
Samoa	0	1	1	0	1	1
San Marino	0	1	0	0	1	0
Saudi Arabia	0	0	0	0	1	0
Seychelles	0	1	0	0	1	0
Singapore	1	0	1	0	1	0
South Korea	0	0	0	0	0	1
Switzerland	1	0	1	1	1	0
Taiwan	0	0	0	0	1	0
Tanzania	0	0	0	0	1	0
Trinidad and Tobago	0	0	0	0	0	1
Tunisia	0	0	0	0	0	1
Turkey	0	0	0	0	1	0
Turks and Caicos Islands	1	1	1	0	1	0
United Arab Emirates	0	0	0	0	1	1
Uruguay	0	0	0	0	1	0
Vanuatu	1	1	1	0	1	0
Venezuela	0	0	0	0	1	0
Virgin Islands (British)	1	1	1	0	1	0
Virgin Islands (USA)	0	1	0	0	1	0

Notes: The table presents countries that have been included in previous tax haven lists in an ascending order of list publication year. The different tax haven lists are compiled by Hines & Rice (1994), OECD (2000), Senate of the United States (2009), Johannesen & Zucman (2014), Tax Justice Network (2015), and finally the EU (2017).

Country	Nr previous lists (5)	% previous lists	% previous lists & in EU list	% previous lists & not in EU list	Likely to be on EU list & was on list	Likely to be on EU list & was not on list	Not likely to be on EU list & was on list	Was on all lists & was on list	Was on all lists & was not on EU list	Was on no lists & was on list
American Samoa	0	0	0	0	0	0	1	0	0	1
Andorra	2	0.4	0	0.4	0	0	0	0	0	0
Anguilla	3	0.6	0	0.6	0	1	0	0	0	0
Antigua & Barbuda	3	0.6	0	0.6	0	1	0	0	0	0
Aruba	3	0.6	0	0.6	0	1	0	0	0	0
Austria	1	0.2	0	0.2	0	0	0	0	0	0
Bahamas	3	0.6	0	0.6	0	1	0	0	0	0
Bahrain	2	0.4	0.4	0	0	0	1	0	0	0
Barbados	2	0.4	0.4	0	0	0	1	0	0	0
Belgium	1	0.2	0	0.2	0	0	0	0	0	0
Belize	4	0.8	0	0.8	0	1	0	0	0	0
Bermuda	4	0.8	0	0.8	0	1	0	0	0	0
Bolivia	1	0.2	0	0.2	0	0	0	0	0	0
Botswana	1	0.2	0	0.2	0	0	0	0	0	0
Brunei Darussalam	1	0.2	0	0.2	0	0	0	0	0	0
Cayman Islands	5	1	0	1	0	1	0	0	1	0
Chile	1	0.2	0	0.2	0	0	0	0	0	0
Cook Islands	4	0.8	0	0.8	0	1	0	0	0	0
Costa Rica	1	0.2	0	0.2	0	0	0	0	0	0
Curaçao	1	0.2	0	0.2	0	0	0	0	0	0
Cyprus	4	0.8	0	0.8	0	1	0	0	0	0
Dominica	4	0.8	0	0.8	0	1	0	0	0	0
Dominican Rep.	1	0.2	0	0.2	0	0	0	0	0	0
Gambia	1	0.2	0	0.2	0	0	0	0	0	0
Ghana	1	0.2	0	0.2	0	0	0	0	0	0
Gibraltar	4	0.8	0	0.8	0	1	0	0	0	0
Great Britain	1	0.2	0	0.2	0	0	0	0	0	0
Grenada	4	0.8	0.8	0	1	0	0	0	0	0
Guam	0	0	0	0	0	0	1	0	0	1
Guatemala	1	0.2	0	0.2	0	0	0	0	0	0
Guernsey	4	0.8	0	0.8	0	1	0	0	0	0
Hong Kong	3	0.6	0	0.6	0	1	0	0	0	0
Ireland	1	0.2	0	0.2	0	0	0	0	0	0
Isle of Man	5	1	0	1	0	1	0	0	1	0
Jersey	4	0.8	0	0.8	0	1	0	0	0	0
Jordan	1	0.2	0	0.2	0	0	0	0	0	0
Latvia	1	0.2	0	0.2	0	0	0	0	0	0
Lebanon	2	0.4	0	0.4	0	0	0	0	0	0
Liberia	3	0.6	0	0.6	0	1	0	0	0	0
Liechtenstein	4	0.8	0	0.8	0	1	0	0	0	0
Luxembourg	3	0.6	0	0.6	0	1	0	0	0	0
Macau	3	0.6	0.6	0	1	0	0	0	0	0
Macedonia	1	0.2	0	0.2	0	0	0	0	0	0
Malaysia	2	0.4	0	0.4	0	0	0	0	0	0
Maldives	2	0.4	0	0.4	0	0	0	0	0	0
Malta	3	0.6	0	0.6	0	1	0	0	0	0
Marshall Islands	3	0.6	0.6	0	1	0	0	0	0	0
Mauritius	2	0.4	0	0.4	0	0	0	0	0	0
Monaco	3	0.6	0	0.6	0	1	0	0	0	0
Mongolia	0	0	0	0	0	0	1	0	0	1
Montenegro	1	0.2	0	0.2	0	0	0	0	0	0
Montserrat	3	0.6	0	0.6	0	1	0	0	0	0
Namibia	0	0	0	0	0	0	1	0	0	1
Nauru	3	0.6	0	0.6	0	1	0	0	0	0
Netherlands Antilles	3	0.6	0	0.6	0	1	0	0	0	0
Niue	1	0.2	0	0.2	0	0	0	0	0	0
Palau	0	0	0	0	0	0	1	0	0	1
Panama	5	1	1	0	1	0	0	1	0	0
Paraguay	1	0.2	0	0.2	0	0	0	0	0	0
Philippines	1	0.2	0	0.2	0	0	0	0	0	0
St Kitts & Nevis	4	0.8	0	0.8	0	1	0	0	0	0
St Lucia	4	0.8	0.8	0	1	0	0	0	0	0
St Martin	1	0.2	0	0.2	0	0	0	0	0	0
St Vincent & Grenad.	4	0.8	0	0.8	0	1	0	0	0	0
Samoa	3	0.6	0.6	0	1	0	0	0	0	0
San Marino	2	0.4	0	0.4	0	0	0	0	0	0
Saudi Arabia	1	0.2	0	0.2	0	0	0	0	0	0
Seychelles	2	0.4	0	0.4	0	0	0	0	0	0
Singapore	3	0.6	0	0.6	0	1	0	0	0	0
South Korea	0	0	0	0	0	0	1	0	0	1
Switzerland	4	0.8	0	0.8	0	1	0	0	0	0
Taiwan	1	0.2	0	0.2	0	0	0	0	0	0
Tanzania	1	0.2	0	0.2	0	0	0	0	0	0
Trinidad & Tobago	0	0	0	0	0	0	1	0	0	1
Tunisia	0	0	0	0	0	0	1	0	0	1
Turkey	1	0.2	0	0.2	0	0	0	0	0	0
Turks & Caicos Isl.	4	0.8	0	0.8	0	1	0	0	0	0
UAE	1	0.2	0.2	0	0	0	1	0	0	0
Uruguay	1	0.2	0	0.2	0	0	0	0	0	0
Vanuatu	4	0.8	0	0.8	0	1	0	0	0	0
Venezuela	1	0.2	0	0.2	0	0	0	0	0	0
Virgin Isl. (British)	4	0.8	0	0.8	0	1	0	0	0	0
Virgin Isl. (USA)	2	0.4	0	0.4	0	0	0	0	0	0

Notes: The table presents countries that have been included in previous tax haven lists and the probabilities of how likely they were to be included in the EU tax haven blacklist. A country is likely to be included in the EU tax haven blacklist if it has been included in at least 3 previous tax haven lists.