Sizing up the Iceberg
Estimating the scope of multinational corporations’ aggressive tax planning in Finland
Finnwatch is a non-governmental organisation focused on global corporate responsibility. The work of Finnwatch is supported by a number of Finnish development and environmental organisations and trade unions: Solidarity, Attac, Finnish Church Aid, KEPA, KEHYS, Eetti, Dalit Solidarity Network in Finland, Friends of the Earth Finland, Consumer Union of Finland.

Authors: Lauri Finér and Henri Telkki
Layout: Petri Clusius / Amfibi ky
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Introdction

Aggressive tax planning\(^1\) by multinational corporations (MNCs) is a concern that is unanimously recognised by the EU, OECD and the UN. Dozens of studies show that the economic consequences arising from it are significant. According to conservative estimates made by the OECD\(^2\) the global cost of aggressive tax planning by MNCs is between US$100 and US$240 billion (€75–€180 billion\(^3\)) in the lost corporate income tax (CIT) revenue\(^4\). The estimate corresponds to 4 percent–10 percent of global CIT revenues\(^5\). Another study assessed that more than US$600 billion (nearly 40\%) of multinational profits were shifted to tax havens in 2015\(^6\).

It is important to understand the magnitude of the issue since aggressive tax avoidance can be tackled through legislative changes. Impact studies concerning single countries have only been made in few instances. No such estimates exist for Finland, however the Ministry of Finance has estimated the impacts of certain measures intended to tackle base erosion and profit shifting mainly through excessive debt funding\(^7\).

In this report we will examine previous international and country specific studies that investigate the tax losses arising from aggressive tax planning. Based on these studies we also estimate the scope of the CIT losses in Finland.

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1 For a definition of aggressive tax planning, see Chapter 1.
2 The OECD (Organisation for Economic Cooperation and Development) was founded in 1961 and it has 35 member states. Most member states are developed countries.
3 The OECD estimate concerns the year 2014, which is why the estimate in US Dollars has been converted into Euros, based on the average exchange rate for that year.
4 Corporate income tax (CIT) is the tax that is payable on corporate profits.
7 Ministry of Finance, Report by the working group for the evaluation of the economic impacts of BEPS actions (BEPS-toimenpiteiden taloudellisten vaikutusten arviointiraportti), available at: https://vm.fi/julkaisu?pubid=20402
1. Definition of aggressive tax planning and its forms

Aggressive tax planning is defined as a number of purposeful activities that are primarily aimed at avoiding the payment of taxes. The OECD defines tax planning as aggressive when a multinational enterprise establishes intra-group arrangements whereby

1) its profits are shifted from jurisdictions where the activities creating the profits are taking place, and

2) the enterprise achieves no or low taxation.

The OECD’s concern for aggressive tax planning consists, therefore, of two components: profit shifting as a result of corporate tax arrangements, and the low taxation of these shifted profits. Harmful tax competition is often the reason for low taxation, and tax havens represent its extreme forms.

Profit shifting is made possible by two basic pillars of the international tax system: the arm’s length principle in transfer pricing and the separate entity taxation. Governments’ revenue authorities apply tax rules to separate entities that all belong to a multinational corporation, and the arm’s length transfer pricing should be used in the transactions between these separate entities. In practice, the terms of intra-firm trade and the legal structure of the corporate group are determined at the headquarters of the parent company. These decisions in turn determine the countries and jurisdictions where profits are declared.

The OECD classifies techniques aimed at profit shifting as follows: (1) transfer price optimisation, (2) allocation of intangibles, assets and risks, (3) location of intra-group financing operations. The optimisation and manipulation of transfer pricing are closely connected to the location of corporate activities that are linked to immaterial property and risks; they have a critical influence over transfer pricing, and consequently where the taxable profits arising from the actual business are accounted.

Low tax rates result from sovereign decisions by many countries and jurisdictions in deciding their own tax laws. Aggressive tax avoidance makes use of the gaps and mutual discrepancies in tax laws of different countries and jurisdictions, such as lower tax rates and asymmetry of the tax base. As a result, profits shifted to low tax jurisdictions are taxed less or not taxed at all.

Low effective taxation can be based on (1) hybrid instruments, (2) hybrid entities, (3) legislation and regulatory measures offering lower effective tax rates, and (4) individual tax incentives agreed between corporates and jurisdictions (e.g. tax holidays). The tax advantage of hybrids is based on the premise that the tax treatment of such hybrid instrument or entity differs from one jurisdiction to another. For instance, profits arising from an investment

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8 On the definition of aggressive tax avoidance, see Knutinen R., 2015, What is aggressive tax avoidance? [Mitä on ns. aggressiivinen verosuunnittelu?] Verotus 1/2015.


13 Typical examples include, for instance, concentration of immaterial property and/or risks in a holding company. The holding company also accumulates a large share of the profits arising from profitable business activities. See, for example, Finér L., Ylönen M., 2012, H&M claws taxes back home, [H&M veti verot kotiin], available at: http://www.talouselama.fi/uutiset/hennes-mauritz-etti-verot-kotin-3356185

14 The tax base of companies means both the income that is deemed taxable, as well as the tax rates at which profits are taxed. These are decided on a national or sub-national jurisdictional level.

Harmful tax competition and low effective taxation

The consequences of aggressive tax planning differ from one country to another. Some countries engage in aggressive tax avoidance by offering tax advantages to attract companies that shift their profits there from other countries. Such countries benefit from aggressive tax avoidance at the expense of other countries.

Transit countries of aggressive tax planning can be identified e.g. in IMF investment statistics (Figure 1). For instance, inward foreign direct investments (FDIs) into Luxembourg are over 20 times greater than inward FDIs to Finland, and almost three times greater than all inward FDIs to Germany. In reality, the vast majority of investments transit via Luxembourg only in accounting terms.

Transit countries are also prevalent when we examine subsidiaries of multinational corporations. According to a study published by Finnwatch in 2014, the 20 largest Finnish corporations had over 225 subsidiaries in the Netherlands, Belgium, Luxembourg and a few other countries that engage in harmful tax competition.

For instance, the Netherlands and Luxembourg offer favourable tax treatment for profits arising from immaterial assets, even when the research and development activity behind such assets was done elsewhere. For this reason we find a large share of immaterial rights being transferred to these countries where they are subject to lower effective taxes. Immateral rights give rise, for instance, to royalty payments, which subsidiaries in other countries deduct from their taxable profits.

Especially US technology companies have placed their immaterial rights in subsidiaries registered in Ireland. Tax advantage arises from the fact that Ireland does not tax companies if they are controlled from somewhere else. The control of Irish-based companies is therefore often placed in tax havens like Bermuda, which does not tax foreign earnings. A large part of profits have not been taxed at all, and profits arising from different EU-countries have been taxed at less than 5 percent tax rate. Apple’s arrangement in Ireland is the best-known case study of such an arrangement. The European Commission (EC) has considered that the Advanced Tax Ruling (ATR) granted to Apple by the Irish tax administration was a case of illegal state aid. The EC has demanded that Irish administration recover €13 billion in unpaid taxes from Apple for the years 2003 to 2014.

Among EU member states, especially Luxembourg, the Netherlands and Belgium commonly agree on Advanced Tax Rulings and Advanced Pricing Agreements (APAs) with multinational corporations that have the intent of accepting a lower effective rate of taxation. The EU Commission is also investigating them for suspects of being counterparts to agreements that offer illegal state aid. The popularity of these agreements in the three Benelux countries equals to the popularity of similar agreements in all the other EU member states (see Figure 2).

Advanced pricing agreements are confidential, but hundreds of such agreements were revealed to the public in the LuxLeaks-scare.


20 Unlike in Ireland, in the US the legislation a tax residency is not considered a jurisdiction where its effective place of management is located, but rather being the jurisdiction where it is registered. Therefore, tax avoidance is based on discrepancies concerning the taxable presence in different jurisdictions.

21 Financial Times, Q&A: What is the double Irish?, https://www.ft.com/content/7fa2b958-4fc8-11e4-908e-00144feab7de (retrieved 16.9.2016)


It showed that Luxembourg had made hundreds of agreements with a tax rate lower than one percent concerning profits by foreign corporations shifted to Luxembourg. Despite its low levels of corporate taxation, Luxembourg has collected considerable corporate tax revenues as profits, which are worth at least tens of billions of euros that have been shifted there.

In addition, Luxembourg has successfully created jobs in the financial sector and has attracted several tax advisory service providers to its territory. Luxembourg, a country with a population of a bit over half a million, collected €2.5 billion in corporate income taxes in 2016. This is over half of the €4.8 billion of corporate income taxes collected in Finland in the same year (while Finland has a population of over 5 million inhabitants). Similarly, other countries have even lost tens of billions in tax revenues due to questionable tax advantages provided for corporations by the Luxembourgish authorities.

Figure 1: Ten Largest Reporting Countries for Inward Direct Investments in 2014

<table>
<thead>
<tr>
<th>Country</th>
<th>Billions of US Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Netherlands</td>
<td>4,013.5</td>
</tr>
<tr>
<td>2. United States</td>
<td>2,901.1</td>
</tr>
<tr>
<td>3. Luxemburg</td>
<td>2,345.9</td>
</tr>
<tr>
<td>4. China (Mainland)</td>
<td>2,31.8</td>
</tr>
<tr>
<td>5. United Kingdom</td>
<td>1,744.7</td>
</tr>
<tr>
<td>6. Hong Kong</td>
<td>1,333.9</td>
</tr>
<tr>
<td>7. Germany</td>
<td>830.7</td>
</tr>
<tr>
<td>8. Singapore</td>
<td>806.8</td>
</tr>
<tr>
<td>9. Switzerland</td>
<td>796.6</td>
</tr>
<tr>
<td>10. France</td>
<td>729.1</td>
</tr>
</tbody>
</table>

Source: IMF

Figure 2 – Unilateral Advance Pricing Agreements in the EU in 2014

Source: EU Joint Transfer Pricing Forum

Inhabitants, collected €2.5 billion in corporate income taxes in 2016. This is over half of the €4.8 billion of corporate income taxes collected in Finland in the same year (while Finland has a population of over 5 million inhabitants). Similarly, other countries have even lost tens of billions in tax revenues due to questionable tax advantages provided for corporations by the Luxembourgish authorities.
Tax Gap

Aggressive tax planning contributes to the tax gap. The Finnish Tax Administration defines the tax gap as taxes, which according to the law should be paid, but which either intentionally or unintentionally are not paid\(^\text{31}\). Aggressive tax avoidance is included in the definition of the tax gap according to the Finnish Tax Administration to the extent that the Tax Administration has legal means to make adjustments\(^\text{32}\). However, aggressive tax avoidance is often not illegal, and thus the Tax Administration cannot intervene. These aspects of aggressive tax avoidance are not included in the tax gap.

Aggressive tax avoidance is only one aspect of the tax gap. According to the Parliamentary Audit Committee report\(^\text{33}\):

*The tax gap is caused by lack of registration, lack of notification, mistaken content in notifications, errors and other involuntary mistakes, matters of judgement, aggressive tax avoidance, delayed and undone payments as well as the shadow economy.*

According to the Tax Administration, the tax gap in the Value-Added Tax (VAT) alone was €1.4 billion\(^\text{34}\) in 2010. The estimate of the Parliamentary Audit Committee in 2014, based on previous research, considers that the tax gap in Finland could amount to €4-8bn, which is between 4 percent and 6 percent of the GDP\(^\text{35}\). This is the amount of additional revenue that the government would have received if taxpayers had paid their due taxes according to the law. These tax gap estimates do not include disaggregated estimates of the various components, including the proportion of aggressive tax avoidance. However, the Tax Administration estimated in 2011, at the request of the Parliamentary Audit Committee, that the transfer pricing related tax avoidance by multinational corporations causes approximately €320 million in lost tax revenue annually\(^\text{36}\). These are the most recent estimates available by the Finnish Tax Administration\(^\text{37}\).

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\(^{31}\) According to the Finnish Tax Administration “A tax gap is defined as the difference between legally due taxes and actual taxes paid during a calendar year” (“Verovaje on kalenterivuoden lainmukainen veroker- tyymän ja todellisen verokertyymän erotus”), Finnish Tax Administration, Defining the tax gap and how it develops [Verovajeen määrittely ja kertyminen], available at: https://www.vero.fi/fi-FI/Tietoa_Verohallinnosta/Tietoa_verotuksesta/Verovajeen_maaritely_ja_kertyminen(32314) (retrieved 15.1.2016)

\(^{32}\) Companies usually seek to plan their tax arrangements so that authorities cannot intervene in them according to the law. According to the Finnish law, the authorities can intervene in aggressive tax avoidance when the avoidance scheme is defined within the scope of the definition of tax avoidance in Clause 28 of the law concerning tax practices. A tax arrangement is not considered tax avoidance if it has business reasons independent of its tax arrangements. When the law applies, the taxes avoided within the scheme will be recovered. The law has been applied to aggressive tax avoidance in a case cited in the following decision. KHO:2016:72. The decisions is available at: http://www.kho.fi/fi/index/paatoksa/vuosikirjapaatokset/vuosikir_japaatos/1463565113541.html


\(^{36}\) The estimate is discussed in more detail on page 8.

\(^{37}\) E.g. the European Commission estimates VAT Gap in the EU member states each year. The latest report is available at https://ec.europa.eu/taxation_customs/news/vat-gap-report-2018_en
may in one jurisdiction be seen as a tax-deductible interest cost, while in another jurisdiction it may be treated as a tax exempted dividend income.

Regulators try to limit the scope for aggressive tax avoidance. The means include, for instance, Controlled Foreign Company (CFC)\textsuperscript{38} rules, and limitations on interest deductibility. In addition, General Anti-Avoidance Rules (GAAR) can be used in certain circumstances to tackle artificial arrangements that have been set up purely for tax avoidance purposes. In Finland, all of the methods are in use. Despite this, tax avoidance that utilises tax-planning methods is often relatively straightforward. The EU Council agreed in June 2016 on the so-called tax evasion directive, which harmonises measures against aggressive tax avoidance from the year 2019 onwards\textsuperscript{39}. The directive could be considered a weak compromise, since it contains several gaps that allow tax avoidance and harmful tax competition to take place\textsuperscript{40}.

\textsuperscript{38} The purpose of CFC rules is to prevent a multinational corporation from shifting its profits from a high tax jurisdiction to foreign controlled holding companies in low tax jurisdictions. When CFC rules apply, the foreign controlled holding company owners can be taxed in Finland for the profits declared in the holding company abroad. Concerning Finnish CFC rules, see Finnish Tax Administration, Taxation of Foreign Controlled Companies in Finland [Väliyhteisötulon verotus Suomessa], https://www.vero.fi/fi-Fi/Syventavat_veroojjeet/Verohallinnon_ohjeet/2014/Vailiyhteisotulon_verotus_Suomessa (retrieved 29.9.2016)


\textsuperscript{40} Finnwatch has brought to light the gaps included in the directive, for instance, during the parliamentary discussions concerning the directive. Finnwatch, 2016, Finnwatch’s expert statement to the Parliament [Finnwatch ry:n asiantuntijalausunto eduskunnalle] 3.5.2016, available at: http://finnwatch.org/images/LausuntoVeronKiertamisenTorjunta.pdf
2. Earlier studies concerning the effects of aggressive tax planning

2.1 RESEARCH METHODS AND DATA

The economic impact of aggressive tax planning has been studied using different research material and methods. Due to the differences in available research material and methods, the results indicate separate issues, leading to differences in their validity and reliability. These differences need to be taken into account when making use of the findings. The assessment of the content and reliability of the research findings is essential, as no single method gives an accurate and comprehensive picture of the scale of the impacts of aggressive tax planning. The European Commission has published a summary report on indicators that could be used to assess the impact of aggressive tax planning.

In the next section we discuss the strengths and weaknesses of different studies. An OECD classification of different methods groups these studies in the following subcategories according to the research data being used:

- econometric studies based on publicly available company databases;
- studies based on administrative databases not available to the public;
- statistical studies based on macroeconomic statistics;
- estimates based on publicly available corporate accounts;
- case-studies based on data leaks and annual accounts.

We have looked into the data and the methods that apply from the viewpoint of their suitability to assessing the economic impact of aggressive tax planning on a country level.

In addition to academic researchers, international organisations, national authorities, research organisation, companies and civil society organisations have studied the impacts of tax planning practices by corporations. The different studies often complement each other, and we have drawn upon various sources in this report.

2.2 STUDIES BASED ON PUBLICLY AVAILABLE COMPANY DATABASES

The most extensive branch of econometric studies concerning the impacts of aggressive tax planning grew in the beginning of the 1990s. The researchers based their studies on the conclusion that the profits declared before taxes by companies on their activities are composed of the sum total of real business profits as well as profits that are shifted in or out of the company by means of tax planning.


These concerns have been discussed in a number of studies. See: OECD, 2017, Aggressive tax planning indicators, available at https://ec.europa.eu/taxation_customs/sites/taxation/files/taxation_papers_71_atp_.pdf


The subject of the research has often been the semi-elasticity of reported income with respect to the tax rate differences across countries. The semi-elasticity seeks to describe how much a percentage point change in the tax rate difference between home country and the location country of an MNC affects the taxable profits in the location country. Databases based on publicly available annual

41 According to the Statistics Finland, “validity expresses how well the research method used in the research measures the precise phenomenon which it aims to measure”. Meanwhile, reliability “expresses how reliably and replicable the used method measures the desired phenomenon.” Statistics Finland, Concepts and Definitions (Käsitteet ja määrielmät), http://www.stat.fi/meta/kas/index.html (retrieved 14.6.2016)
accounts are being used in the most recent studies in this research strand. Based on these studies, estimations are made on how much tax rate in a country affects the amount of profits demonstrated there by multinational corporations. The most commonly used database is called Orbis by the Dutch company Bureau van Dijk, which includes company accounts and corporate information from publicly available sources for over 200 million companies all over the world.

The branch of studies has evolved since 1990s in several ways. The latest studies attempt to control for factors other than the level of taxation that have effect on taxable profits, since obviously tax rate is not the only or the most pivotal factor that determines corporate profitability. E.g. the stability of political system or the quality of infrastructure vary between countries and have an effect on profits. Functioning infrastructure attracts certain corporations and increases their profits substantially more than low tax rates. These outside factors could be taken into account if there is sufficiently reliable country-level information available on them. Some studies have attempted to control e.g. the effect of infrastructure, but it is obvious not all outside factors can be identified and quantified.

Information concerning taxable corporate revenue is not included in the most common corporate information databases, as this information is usually not publicly available. This is due to taxable profits not being publicly declared. Therefore, profit before tax on the financial accounts is used as an estimate for pretax profit as a variable describing its semi-elasticity with tax rate in the calculation. The tax rate variable is derived in most cases from the nominal corporate income tax rate, as comparable cross-country data concerning effective tax rates is not available in national statistics or other databases.

A few dozen empirical studies have estimated the semi-elasticities of the tax rate differentials on pretax profits of MNEs since the 2000s. An article by the Centre for European Economic Research in Germany considered 25 of these studies. The researchers concluded that the semi-elasticity of reported income with respect to the tax rate differential was 0.8. This entails, for instance, that a percentage point increase in the tax rate between a subsidiary and its parent would increase the pretax profits by the subsidiary by 0.8 percent. The average semi-elasticity in different studies ranged from 0.31 to 12.29. Thus all of the studies indicated that a higher rate of taxation would reduce taxable profits.

46 The Orbis database is the most comprehensive corporate information database, which is why it has been used in almost all studies. However, it has certain limitations. Data concerning many countries is completely absent. Company accounts are mainly available for European companies because in many other parts of the world company accounts do not constitute publicly available information. In addition, some studies have used data collected by US authorities, which have been handed over to researchers. Such data only covers companies operating in the USA. OECD, 2015, Measuring and Monitoring BEPS, p. 33; 141–142, available at: http://www.oecd.org/tax/measuring-and-monitoring-beps-action-11-2015-final-report-9789264241343-en.htm; Bureau van Dijk, Orbis, http://www.bvinfo.com/en-gb/our-products/company-information/international-products/orbis (retrieved 16.8.2016)


48 In this regard, Finland is an exception.

49 For instance, the internal dividend payments are included in the profits declared in company accounts, but they are usually tax-exempt. In addition, deductible depreciations and amortizations in accounting and tax rules vary in many countries. These factors have an impact on the research results. Finwatch, 2016, p. 14, A developing country in terms of mineral taxation: Investigation into extractive industry companies’ tax payments and tax planning in Finland [Kaivosverotuksen kehitysmaa: Selvitys metallimalmeja louhivien kaivosyhtiöiden veronmaksusta ja verosuunnittelusta Suomessa], available at: http://finwatch.org/images/kaivosverotuksen_kehitysmaa.pdf

50 Comparability would require that it would be possible to determine the actual tax base on a country by country basis, which in turn would be compared to taxes paid in this jurisdiction. In order to achieve this, it would be important to take into consideration other issues, such as the impact of accounting and tax rules on the tax base. Such calculations are not made, because the information is not directly accessible in national statistics. OECD, 2015, Measuring and Monitoring BEPS, p. 94–95, available at: http://www.oecd.org/tax/measuring-and-monitoring-beps-action-11-2015-final-report-9789264241343-en.htm


52 The highest value was an outlier, as the second highest value was 4.47.

The methods that estimate semi-elasticity do not always give a reliable picture of the scale of aggressive tax planning. The problem is compounded when trying to use the research findings to estimate tax losses in a single country. In the case of certain countries, the databases only cover a fraction of all companies, while also company accounts concerning typical jurisdictions used in tax planning strategies are missing. This is highlighted by the fact that only a marginal share of profits reported by the largest U.S. based MNCs is included in the ORBIS database. The very same MNCs are well known for their profit shifting. In addition, the research material has been collected during a long period (for instance, during the years 2000–2010 in the case of the OECD study).

Meanwhile, tax laws as well as tax planning practices have evolved during this ten-year period that the research covers. Due to these reasons – apart from a few exceptions – there have been very few country-by-country impact studies concerning BEPS issues. For instance, the OECD has not done comprehensive country-by-country estimates in its extensive research, but its US$100-240 billion estimate of losses incurred due to aggressive tax planning worldwide is based on a statistical analysis of research data from the ORBIS database.

The OECD thus recommends approaching the figures with caution, as is the case with any other impact estimates. Methods based on company accounts cannot, therefore, be used straightforward for estimating the effects of aggressive tax planning. Below we list the principal reasons for this:

- Databases do not have company accounts concerning all countries, and information concerning some countries is not comprehensive. The reason for this is that some aspects of company accounts and ownership information are not on the public record in all countries. Separate entity accounts used to assess the scale of tax planning are not comprehensively on the public record in Germany and the United States or other countries outside the European Union. Information concerning tax havens is entirely absent in these databases. Similarly, information regarding Luxembourg and Switzerland, jurisdictions commonly used in Europe for aggressive tax planning, is so incomplete that only a few dozen of company accounts from these jurisdictions have been included in different research projects. In the Lux-Leaks case alone, it was revealed that over 300 companies had used Luxembourgish subsidiaries as part of their tax planning


55 See: Huizinga H., Laeven L., 2008, International Profit Shifting Within European Multinationals, Journal of Public Economics 92, p. 1164-1182. This study is based on research data from 1999, after which the tax rates and tax incentives that the tax planning practices were based have completely changed. In addition, the research data in many countries is composed of only very few enterprises (p. 1170), and the conclusions of the estimates differ from the analysis done by, for instance, the OECD in terms of the scale and the number of countries examined (p. 1180). For instance, the impact of tax planning in Luxembourg has been estimated to be practically inexistent. It has been estimated that tax losses due to transfer pricing related tax planning practices represent approximately 10% of the corporate income tax revenues in France in the year 2008, according to Vicard V., 2015, Profit shifting through transfer pricing: Evidence from French firm level trade data, available at: http://dx.doi.org/10.2139/ssrn.2614864

56 The OECD Estimate is composed of several components and it includes certain assumptions that are not based on existing data due to incompleteness of research data. Along with the estimates on semi-elasticity, the OECD has among other issues estimated how much less taxes are paid by multinational enterprises in comparison with purely national enterprises. On this basis it has calculated the extent to which tax planning practices that are based on mismatches of tax bases reduce the global amount of corporate income tax collection. See OECD, 2015, Measuring and Monitoring BEPS, p. 101–103, available at: http://www.oecd.org/tax/measuring-and-monitoring-beps-action-11-2015-final-report-9789264241343-en.htm

57 For a more extensive discussion, see ibid, p. 19–23 and 141–145


practices\textsuperscript{61}. Therefore, a vast majority of tax planning arrangements is missing from the available research databases, which in turn distorts the impact estimates of aggressive tax planning.

– In the different studies taxable income is derived from the accounting profit before taxes. However, the taxable profit often significantly differs from the accounting profit before taxes, and studies cannot take into account these differences. The differences distort research findings. For instance, intra-group dividends that are included in the accounting profit figures are often tax exempt in the EU countries.

– Many forms of aggressive tax planning are hardly visible in public company accounts. For instance this is due to the fact that these statements do not differentiate different permanent establishments, which in tax terms are treated as separate entities. In addition, different legal entities and their tax residency (places where they are liable to pay taxes) can be determined in different ways in different countries. For instance, Ireland has not taxed Apple and many other technology companies’ extensive profits due to their control being elsewhere (see p. 6)\textsuperscript{62}. Therefore, the effects of such arrangements based on differential tax treatment of such companies are not visible in public company accounts.

– The nominal corporate tax rate often used as a point of comparison in research efforts does not describe the attractiveness of a country in terms of tax planning. In Europe, aggressive tax planning is almost exclusively based on such methods as tax incentives, Advanced Pricing Agreements (APAs) made with authorities, as well as hybrid instruments (see chapter 1). This has a distortive effect on research findings that compare the relationship between nominal tax rates and profitability rates.

– The datasets used in the studies are always based on out-dated data, as company accounts are published at the earliest a few months after the end of the accounting period. The analysis of company accounts and their inclusion in company databases takes even longer. Studies also typically use data covering several years. This is a problem as tax rates and tax laws change at a fast pace in many countries. Also companies that are planning their taxes react to these changes at a rapid pace, meaning that methods of tax planning are also ever changing. This should be taken into account especially when evaluating findings from older studies.

2.3 STUDIES BASED ON CONFIDENTIAL ADMINISTRATIVE DATA

Authorities obtain information from tax returns and tax inspections that can be used to estimate the scale of tax planning. Tax returns, among other things, have information concerning tax exempt income and non-tax-deductible expenses, which are not included in publicly available company accounts. In addition, they may have information concerning transfer pricing and intra-group financing and in some cases very detailed information from European companies\textsuperscript{63}. For instance, the nominal corporate income tax rate in Luxembourg between 2000 and 2010 has been between 28 percent and 29 percent, even though in reality foreign multinationals operating there have contributed less than 1 percent of their profits in taxes. Despite these discrepancies, many studies compare profits made to the nominal corporate income tax rates, even though profit shifting into Luxembourg is based on tax rulings and agreements. This has a decisive impact on research findings that compare the relationship between nominal tax rates and profitability rates.


\textsuperscript{62} The so-called Double Dutch Irish Sandwich – structure has been described in detail in the following article: Kleinbard, E., 2011, Stateless Income, p. 706–713, available at: http://ssrn.com/abstract=1791769

Table 1 – Key Locations of Profit Shifting, 2012

<table>
<thead>
<tr>
<th>Country / Jurisdiction</th>
<th>Gross income reported, $Billion</th>
<th>Estimate of gross income without shifting, $Billion</th>
<th>Percent of total excess income in location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Netherlands</td>
<td>172.3</td>
<td>33.0</td>
<td>23.0 %</td>
</tr>
<tr>
<td>Ireland</td>
<td>122.3</td>
<td>23.6</td>
<td>16.3 %</td>
</tr>
<tr>
<td>Luxemburg</td>
<td>96.1</td>
<td>15.0</td>
<td>13.4 %</td>
</tr>
<tr>
<td>Bermuda</td>
<td>79.7</td>
<td>9.9</td>
<td>11.5 %</td>
</tr>
<tr>
<td>Switzerland</td>
<td>57.9</td>
<td>14.6</td>
<td>7.2 %</td>
</tr>
<tr>
<td>Singapore</td>
<td>42.4</td>
<td>10.5</td>
<td>5.3 %</td>
</tr>
<tr>
<td>Cayman Islands (United Kingdom)</td>
<td>40.9</td>
<td>8.7</td>
<td>5.3 %</td>
</tr>
<tr>
<td>Other countries where the effective corporate tax rate is below 15 %</td>
<td>188.6</td>
<td>89.8</td>
<td>16.3 %</td>
</tr>
<tr>
<td>Countries where the effective tax rate is below 15 % (where information is available)</td>
<td>800</td>
<td>205</td>
<td>98.4 %</td>
</tr>
<tr>
<td>Countries where the effective tax rate is at least 15 % (where information is available)</td>
<td>267</td>
<td>257</td>
<td>1.6 %</td>
</tr>
</tbody>
</table>

Source: Clausing 2016

Concerning tax planning arrangements and their consequences. Authorities also have knowledge over entities registered in other countries, such as permanent establishments.

Tax information is principally considered confidential in all countries, and in most countries even researchers do not have access to this data. There are some exceptions, and in some countries also authorities themselves have analyzed the extent of aggressive tax planning based on confidential information. However, the quality and comprehensiveness of the data included in tax returns does vary between countries and often they do not contain information concerning subsidiaries. When this is the case, studying the impact of aggressive tax planning in a comprehensive way is not possible. Administrative databases provide, however, possibilities of estimating the impact of aggressive tax planning concerning the country where the data has been collected.

Authorities in the US and Germany have collected databases concerning multinational corporations based on confidential questionnaires. These databases have also been made available to some researchers studying aggressive tax planning. Some companies are also mandated to provide information to authorities for research purposes. The Bureau of Economic Analysis (BEA) manages this database in the USA, while in Germany it is managed by the German Central Bank (Bundesbank). As the databases only contain information of companies whose parent entity is located in the USA or Germany, they do not have information regarding foreign companies operating in the United States.

Especially in the United States, this data has been used to study aggressive tax planning and the data has been used to understand the impacts of tax planning on US tax revenues. In addition, the databases give a good picture of the countries where US companies report their profits. For example, the recent study by the Reed College Professor of Economics Kimberly Clausing shows that US-based companies report a substantial share of their profits in low-tax jurisdictions (see Table 1). Studies also show that profit shifting into low-tax jurisdictions has dramatically increased since the 2000s (see Table 2).

65 For instance the LuxLeaks agreements that were leaked to the public contained detailed information concerning tax planning structures.
67 Ibid, p. 88
Table 2 – The U.S. Foreign Company Profits Relative to GDP, Larger Countries (GDP at Least 15 billion) on Tax Haven Lists and Netherlands

<table>
<thead>
<tr>
<th>Country</th>
<th>Profits of U.S. Controlled Corporations as a Percentage of GDP, 2004</th>
<th>Profits of U.S. Controlled Corporations as a Percentage of GDP, 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyprus</td>
<td>9.8</td>
<td>13.6</td>
</tr>
<tr>
<td>Ireland</td>
<td>7.6</td>
<td>41.9</td>
</tr>
<tr>
<td>Luxemburg</td>
<td>18.2</td>
<td>127.0</td>
</tr>
<tr>
<td>Netherlands</td>
<td>4.6</td>
<td>17.1</td>
</tr>
<tr>
<td>Singapore</td>
<td>3.4</td>
<td>4.7</td>
</tr>
<tr>
<td>Switzerland</td>
<td>3.5</td>
<td>12.3</td>
</tr>
</tbody>
</table>

Source: Gravelle 2015

Studies conducted in the US are not directly comparable with other countries as the US tax system has several differentiating features. The US federal corporate income tax rate at the time of the studies 35 percent was by far the highest in any other OECD country, which has increased the motivation of US-based companies to declare their profits elsewhere. Also until 2018, the US applied a system of worldwide corporate taxation, which has not been used in any other Western economy. This means that profits of US-based companies are taxed in the US even if the profits have been incurred anywhere else in the world. Meanwhile, e.g. Finland utilises a system of territorial taxation where corporate income tax is only paid on profits generated within its own territory.

The differences between a worldwide and a territorial system in practical terms are not that big. The profits of foreign subsidiaries of US companies were taxed on a deferred basis only when these profits are repatriated as dividends. In this case, taxes paid elsewhere were credited from the taxes payable in the US. This led to a situation where US companies delayed repatriation of their foreign earned profits. According to one estimate the 500 largest listed companies in the US had US$2.6 trillion in offshore profits at the end of 2016. The reason for non-repatriation of the foreign profits was the anticipation of tax holiday on repatriated profits Donald Trump had promised if he would be elected the president. The tax repatriation holiday was implemented in 2018 at maximum tax rate of 15.5 percent for foreign profits, which led to repatriation of hundreds of billions in foreign profits.

The duty of tax administrations is to ensure that tax laws are followed. Therefore, the studies they conduct on the basis of confidential tax returns usually concern the national tax gap, which is the difference between the taxes that are legally due and the actual amount of taxes collected (see p. 8). The databases used by tax administrations as well as their methods are more or less confidential. Therefore, replicating these studies directly in other countries is not possible, even though there is some information available to the public on the methods used to calculate the tax gap both in the UK and US.

Both in the UK and in Sweden tax administrations have additionally estimated tax losses due to aggressive tax planning in their respective tax gap analyses. Corporate income tax losses in the UK were estimated at £1 billion (€1.3 billion) for the financial year 2013–2014. However, the definition of aggressive tax planning used by the HMRC in this case is questionable. The part of the tax gap resulting from aggressive tax planning has

70 The specific features of the US tax system have been described in the following article: E.D. Kleinbard, 2011, Stateless Income, p. 715–727, available at: http://ssrn.com/abstract=1791769
71 The federal CIT rate in the US was decreased to 21 percent in 2019. On average the total CIT rate in the US is 26 percent as most states also apply their own tax on corporate profits.
72 Institution on Taxation and Economic Policy, Fortune 500 Companies Hold a Record US$2.4 Trillion Offshore, available at: https://itep.org/fortune-500-companies-hold-a-record-26-trillion-offshore/
been calculated by adding up all the additional tax adjustments as instructed by the HMRC in disputed cases, but where a court had found the interpretation of the HMRC incorrect and thus it had removed the adjusted amount of tax77. Although this method does not provide a picture of the full extent of aggressive tax planning, it does give some indication of the aggressive tax planning that is in a disputable grey territory.

The Swedish Tax Agency Skatteverket estimated that in 2008 tax losses due to tax planning by large multinational corporations resulted in a loss of 11 billion krona in Sweden78. Two methods “whose findings support each other” have been used to make the estimate, including: risk analysis79 and observation of on-going tax inspections. It is unclear what the Skatteverket means by tax planning by large multinationals and how it has calculated the impact of tax planning, as the exact definition or evaluation method of aggressive tax planning has not been published. The estimated figure of aggressive tax planning, for instance, includes the impact of transfer pricing and intra-firm financing. We asked Skatteverket for a more detailed explanation of the methods used and for the definitions, but we were not able to obtain any clarification80. In subsequent tax gap analyses Skatteverket has abandoned the analysis of impacts of aggressive tax planning81. According to the Skatteverket the arrangements used in tax planning change as the legislation and its interpretation evolve, which is why also the impact of tax planning may change substantially from year to year82.

The research data used by Skatteverket and its approach can be considered a good basis for studying the impact of aggressive tax planning83. The reliability of the research findings is impossible to estimate without a better knowledge of the methods and definitions used. In addition, the timing and the country where the study was conducted have an impact on the usability of the method, as both the legislation and methods of tax planning have since changed both in Sweden and elsewhere. Sweden’s tax legislation and economic climate are also substantially different compared to other countries. The Nordic legal state84 sets a relatively clear scope for aggressive tax planning.

The European Commission (EC) has often used the figure of €1 trillion85 of annual lost tax revenue due to the shadow economy86 in EU member states. Richard Murphy, an expert in accounting and taxation, calculated this figure in 2012. Of this estimate €150 billion is composed of aggressive tax planning by multinational corporations87. This figure is based on

79 By risk analysis the authorities mean their own analytical frameworks, which by combining data from different datasets attempt to identify companies whose tax affairs require further attention. Information provided in tax returns are in a central role in making tax risk analysis as they include the most important information in terms of tax inspection. For instance, they seek to target tax inspections to companies that according to the analysis have a higher “risk” of having engaged in illegal tax avoidance.
80 Skatteverket, Åsa Hagman, email 10.3.2016
84 The legal state in Nordic countries originates from the German concept of Rechtsstaat, which is a doctrine in continental European legal thinking, originating in German jurisprudence, that can be translated as “legal state”, “state of law”, “state of justice”, “state of rights”, or “state based on justice and integrity”. It is often tied to the Anglo-American concept of the rule of law, but differs from it in that it also emphasizes what is just (i.e., a concept of moral rightness based on ethics, rationality, law, natural law, religion, or equity).
85 EUobserver, Commission - EU must combat €1tn tax dodging, https://euobserver.com/economic/118450 (last accessed 7.7.2016)
the Skattesverket’s estimates of tax losses due to international tax planning by multinational companies in Sweden. It estimated that 11 billion krona, or 8.2 percent of Sweden’s 133 billion krona tax gap in 2008, was due to international tax planning by multinational companies. In addition to Skattesverket’s estimates, Murphy used tax gap estimates by the United Kingdom. Murphy adopted a mid-range estimate, according to which aggressive tax planning represents 18 percent of the tax gap of EU countries. Murphy used calculations by Friedrich Schneider regarding the size of the shadow economy as a basis for estimating the other components of the tax gap.

The data and methods used by Murphy to make his estimate contain so many gaps and uncertainties that we can treat the final result mainly as an enlightened guess. In addition, it is questionable whether the tax gap created by the shadow economy and the impacts of aggressive tax planning are in any way related to each other as Murphy assumes. The shadow economy always causes tax losses, but its size depends on factors such as the level of tax control and the tax paying culture. Also not all EU countries are impacted in similar ways; e.g. some EU member states benefit from tax planning because it is based on shifting profits from one country to another. The extent of aggressive tax planning depends on issues such as: the level of taxation, national legislation aiming at tackling tax avoidance and evasion, and the extent of tax inspections. Murphy gives no explanation for why the extent found in Sweden and the United Kingdom would be representative of the extent in the whole European Union.

The tax gap analysis prepared and commissioned by the Finnish authorities has not estimated the impact of aggressive tax planning. The Finnish Tax Administration estimated, at the request of the Parliamentary Audit Committee in 2011, that transfer pricing related tax planning in Finland results in an annual tax loss of €320 million. The estimate was based on potential situations where the Finnish Tax Administration should make tax adjustments based on the existing legal framework, as identified in a risk analysis conducted by the Administration. The Tax Administration has not defined in more detail which arrangements cause these impacts and how they have been tackled. The figure does not describe

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88 11bn Swedish krona divided by 133 billion Swedish krona
89 Murphy uses a range of 10%–35%. Earlier it was already stated that the estimates of the impact of tax planning by the HMRC in the UK do not define the scope of aggressive tax planning according to commonly used definitions. Also Murphy’s own estimates have been criticised, because the calculations which they are based on do not exactly represent impact of tax planning, but rather the difference between the group accounting and calculation of taxable income. See Devereux M., Friedman J., Vella J., 2012, The Tax Gap For Corporation Tax, p. 10–13, available at: https://www.sbs.ox.ac.uk/sites/default/files/Business_Taxation/Docs/Publications/Reports/TaxGap_3_12_12.pdf; Murphy R., 2008, The Missing Billions The UK Tax Gap, available at: https://www.tuc.org.uk/sites/default/files/documents/1missingbillions.pdf
91 The most extensive report concerning the shadow economy in Finland is from the year 2010: Hirvonen M., Lith P., Walden R., 2010, The shadow economy in Finland is increasingly international [Suomen kansainviljelyä hammaa talous], available at: https://www.eduskunta.fi/ Fi/tietoaeduskunnasta/julkaisut/Documents/tnv_1+2010.pdf
93 Transfer pricing risk analysis cannot directly identify situations where transfer pricing should be adjusted, as identifying these cases would require a more detailed investigation, for instance, in the context of a tax inspection. Instead, a risk analysis can identify cases in which a risk is present, and which are thus worth investigating further so as to identify whether there are reasons to adjust transfer prices. It is not possible to inspect all cases where risk is identified, as tax inspections take a considerable amount of time. For further reading, see methods of international tax inspections, Finer L., 2012, Finnish practices of transfer pricing [Siirtohinnoittelut ollessa käytännössä], p. 69–73, available at: http://epub.lib.aalto.fi/fi/ethesis/id/13158; Waal J., 2012, Finnish Tax Administration Transfer Pricing Project – A new step towards more effective client advice and tax inspection in cases of transfer pricing [Verohallinnon siirtohinnoittelulanne – uusi askel kohti tehokkaampaa asiakasohjausta ja verovalvontaa siirtohinnoittelusioissa], Verotus, 1/2012.
aggressive tax planning in its entire scope, as the law does not allow tackling all aspects of it. Even though conducting risk analysis is said to be “an increasingly central part of the work of the Tax Administration”, the Administration has not made more recent studies of this issue94. These types of estimates would be useful both for estimating the need for future legislative changes as well as determining the focus areas of tax inspections.

Based on the OECD BEPS-project, the Ministry of Finance launched a project in January 2016 that aimed at developing methods for assessing the extent of aggressive tax planning95. However, the final report was merely able to present qualitative assessments of the phenomena. Nonetheless, the Ministry of Finance has already previously estimated the impact of the proposed limitations of interest deductibility included in EU Commission’s proposed Anti Tax Avoidance Directive (ATAD)96. Similar calculations were made in 2012 when the initial interest deduction limitation rule was adopted in Finland as well as when the rule was again amended in 201897. These impact assessments provide for their part a description of aggressive tax planning, as the purpose of these new rules is to tackle the issue. In Finland, the estimated tax revenue impact of applying the interest deductibility limitation rule was €117 million on an annual basis (as calculated for the first year of application 2014), according to the calculation made by the Ministry of Finance. The rule was estimated to apply on 200 companies. The rule did not, however, intervene in the entire range of tax planning strategies using intra-firm financing arrangements. During the planning phase of the rule, it was estimated that the annual impact of the interest deductibility rule would (depending on its application) vary between €80–246 million. This would be about 2–5 percent of the roughly €5 billion of the annual corporate income tax revenues for the years covered by the estimate98. None of the proposed forms of the interest deductibility limitations would have entirely removed the benefits for the taxpayer from arranging intra-firm finance, as a part of interests paid would have remained deductible.

The estimates by the Ministry of Finance are based on the tax return database created on the basis of information from the Finnish Tax Administration99. This increases the reliability of the estimate, as tax returns include a wide range of information including intra-firm loans and the effect of interest payments arising from them for taxable incomes.

The impact of intra-firm financing can be identified from company accounts and tax returns, as intra-firm loans and interest payments usually need to be separated, and unusually large payments can be noticed from tax returns100. Due to the possibility of using such a method, similar impact assessment studies have also been conducted in Norway, Sweden and Denmark. In 2014 the impact of the rule regarding limitations in interest deductibility in Norway was estimated at 3.4 percent of the entire corporate income tax revenue. In Sweden a similar rule was implemented in 2013, and its impact was 8.5 percent of the corporate income tax revenues. In Denmark, the rule on interest deductibility limitation was established already in 2007, and its impact was estimated to be 5.2 percent in relation to corporate income tax revenues. The revenue impact of different rules limiting other types of tax planning has also been estimated at least

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94 Finnish Tax Administration, Jouni Marjo, email 2.2.2016
95 Ministry of Finance, Report by the working group for the evaluation of the economic impacts of BEPS actions [BEPS-toimenpiteiden taloudellisten vaikutusten arviointiraportti], https://vm.fi/julkaisu?pubid=20402 (retrieved 17.6.2019)
96 Ministry of Finance, 2016, U-letter to the Parliament concerning the EU Council directive on strengthening the rules concerning tax evasion practices that have a direct impact on the functioning of the internal market [U-jatkokirje eduskunnalle ehdotuksesta neuvoston direktiiviksi sisämarkkinoiden toimintaan suoraan vaikuttavien veron kiertämisensä käytäntöjen torjuntaa koskevien sääntöjen vahvistamisesta], available at: https://www.eduskunta.fi/Fi/vaski/Liiteasiakirja/Documents/EDK-2016-AK-56756.pdf
99 Ministry of Finance, Ilari Valjus, email 5.2.2016
100 In the Orbis-database this information is not separately available, which is why it is not possible to utilise them to make similar studies.
in the United Kingdom, France, Germany and the United States\textsuperscript{101}.

2.4 STUDIES BASED ON MACROECONOMIC STATISTICS

Studies based on company level accounts and administrative data described in the previous section provide in principle a better picture of tax planning than studies based on macroeconomic statistics, as the former can better take into account the consequences of the structures used in tax planning\textsuperscript{102}. The impact of aggressive tax planning can, however, be also researched based on macroeconomic accounting data, balance of payments statistics, foreign direct investment statistics, overall corporate tax receipts data and trade statistics\textsuperscript{103}. A recent working paper has also exploited foreign affiliates statistics to study profit shifting\textsuperscript{104}.

It is not possible to separate the impact of aggressive tax planning from national accounts, as aggressive tax planning has an impact, for instance, on the statistical recording of the gross domestic product (GDP). The calculation of the GDP is based on company accounts, and thus if profits are reduced due to profit shifting, this in turn also has a direct impact in reducing the GDP while increased profits also increase the GDP. Methods of recording national accounts also differ from country to country, which in turn reduces comparability.

Balance of payments\textsuperscript{105} statistics do not directly separate the activities inside companies and other investments, which make them less useful as research data\textsuperscript{106}. Statistics regarding foreign direct investment\textsuperscript{107} include information on these issues, which is why UNCTAD among others has made use of them in estimating the impact of aggressive tax planning on tax revenues in developing countries’ and globally. These statistics, however, are not comprehensive because, for instance, information concerning tax havens and developing countries is incomplete. It is also difficult to distinguish between real investments and the investment flows that are channelled via tax havens\textsuperscript{108}.

Tax data can also be used in estimating the impact of aggressive tax planning by comparing tax revenue to estimates of tax revenue without the impact of aggressive tax planning. However, difficulties with these estimates arise from a number of factors, such as the lack of comparability due to the problem of distinguishing between the impact of aggressive tax planning and other phenomena that have an impact on tax revenue; the lack of comprehensive data, and the problem that tax planning also has an impact on the Gross Domestic Product used as an independent variable in the comparison. The European Parliament Research Service and the International Monetary Fund (IMF) have used this kind of a method\textsuperscript{109}.

In 2015, the European Parliament Research Service estimated that the impact of aggressive tax planning in EU member states based


\textsuperscript{102} Ibid, p. 26–29

\textsuperscript{103} Ibid, p. 24


\textsuperscript{105} Balance of payments statistics describe the external balance of the national economy, both from the perspective of the real economy and the financial economy. The balance of payments includes economic transactions, which take place among entities belonging to the national economy (domestic residents) and entities belonging to the economies elsewhere (foreign residents). Statistics Finland, Balance of payments and international investment position [Maksutase ja ulkomainen varallisuusasema], available at http://www.stat.fi/meta/tii/mata.html (retrieved 26.8.2016)


\textsuperscript{107} Direct investments are part of the balance of payments, and the definition of a direct investment is that the investor has at least a 10% ownership share of the destination of the investment.


on data concerning corporate income tax revenue, corporate income tax rates and business profits. However, the reliability of the method is questionable. The method is based on estimates concerning the difference between theoretical corporate income tax revenue defined by the researchers and the actually occurring tax revenues in EU member states that are summed up on a country-by-country basis. Additionally, there are estimates concerning the share of the difference that is attributable to aggressive tax planning and the share that is attributable to other phenomena. The theoretical estimate of corporate income tax revenue attempts to describe a situation where aggressive tax planning was not practiced at all\textsuperscript{110}.

The authors also calculated the theoretical corporate income tax revenue by multiplying the national tax rate with their calculation of the theoretical tax base. The theoretical tax base is derived from the national accounting gross surplus, which is based on the combined profits of companies\textsuperscript{111}. This is problematic, for example, because aggressive tax planning has a direct impact both on the theoretical and actual tax base, which researchers are comparing. The sources used, therefore, do not contain information about actual aggressive tax planning. Thus they do not necessarily provide relevant information about tax revenue falling under the general tax rates in the EU is usually due to explicit tax incentives used in harmful tax competition by the governments. The research results show, for instance, that countries like the Netherlands, Ireland and Luxembourg that are actively engaged in tax competition would be losing tax revenue due to aggressive tax planning\textsuperscript{112}. This is in contradiction with other sources, for instance, with the LuxLeaks data discussed earlier (refer to p. 6), which demonstrate that Luxembourg has in reality received significant additional tax revenue as a result of aggressive tax planning.

The International Monetary Fund IMF estimated in 2014 the global impact of aggressive tax planning with similar methods, focusing in particular on the impact on developing countries\textsuperscript{113}. The estimates by the IMF were also based on the difference between theoretical tax revenues and actual tax revenues on the basis of national accounting data. The shortcomings of the method are similar to the estimates by the European Parliament Research Service and, for instance, the OECD has criticised the reliability of the results\textsuperscript{114}. According to the study, the United States benefits from aggressive tax planning, which is in stark contrast with all the studies conducted using company level data (see p. 14).

Based on similar methods, in 2013 Professor Stefan Bach from the German Institute for Economic Research estimated the impact of aggressive tax planning in Germany concerning the year 2008 by comparing recorded statistical profits with their taxable profits. According to the estimates by Bach, Germany’s corporate income tax losses would have been €90 billion per year, which is almost twice the amount of the actual corporate income taxes collected (€58 billion in 2008)\textsuperscript{115}. The method has the same shortcomings as the studies made by the European Parliament Research Service and the IMF. Researchers criticising the figure consider that Germany’s annual corporate income tax losses could at most be €10 billion\textsuperscript{116}.

The United Nations Conference on Trade and Development (UNCTAD) in 2015 estimated the global impact of aggressive tax planning, including developing countries, based


\textsuperscript{111} This has been derived from the country’s combined gross operating surplus. The gross operating surplus differs from the actual tax base, as it has not taken into account the depreciation of working capital, interest payments, and other such payments which are often tax deductible.

\textsuperscript{112} Ibid, p. 15


\textsuperscript{115} Bach S., 2013, Has German Business Income Taxation Raised Too Little Revenue Over the Last Decades?, available at: http://www.diw.de/sixcms/detail.php?id=diw_01.c.421801.de

on foreign direct investment statistics

The report found that the profits arising from foreign direct investments for developing countries were between 1 percent and 1.5 percent lower when these investments had been made through a low-tax jurisdiction. This was assumed to be due to a part of the profits having been shifted to jurisdictions where companies benefit from lower taxes. Based on this difference, the UNCTAD estimated the scale of profit shifting based on an average tax rate, and concluded that the annual global tax revenue impact was in the order of $200 billion (approximately €155 billion). However, the use of foreign direct investment data in research settings is problematic because differences in profitability can be caused by other factors, and these statistics do not include information about all types of tax planning, including methods using financial arrangements.

Another IMF study in 2015 developed a new method to assess global revenue losses caused by aggressive tax planning. Their estimate using CIT bases of 2013 is that global revenue losses were $650 billion (€500 billion). Two thirds of the losses were caused in OECD countries and the rest in non-OECD countries. The study estimates spill overs due to tax rate differences in different countries. Aggressive tax planning is estimated specifically based on differences between tax rates in other countries and average tax rates in tax havens. Also, geographical distance between countries is taken into account in the equation. The approach has many deficiencies. It is obvious this kind of approach shows great tax income losses for countries with high nominal corporate income tax rate. However, the difference between nominal tax rates is not necessarily the defining factor in aggressive tax planning as described previously. The tax incentives and other loopholes that erode tax base as well as anti-tax avoidance legislation play a major role in level of profit shifting, but have been ignored in the approach. The use of average tax rate in tax havens in the calculation is difficult to justify, since aggressive tax planners can exploit jurisdictions with tax incentives offering lower rates. Some corporate tax havens have high nominal tax rates. Also the differences between markets and corporations business in different countries has not been taken into account. There are also many shortages in the data that covers tax bases of 120 countries. The researchers themselves describe their approach "very speculative indeed" and their results "no more than indicative".

In 2018, Alex Cobham and Petr Janský used the same method as IMF researchers but a different data set to arrive at estimated global revenue loss of $500 billion (€390 billion) due to aggressive tax planning. They also presented their results on country-by-country level, which highlight the problems of the approach. E.g. many well-known corporate tax havens such as Luxembourg and Malta are estimated to lose tax income due to profit shifting. The revenue loss of Finland is estimated to between $280–410 million (€220–320 million) in 2013.

In a recent working paper Thomas Tørsløv, Ludvig Wier and Gabriel Zucman have exploited more nuanced foreign affiliates statistics to study profit shifting. This data includes information on aggregated corporate profits in different countries but also information on the ownership and employees of these firms. The statistics show that subsidiaries of multinational companies are more profitable than local firms in tax havens and less profitable in non-haven countries. This is indicated by the differences in profit-to-wage ratios that present pre-tax profits for any dollar of wage paid. On average the profit-to-wage ratio in non-haven countries is higher than in tax havens.

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118 The tax losses in the research by UNCTAD were estimated for the year 2012, which is why we convert dollars into euros based on the average exchange rate for 2012.
countries in 2015 was 35 percent. In contrast, the ratio for foreign subsidiaries in a corporate tax haven Ireland was above 800 percent, indicating that an employee in Ireland was on average over 20 times more profitable compared to an ordinary employee in a non-haven. The researchers estimate the total global profit-shifting based on differences of profit-to-wage ratios of local companies and subsidiaries of foreign corporations in tax havens. They assume the difference in the ratios represents profit-shifting. The total global profit shifting is estimated at $600 billion, which is 40 percent of the profits of multinational corporations. Based on the estimate the global revenue losses are approximately $180 billion (€140 billion) or 10 percent of the total corporate income tax revenue. The researchers also estimate how much other countries lose revenue due to profit shifting based on high risk payments\textsuperscript{123} to tax havens. They find “that about 35 percent of the shifted profits come from EU (non-haven) countries, close to 30 percent from developing countries, and about 25 percent from the United States”. In the non-haven EU countries aggressive tax planning is estimated to reduce corporate tax revenue by around 20 percent. The estimate for Finland in 2015 is 11 percent or $540 million (€420 million). The country-by-country results of the study are mainly in line with observed tax avoidance structures. However, the researchers point out several statistical gaps in their data and make a variety of assumptions to arrive at their estimate. E.g. they do not take into account possible anti-tax avoidance legislation or profits-shifting of tax haven headquartered corporations. Due to these reasons, the researchers consider their estimate conservative.

2.5 ESTIMATES BASED ON PUBLIC CORPORATE ACCOUNTS

Richard Murphy, an expert in accounting and taxation, (see also pages 16 and 17) made an estimate in 2008 indicating that the aggressive tax planning of 700 biggest UK-based companies led to a tax loss of £12 billion (€17.5 billion) in 2006-2007\textsuperscript{124} in the UK. Murphy estimated the losses by comparing the actual amount of taxes paid to the amount of taxes that they should have paid if their accounting profit before taxes would have been taxed according to the general corporate income tax rate in the UK.

Murphy’s study has been heavily criticised, and others have not used a similar method\textsuperscript{125}. The data that Murphy used consisted of publicly available consolidated group accounts where all the entities that were part of the same corporate group had been consolidated by eliminating the effects of their transactions with one another. In this data, the profits and taxes also include the profits that the corporation had made abroad and the taxes paid on them. Large corporations have operations outside of their country of residence, and therefore the figures cannot relate to tax losses just in the UK. As the tax rates may also differ in other countries, this would explain part of the tax losses that Murphy calculated. In addition, the difference between accounting profit and taxable profit may be due to numerous other reasons than just tax planning. For instance, the profits arising from mergers and acquisitions are often tax exempt, and changes in capital reserves are dealt differently in accounting and tax terms. The impact of these factors can be substantial in many sectors. Therefore, it is questionable whether the figure that Murphy calculated describes the actual impact of aggressive tax planning.

2.6 CASE-STUDIES BASED ON DATA LEAKS AND COMPANY ACCOUNTS

The impact of aggressive tax planning can also be studied by analysing company case-studies. The data may include leaked information\textsuperscript{126},


\textsuperscript{123} Payments related to intra-group finance and services.
publicly available court cases\textsuperscript{128}, public company accounts\textsuperscript{129}, or internal company information made available for research purposes\textsuperscript{130}. Case studies have been discussed in the media as well as in academic studies. These case studies typically require a detailed research of the particular company and their tax arrangements. The benefit of this approach is that it provides a comprehensive and reliable view both for the company in question and for the government concerning the structures and effects of tax planning. However, even such case studies do not necessarily make it possible to assess all of the aspects of tax planning in the case of a single firm.\textsuperscript{131}

In its previous reports Finnwatch has addressed tax planning practices of the health service provider Attendo as well as metal mining companies operating in Finland\textsuperscript{132}. In the last few years, the media has also revealed tax planning practices of around 20 corporation – both Finnish and subsidiaries of multinational corporations operating in Finland. These corporations and the impact of their tax planning are listed in Section 3.1.

The problem with case studies is that their results cannot be directly generalised to the level of the whole economy. The method is still useful in assessing economic studies of wider datasets and their reliability. Comparisons between case studies and statistical studies have revealed that the statistical studies rarely contain information concerning the central tax planning strategies, and that the results of certain statistical studies have been unreliable\textsuperscript{133}. The studies based on large datasets presented in the previous section can even provide a completely erroneous picture of the consequences of aggressive tax planning. Case study evidence thus helps to correct the shortcomings of statistical studies of tax planning.

Based on case study evidence it is also possible to develop wider databases, for instance, for conducting sector specific studies. Tax planning practices by metal mining companies operating in Finland were analysed in a report published

\begin{itemize}
\end{itemize}
by Finnwatch in March 2016.135 Such a wide sample can also be used for assessing tax planning practices among all companies (see p. 33). In this case, however, certain shortcomings should be taken into account, as a single sector may not necessarily be representative of the entire corporate sector.

### 2.7 SUMMARY OF ESTIMATES BASED ON DIFFERENT METHODS

In the past few years a number of studies have been conducted concerning the impact of aggressive tax planning on corporate income tax revenues on the global, regional and national levels using the methods that were discussed above.

The OECD, IMF and UNCTAD have estimated the impact of aggressive tax planning on developing and developed countries (table 3).

The estimate by the OECD has been carried out using company level data, where in principle it is possible to analyse the impact of aggressive tax planning more reliably than in macroeconomic statistics (see pages 10–13)136. In turn, the IMF’s estimate is based on data where the differences between theoretical tax revenues and actual tax revenues are estimated on the basis of national accounts137. UNCTAD’s estimate is based on foreign direct investment statistics, which have been used to analyse the profitability of investments depending on the level of taxation in the country of the origin of investments (see page 20).138 Global estimates based on different macroeconomic statistics have also been done by Crivelli, de Mooij and Keen, Cobham and Janský as well as Tørsløv, Wier and Zucman (see page 25).

134 This estimate only includes tax losses due to cross-border investments and does not include, for instance, tax losses due to transfer pricing abuses.

135 Finnwatch, 2016, A developing country in terms of mineral taxation: Investigation into extractive industry companies’ tax payments and tax planning in Finland [Kaivosverotuksen kehitysmaa: Selvitys metalimalmeja louhivien kaivosyhtiöiden veronnakkumasta ja vero-suunnittelusta Suomessa], available at: http://finnwatch.org/images/kaivosverotuksen_kehitysmaa.pdf


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**Table 3 – Regional estimates of the impact of aggressive tax planning**

<table>
<thead>
<tr>
<th>Institution</th>
<th>Scope</th>
<th>Year of estimate</th>
<th>Impact (bn)</th>
<th>Impact % of corporate income tax revenue</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>OECD</td>
<td>Global</td>
<td>2015</td>
<td>$100–$240 (75€–180€)</td>
<td>4%–10%</td>
<td>Company databases</td>
</tr>
<tr>
<td>IMF</td>
<td>Global</td>
<td>2014</td>
<td>–</td>
<td>5%</td>
<td>National economic statistics</td>
</tr>
<tr>
<td>UNCTAD</td>
<td>Global</td>
<td>2015</td>
<td>$200 (155€)</td>
<td>8%</td>
<td>Macroeconomic statistics concerning direct investments</td>
</tr>
<tr>
<td>Crivelli, de Mooij and Keen</td>
<td>Global</td>
<td>2015</td>
<td>$650 (€500)</td>
<td>–</td>
<td>Macroeconomic corporate and tax statistics</td>
</tr>
<tr>
<td>Cobham and Janský</td>
<td>Global</td>
<td>2018</td>
<td>$500 (€390)</td>
<td>–</td>
<td>Macroeconomic corporate and tax statistics</td>
</tr>
<tr>
<td>Tørsløv, Wier and Zucman</td>
<td>Global</td>
<td>2018</td>
<td>$180 (€140)</td>
<td>10%</td>
<td>Macroeconomic foreign affiliate statistics</td>
</tr>
<tr>
<td>IMF</td>
<td>Developing countries</td>
<td>2014</td>
<td>–</td>
<td>13%</td>
<td>National economic statistics</td>
</tr>
<tr>
<td>UNCTAD</td>
<td>Developing countries</td>
<td>2015</td>
<td>$66–$12013^4 (50€–93€)</td>
<td>7.5%–14%</td>
<td>Macroeconomic statistics regarding direct investments</td>
</tr>
<tr>
<td>Research institute of the European Parliament</td>
<td>EU</td>
<td>2015</td>
<td>50€–70€</td>
<td>–</td>
<td>National economic statistics</td>
</tr>
<tr>
<td>Murphy</td>
<td>EU</td>
<td>2012</td>
<td>150€</td>
<td>18%</td>
<td>Tax data</td>
</tr>
</tbody>
</table>
Despite the different methods, the global estimates made by all of the three institutions are within the same order of magnitude: the tax leakage caused by aggressive tax planning is between 4% and 10% per cent of all of the world’s corporate tax revenues, which is between $100bn to $240bn (€75bn to €180bn139) on an annual basis. The impact on developing countries is bigger, approximately between 7.5 percent and 15 percent of all corporate income tax revenues, which is between $66 billion and $120 billion (€50–€93 billion140) on an annual basis. Also the estimate by Tørsløv, Wier and Zucman is within the same range but the estimates by IMF researchers Crivelli, de Mooij and Keen as well Cobham and Janský are significantly higher between $500–650 billion (€390–500 billion).

The European Parliament Research Service and the tax and accounting expert Richard Murphy have estimated the impact of aggressive tax avoidance in EU member states (bottom row in Table 3). The deficiencies of these studies have been discussed on pages 16, 17 and 22. Murphy estimated that in 2012 the annual tax losses arising from aggressive tax planning in the EU were €150 billion141. The European Parliament Research Service in 2015 estimated that the tax losses on an annual basis were €50–€70 billion142.

The impacts of aggressive tax planning on single countries have been studied at least in Sweden, the United Kingdom, Germany and the United States. Of these estimates only those concerning Sweden and the United States were made on the basis of reliable data. The key issue in the Swedish study, however, was the lack of transparency of the methods used (see page 16).

Kimberly Clausing, professor of Economics from the University of Reed, estimated that the tax losses arising from aggressive tax planning in the US were between $77–111 billion (€60–€86 billion143) in the year 2012 (see p. 14). Another set of research-based data collected by US authorities showed that the impact of aggressive tax planning is constantly rising144. The amount of tax loss in the US represented between 31 percent and 45 percent of the total of $248 billion of corporate tax revenues in 2012. Due to the differences in the US tax system, the figure related to it cannot directly be compared to other countries (see section 2.3.). Gabriel Zucman, professor of economics at the University of California in Berkeley, used a balance of payments based estimate of the US tax losses due to tax planning. He concluded on a figure of the same order of magnitude in his research, proposing an estimate between $55 billion and $133 billion (€40–€100 billion145) for the year 2013.

In Sweden, Skatteverket’s 11bn krona estimate of tax losses arising from aggressive tax planning in 2008 is approximately 11 percent of

139 Converted to Euros according to the average exchange rate in 2014, as the OECD used data from that year for its study.
140 Converted to Euros according to the average exchange rate in 2014, as the OECD used data from that year for its study.
143 The Euro conversion is made according to the average exchange rate during the year 2012.
145 The Euro conversion is made according to the average exchange rate during the year 2013.
the 96 billion krona (approximately €1 billion\textsuperscript{146})
corporate income tax receipts (see method in
section 2.3.).

Richard Murphy estimated in 2008 that aggres-
sive tax avoidance caused tax losses of £12
billion (€17.5 billion\textsuperscript{147}), which corresponds to
23 percent of the total corporate income tax
revenues. However, the method cannot be con-
sidered reliable (see page 22).

The estimate by the professor Stefan Bach from
the \textit{German Institute for Economic Research}
stated that tax losses in Germany would
amount to €90 billion on an annual basis, but
the figure is also questionable, as this would be
almost twice the amount of current corporate
income tax revenues (see page 20).

\textsuperscript{146} The Euro conversion is made according to the aver-
age exchange rate during the year 2008.
\textsuperscript{147} The Euro conversion is made according to the aver-
age exchange rate during the year 2006-7.
Aggressive tax planning also causes long-term welfare losses other than short-term tax losses. It is almost impossible to estimate the impact of these influences.

Tax planning has accelerated corporate tax competition between countries, which has led to a collapse in corporate income tax rates during the last few decades. Tax competition has become a vicious circle, which has reduced the fiscal policy sovereignty of states. The tax policy as well as equitable treatment of different taxpayers in terms of tax collection cannot be defined in the most desirable way. The decrease of corporate income tax rates has also increased inequality as the majority of corporations are owned by the wealthy whereas most of the people do not own any shares (only 14% in Finland have direct share ownership).

As a side effect low corporate tax rates cause income shifting in Finland and many other countries. This means personal income, such as salary is being channelled via corporate entities. For instance, remuneration for medical doctors is often paid via their private limited companies, since in this way the income is taxed at lower rate compared to direct salary payments. As a result, the statistical growth of corporate profits takes place at the expense of other incomes. This explains partly why corporate income tax revenues have not diminished at the same rate as corporate tax rates have been reduced. Reducing corporate tax rates from the current level is not sustainable, as it would further reduce tax income arising from personal income taxes, because an increasing amount of income would be channelled via private limited companies.

Aggressive tax planning distorts both the behaviour of individuals as well as companies, placing taxpayers at an unequal position. Larger corporations pay relatively less corporate income taxes than companies engaged in similar activities, operating only on the national level. According to a European study, taxes paid by large corporations are 32 percent lower. According to the OECD, the difference between the effective tax rates of large multinational and national companies is between 4 percent and 8.5 percent.

Finally, aggressive tax planning is also reflected in economic activity and economic growth in different ways.

Investments are made in ineffective ways as large corporations and also intangible investments receive an unwarranted tax advantage. Public services are weakened in a harmful way, as they cannot be financed, even though they may be the most effective way for delivering the specific activities they perform, and their provision would also help the private sector.

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149 EU-15 countries include: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden and the United Kingdom. These countries were EU member states before ten new members joined the European Union in May 2004.


152 The effective tax rate is understood as representing the actual amount of taxes paid by a company as a proportion of its declared profits.

3. Estimates of the economic impact of aggressive tax planning in Finland

3.1 BASIS OF ESTIMATES
There are no special provisions in the Finnish tax legislation that would allow companies to avoid taxes by shifting profits to Finland. Finland’s 20 percent corporate income tax rate is low in a global comparison, but it is not low in comparison with countries engaged in harmful tax competition, where the actual corporate tax rates are often considerably below 10 percent154. Therefore, companies do not generally have an incentive to shift profits to Finland. Meanwhile, it is possible to gain tax advantages by shifting profits out of Finland.

In a study by the European Commission, Finnish legislation was found to have several loopholes that could be used to shift profits out of Finland155. The Finnish economy is strongly integrated with the global economy: Finnish companies act internationally, and several foreign multinational corporations have extensive operations in Finland. Finland, therefore, belongs to a wider group of countries that lose tax revenue due to aggressive tax planning. This can be seen as a starting point in estimating the impacts of aggressive tax planning to Finnish corporate income taxes as has been done in several studies.156

Numerous case examples that have been discussed in public show that both Finnish companies and foreign headquartered multinational companies have avoided paying taxes on profits generated in Finland. Case studies that have been discussed in the media are examined in section 3.2.

The case studies discussed in the media only represent the tip of the iceberg, since they do not discuss aggressive tax planning of all multinational companies operating in Finland. The aggregate impact of aggressive tax planning on corporate income tax collection has not been estimated to date in Finland. However, two global studies have also presented a country-by-country estimates including Finland (see section 2.4).

This report also is not able to make a comprehensive statistical estimate of the amounts of profits that companies shift out of Finland into low-tax jurisdictions. Germany and the USA collect data about multinational corporations and their country-by-country company accounts for research purposes, giving a possibility to conduct more reliable studies (see chapter 2.3.).

However, it is possible to make estimates of the aggregate impact of aggressive tax planning on Finnish tax revenue on the basis of previous studies mentioned in the previous chapter either by taking a proportional estimate of the regional or sector-specific estimates, or by looking at the impact of a specific tax planning method on the scale of the entire Finnish economy. We have only chosen the most reliable methods as the basis for our estimates. Despite this, these estimates still remain remarkably rough. They are discussed in the following sub-sections after first discussing the case study evidence.

3.2 PUBLICLY AVAILABLE CASE STUDIES
Case studies that have been discussed by 2016 in the public concerning aggressive tax planning of companies operating in Finland are presented in Table 5.

The estimates concerning tax losses are based on information that is reproduced from the articles, and the data concerning company accounts has not been reanalysed for this study. Therefore the method used for calculating tax losses differs from case to case, and the estimates should be considered indicative.

---

<table>
<thead>
<tr>
<th>Company</th>
<th>Sector</th>
<th>Years analysed</th>
<th>Estimate of tax losses in Finland</th>
<th>Type of tax avoidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Altona Mining</td>
<td>Mining</td>
<td>2011–2014</td>
<td>No monetary estimates</td>
<td>Financial arrangements[159]</td>
</tr>
<tr>
<td>Attendo</td>
<td>Health services</td>
<td>2009–2012</td>
<td>No monetary estimates</td>
<td>Financial arrangements[160]</td>
</tr>
<tr>
<td>Carlsberg / Sinebrychoff</td>
<td>Beverages</td>
<td>2006–2010</td>
<td>€6.6m per year</td>
<td>Financial arrangements, Highest Administrative Court (KHO) considered the arrangements illegal in 2016[162]</td>
</tr>
<tr>
<td>Caruna</td>
<td>Electricity transfer</td>
<td>2013–2014</td>
<td>No monetary estimates</td>
<td>Financial arrangements[163]</td>
</tr>
<tr>
<td>Elenia</td>
<td>Electricity transfer</td>
<td>2013–2014</td>
<td>No monetary estimates</td>
<td>Financial arrangements[164]</td>
</tr>
<tr>
<td>First Quantum Minerals</td>
<td>Mining</td>
<td>2002–2014</td>
<td>€63.3m for the years 2002–2014</td>
<td>Financial arrangements[165]</td>
</tr>
<tr>
<td>Fortum</td>
<td>Energy</td>
<td>2007</td>
<td>€136.4m per year</td>
<td>Financial arrangements, the Finnish Administrative Court ruled the arrangement is legal in 2016[166]</td>
</tr>
<tr>
<td>Janton</td>
<td>Direct distribution and advertising</td>
<td>2007–2011</td>
<td>€1–3m per year</td>
<td>Financial arrangements[167]</td>
</tr>
<tr>
<td>H&amp;M</td>
<td>Clothing retail</td>
<td>2007–2011</td>
<td>€8m per year</td>
<td>Consolidation of business model and optimising transfer pricing[168]</td>
</tr>
<tr>
<td>Huhtamäki</td>
<td>Manufacturing of consumer packaging</td>
<td>2009–2015</td>
<td>€20m per year (at least)</td>
<td>Financial arrangements[169]</td>
</tr>
<tr>
<td>Mehiläinen</td>
<td>Health services</td>
<td>2010</td>
<td>No monetary estimates</td>
<td>Financial arrangements[170]</td>
</tr>
<tr>
<td>Metal mining companies</td>
<td>Mining</td>
<td>2011–2014</td>
<td>€49m for the years 2011–2014</td>
<td>Financial arrangements[171]</td>
</tr>
<tr>
<td>Nasdaq</td>
<td>Stock exchange</td>
<td>2006–2010</td>
<td>€6.2m per year</td>
<td>Financial arrangements, The Supreme Administrative Court (KHO in Finnish) considered this arrangement as illegal in 2016[172]</td>
</tr>
<tr>
<td>Neste</td>
<td>Oil refining</td>
<td>2015</td>
<td>€15–€20m per year</td>
<td>Consolidation of business model and optimising transfer pricing[173]</td>
</tr>
<tr>
<td>Nokia Tyres</td>
<td>Rubber and tyre industry</td>
<td>2007–2010</td>
<td>€100.3m for the years 2007–2010</td>
<td>Financial arrangements[174]</td>
</tr>
<tr>
<td>Pelican Self Storage</td>
<td>Storage services</td>
<td>2013</td>
<td>No monetary estimates</td>
<td>Financial arrangements[175]</td>
</tr>
<tr>
<td>Stockmann</td>
<td>Retail</td>
<td>2009–2011</td>
<td>€10.3m for the years 2009–2011</td>
<td>Financial arrangements[176]</td>
</tr>
<tr>
<td>Stora Enso</td>
<td>Manufacturing of paper and cellulose</td>
<td>2005–2010</td>
<td>€50m for the years 2005–2010</td>
<td>Consolidation of business model and optimising transfer pricing[177]</td>
</tr>
<tr>
<td>Terveystalo</td>
<td>Health services</td>
<td>2009–2013</td>
<td>No monetary estimates</td>
<td>Financial arrangements[178]</td>
</tr>
</tbody>
</table>

158 Finnwatch, 2016, A developing country in terms of mineral taxation: Investigation into extractive industry companies’ tax payments and tax planning in Finland [Kaivosverotuksen kehityksmaa: Selvitys metallimalmajärjestelmän louhivien kaivosyhtiöiden veronnaukset], saatavilla osittaisessa: http://finnwatch.org/images/kaivosverotuksen_kehityksmaa.pdf

159 Ibid.


161 Iltalehti, 24.4.2016, This is how Huhma’skä’s aggressive tax planning works [Näin Huhmaänsä aggressiivinen verosuunnittelu toimii], http://www.iltalehti.fi/talous/2016042421464472_ta.shtml (retrieved 3.10.2016)


163 Finland, 2016, A developing country in terms of mineral taxation: Investigation into extractive industry companies’ tax payments and tax planning in Finland [Kaivosverotuksen kehityksmaa: Selvitys metallimalmajärjestelmän louhivien kaivosyhtiöiden veronnaukset], saatavilla at: http://finnwatch.org/images/kaivosverotuksen_kehityksmaa.pdf

164 The estimate is based on the adjustment made to the taxable income of the company in 2008, when the arrangement was found to constitute illegal tax evasion.

165 Yle, 19.5.2016, Decisions by the Supreme Administrative Court are tackling aggressive tax planning by multinationals in Finland – possibly even hundreds of millions lost [KHO:n ratkaisut suvaitsevat kansainvälisen yritysten aggressiivista verosuunnittelua Suomessa – jopa satoja miljoonia menetetty], yle.fi/uutiset/kho_ratkaisut_suitsivat_kansainvälistä_yritysten_aggressiivista_verosuunnittelua_suomessa_jopa_satoja_miljoonia_menetetty/899243 (retrieved 3.10.2016)

166 Neste has petroleum product purchasing and sales operations in Switzerland. Iltalehti, 3.4.2016, This is how Neste plans its taxes – the company uses Switzerland as a tax haven [Neste erittää veronottoaan – Sveitseriasta on yhtiölle veroparatiisi], http://www.iltalehti.fi/uutiset/2016040221355709_uu.shtml (retrieved 3.10.2016)

167 The estimate is based on the tax adjustment made by the Finnish Tax Administration concerning taxable income for the years 2007–2010 when it found the tax arrangements practiced by the company as unlawful. The adjustment has since then been overturned.


169 The estimate is based on the adjustment made to taxable income for the years 2009–2011, when the Finnish Tax Administration corrected the illegal tax transfer prices concerning interest payments. Stockmann notified that it would file a complaint concerning the decision in 2016.

170 Stockmann, 13.1.2016, Stockmann ordered to pay EUR 19.6 million in additional taxes in Finland and Sweden; the company will appeal against the decision [Vero- ja verotuskysymykset], http://www.stockmanngroup.com/en/news-releases/-/stock¬/showDisclosure?omxdisplay WAR_omxdisplayportlet_disclosureType=OMX_STOCK&omxdisplay WAR_omxdisplayportlet_disclosureuri=635606&omxdisplay WAR_omxdisplayportlet_disclosurepriority=4913&playportlet_disclosureId=635606&_omxdisplay_WAR_omxdisplayportlet_disclosure=1 (retrieved 3.10.2016)


173 Iltalehti, 24.4.2016, This is how Huhmaäksä’s aggressive tax planning works [Näin Huhmaänsä aggressiivinen verosuunnittelu toimii], http://www.iltalehti.fi/talous/2016042421464472_ta.shtml (retrieved 3.10.2016)

174 Stockmann, 13.1.2016, Stockmann ordered to pay EUR 19.6 million in additional taxes in Finland and Sweden; the company will appeal against the decision [Vero- ja verotuskysymykset], http://www.stockmanngroup.com/en/news-releases/-/stock¬/showDisclosure?omxdisplay WAR_omxdisplayportlet_disclosureType=OMX_STOCK&omxdisplay WAR_omxdisplayportlet_disclosureuri=635606&omxdisplay WAR_omxdisplayportlet_disclosurepriority=4913&playportlet_disclosureId=635606&_omxdisplay_WAR_omxdisplayportlet_disclosure=1 (retrieved 3.10.2016)
The combined estimates concerning tax losses of the cases in the table above, when considered on an annual basis, are at least €230 million, of which the largest share is made up of Fortum’s tax planning practices. The sum does not take into account the fact that the case study estimates of the different cases have different corresponding years. Also the estimates do not take into account those case studies that do not have monetary impact estimates. Nearly all case studies involve tax planning practices related to financial arrangements whereby profits are shifted outside of Finland through interest payments. The reason why most publicly available case studies discuss this type of tax planning practices is that they are relatively easy to notice by analysing publicly available group accounts. It is also worth noting that Finland adopted an interest deduction limitation rule to tackle tax avoidance in 2014. Companies discussed in the case studies could have changed their tax planning practices due to the publicity or to other reasons, so the estimates only provide a picture of tax planning during the period of the research years in the case study.

3.3 EXTRAPOLATING THE MINISTRY OF FINANCE ESTIMATE ON LOAN ARRANGEMENTS

According to a report by the Ministry of Finance (see page 18), the interest deduction limitation rule adopted in 2014 increased tax collection potential in 2014 by €117 million. At the draft stage of the law, when the initial rule was stricter, the increased tax collection potential had been estimated at €246 million. The law was intended to intervene in tax planning practices based on loan arrangements, but even the toughest version of the law in the preparatory stages could not have fully removed the benefits of tax planning. E.g. the estimate did not take into account the tax avoidance in real estate business.

The estimates by the Ministry of Finance were concerned with the impact of the legal amendments. They do not, therefore, discuss the impact of aggressive tax planning. However, based on these estimates, we can make an approximate estimate concerning the impact of the loan arrangements on tax revenues in Finland.

If we assume that the high end estimate of €246 million describes the tax losses due to the intra-firm lending arrangements before the change of the law, and that the change in law led to an increase of €117 million increase in the tax collection potential, we can estimate that the tax loss due to the loan arrangements still stands at €129 million – even after the changes in the legislation186. The estimate is probably in the right order of magnitude, but due to its limitations it should be considered as a conservative one. First of all, even the stricter draft law would only have partially removed the benefits of tax planning187. Secondly, in light of the case studies that have been discussed in public, some corporations have been able to avoid the application of the interest limitation rule e.g. based on the equity escape rule188. Thirdly, other factors such as company profitability and interest rates have an impact on the tax effects of loan arrangements.

Based on a German study, the European Commission has estimated that financial arrangements represent approximately 30 percent of the tax losses due to tax planning189.

186 This is obtained by €246 million – €117 million
187 Ministry of Finance, Ilari Valjus, email 5.2.2016. According to the legislation (Act Concerning the Taxation of Income from Professional Activities section 18a) a proportion of the interest costs is always deductible. In addition, it does not apply at all to real estate investment companies or financial companies.
188 In the Act, due to rulings concerning property ownership and equity ratio, at least private equity-owned companies have the possibility to avoid the application of the Act. Yle, 13.1.2016, Company made nearly €50m in profits from electricity transmission in Finland – Paid almost no taxes [Yhtiö teki 50 miljoonan euron voitot sähkönsiirrosta Suomessa – verot lähes olemattomat], http://yle.fi/uutiset/yhtiö_teki_50_miljoonan_euron_voitot_sahkonsiirrosta_suomessa_verot_lahes_olemattomat/8636094 (retrieved 7.7.2016); Taloussanomat, 5.2.2016, Elenia pays even less taxes on its profits than Caruna [Elenia maksaa vähemmän veroja vielä Carunaaakin vähemmän], http://www.taloussanomat.fi/energia/2016/02/05/elenia-maksaa-voroistaan-veroja-vielä-carunaakin-vahemmän/20161380/12 (retrieved 7.7.2016)
These include also intra-group loan arrangements that were the subject of the Ministry of Finance estimates. The remaining 70 percent of tax losses according to the studies are related to other means of aggressive tax planning such as placing intangible assets in low-tax countries. The scale of other types of tax planning has not been studied in Finland. If we assume that the proportion in the European Commission estimate would also be directly applicable for Finland, then we could use the €129 million estimate of the tax losses due to loan arrangements as the basis extrapolating the estimate. Using this method, we find that the impact of tax aggressive planning would be €430 million. This would represent approximately 10 percent of the €4.5 billion of corporate income taxes collected in the year 2015. Due to reasons mentioned above, the estimate should be considered a conservative one. This view is supported by the Tax Administration estimate dating back to 2011, which estimated that aggressive tax planning linked to transfer pricing caused an annual tax gap of €320 million in Finland (see page 8). The estimate is based on situations in which the Tax Administration should make tax adjustments on the basis of the current law, and this is why the figure does not provide a comprehensive estimate of all types of aggressive tax planning.

3.4 ADAPTING OTHER COUNTRY ESTIMATES AND OECD GLOBAL ESTIMATES TO THE FINNISH CONTEXT

The impact of tax planning in Finland can also be estimated on the basis of estimates that refer to other countries. The Swedish Tax Agency estimated in 2008 that the tax losses arising from international tax planning were 11 percent in relation to the total corporate income tax collection. Sweden’s tax system and its economy are similar to Finland in many regards. Assuming that the same proportion also describes Finland’s tax losses due to aggressive tax planning, so Finland’s tax loss estimate would be €500 million based on €4.5 billion corporate income tax revenues in the year 2015. The 2018 study by Thomas Tørsløv, Ludvig Wier and Gabriel Zucman regarding Finland’s tax losses arrives at same 11 percent estimate in proportion to corporate income tax revenue (see section 2.4).

Studies made in the United States, Germany and the United Kingdom indicate much bigger estimates of the proportion of tax losses to

190 The assumption has several problems. Above all, the reliability of the co-efficient is questionable and there is no certainty for its applicability to companies operating in Finland. Finnish legislation, however, does permit tax planning by way of both methods, and publicly discussed case-studies demonstrate that business operation structuring and transfer price optimisation have been utilised as tax planning methods in addition to financial arrangements. As we have noted earlier, tax planning based on financial arrangement is easier to detect. However, methods of aggressive tax planning based on business structures have been considered to be on the rise. For these reasons, the use of coefficients can be justified. See: Finér L., 2013, Transfer pricing arrangements and planning in Finnish companies [Siirtohinnoittelun järjestäminen ja suunnittelu suomalaissisa yrityksissä], Verotus 5/2013; Finér L., Ylönen M., 2012, H&M clawed taxes back home [H&M veti verotokitin], available at: http://www.talouselama.fi/uutiset/hennes-mauritz-veti-verotokitin-3356185


192 Transfer pricing risk analysis cannot directly identify situations where the Tax Administration should intervene in transfer pricing of a company, as detecting these cases requires greater scrutiny, for instance, in the form of a tax inspection. However, risk analyses can detect high-risk cases, which should be studied more closely to identify whether they give risk to adjusting transfer prices. It is not possible to investigate all high-risk cases because tax inspections tend to take a long time to conduct. Concerning international tax inspection methods, see: Finér L., 2012, Transfer pricing practices in Finland [Siirtohinnoittelun suomalaisessa käytännössä], p. 69–73, available at: http://epub.lib.aalto.fi/fi/ethesis/id/13158; Waal J., 2012, Tax Administration Transfer Pricing Project – a new step towards more effective customer guidance and tax surveillance in transfer pricing matters [Verohallinnon siirtohinnoitetteluhanke – uusi askele kohti tehokkaampaa asiakasohjausta ja verovalvontaa siirtohinnoitetteluaissiossa], Verotus 1/2012

193 The OECD also tends to use the relationship between tax losses as a share of total corporate tax collection.

194 Legislation and tax planning have changed in both Finland and Sweden since 2008. Tax legislation in both countries now includes interest deductibility limitations. The impact of these changes has not been taken into consideration.
current corporate income tax revenues than the above estimates in Sweden.

However, out of these studies only those made in the United States can be considered as reliable (see page 14). The impact of aggressive tax planning as a proportion of total US corporate income tax revenues was estimated between 31 percent and 45 percent in a study by Kimberly Clausing. Based on this estimate, the estimates of corporate income tax losses due to aggressive tax planning in Finland would be as much as €1.4–€2.0 billion in 2015. It is, however, probable that the tax losses are bigger in the US as they have had considerably higher corporate income tax rate, which has increased the incentive for aggressive tax planning (see page 15).

Tax losses arising in Finland due to aggressive tax planning can also be estimated on the basis of global estimates by the OECD. It considered that tax losses were between 4 percent and 10 percent as a proportion of current corporate income tax revenues. On the basis of this estimate, the annual tax losses in Finland would be between €180 million and €450 million. This figure, however, is problematic and probably on the low end of the scale, as “additional” corporate income tax receipts collected by countries that facilitate tax planning are subtracted from the tax losses by countries suffering from aggressive tax planning practices.

### 3.5 Generalising Sector Specific Estimates to All Sectors

In a report titled “A developing country in terms of mining taxation”, published in March 2016, Finnwatch investigated tax planning practices related to financial and ownership arrangements in every metal mining company operating in Finland. For the report, all company accounts of the 11 metal mining companies were analysed for the period 2011–2014. Each of the 11 metal ore mines were part of a multinational corporation. Three foreign owned companies in this study had avoided taxes in Finland. An estimate was made based on the company accounts that aggressive tax planning practices by these companies caused a tax revenue loss of €49 million during the period of research. This accounted 53 percent in relation to the total of €92 million corporate income tax paid by all metal mining companies.

Based on this result, we can estimate tax losses due to aggressive tax planning in Finland by extrapolating the result to cover all companies by using the same proportion of tax losses to the total amount of corporate income taxes collected. All of the mining companies that paid taxes were part of a multinational corporation. According to data provided by Statistics Finland to Finnwatch, multinational corporations generate 59 percent of the total turnover of companies operating in Finland.

If we assume that 59 percent of Finland’s €4.5 billion corporate income tax revenue was generated in turn by companies belonging to multinational corporations and that their aggressive tax planning reduced corporate income revenue in Finland by 53 percent, then considering their proportion of all corporate income taxes paid, the combined tax loss as a result of aggressive tax planning would be €1.4 billion.

The estimate can be seen as being a conservative one as the mining sector’s tax losses were only estimated on the basis of the impact of aggressive tax practices related to financial arrangements. If we assume that financial arrangements represent 30 percent of aggressive tax planning practices, then the combined impact of tax planning practices in all sectors would be €4.7 billion of lost corporate income tax revenue. This amount would exceed the total of corporate income tax collection in 2015.

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196 A multinational corporation is a company that has at least one foreign parent or subsidiary company. Talvivaara had a subsidiary in Sweden, however it reported no activities.

197 The statistics from Statistics Finland do not include primary production, financial services or permanent establishments.

198 Formula: €4.5bn x 53 % x 59 % = €1.4bn
Table 6 – Estimates of tax losses in Finland

<table>
<thead>
<tr>
<th>Source</th>
<th>Method</th>
<th>Estimate (€ millions)</th>
<th>Share of corporate income taxes in 2015</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Publicly available case-study estimates</td>
<td>Summing up estimates in Euros, and standardising as annual estimates</td>
<td>*230&lt;</td>
<td>*5%&lt;</td>
<td>Different media sources, Finnwatch</td>
</tr>
<tr>
<td>Impact studies of interest deductibility limitations</td>
<td>Generalising the impact to cover all types of aggressive tax planning</td>
<td>430</td>
<td>10 %</td>
<td>Ministry of Finance</td>
</tr>
<tr>
<td>Tax data from the Swedish Tax Agency</td>
<td>Share relative to Finland</td>
<td>500</td>
<td>11 %</td>
<td>Swedish Tax Agency (Skatteverket)</td>
</tr>
<tr>
<td>Tørslev, Wier and Zucman</td>
<td>Researcher’s own method (see section 2.4)</td>
<td>500</td>
<td>11 %</td>
<td>Macroeconomic foreign affiliate statistics</td>
</tr>
<tr>
<td>US administrative database</td>
<td>Share relative to Finland</td>
<td>1 400–2 000</td>
<td>31–45 %</td>
<td>Clausing</td>
</tr>
<tr>
<td>Global company information database</td>
<td>Share relative to Finland</td>
<td>180-450</td>
<td>4–10 %</td>
<td>OECD</td>
</tr>
<tr>
<td>The impact of financial arrangements of mining companies in Finland</td>
<td>Extrapolating the impact to cover all companies</td>
<td>1 400</td>
<td>31 %</td>
<td>Finnwatch, Statistics Finland</td>
</tr>
</tbody>
</table>

* An indicative minimum estimate covering only single enterprises

3.6 SUMMARY OF TAX LOSS ESTIMATES IN FINLAND

The previous sections looked into a number of methods based on different sources to estimate the impact of aggressive tax planning in Finland. The calculations provide a wide range of €180 million to €2.0 billion, which represents between 4 percent and 44 percent of the total of €4.5 billion of corporate income tax revenues in 2015.

If we exclude the smallest and the largest estimate in the range, we obtain a range of €430 million to €1.4 billion, which is 10 percent to 31 percent of Finland’s €4.5 billion of corporate income taxes collected in 2015. The lowest estimate in the range is calculated on the basis of tax losses in the United States. Tax losses in the US are likely to be greater due to a higher corporate income tax. For these reasons, excluding these estimates is justified.

The table gives an indication of the scale of the impact of aggressive tax planning in Finland. It is useful to approach these figures with caution, as calculations and their assumptions are approximate and are based on research data that have deficiencies as well as numerous assumptions, as mentioned in earlier chapters. The impact of tax planning also varies on a year-by-year basis depending on factors such as company profitability.

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199 Estimates concerning tax losses presented in the media are based on data contained in these sources, as original company accounts have not been analysed separately for this study. Therefore, the method of calculation that yields the result differs from case study to case study. Estimates in Euros have not been made in all cases. We only observe individual cases that have been revealed. For these reasons, the estimate given is only indicative minimum estimate, which does not cover the entire scope of companies; see Chapter 3.2.
Aggressive tax planning is a globally significant phenomenon, which both causes direct tax losses and hampers the overall functioning of the economy. The scale of the phenomenon has been researched with several methods, all of which have their own limitations. Due to these limitations, even estimates by international organisations can be described as indicative. Due to gaps in the research data, no single method gives an accurate and comprehensive picture of the scale of the impact of aggressive tax planning. The study of these impacts is, however, necessary in order that the problem can be tackled using measured and targeted methods.

The tax losses arising from aggressive tax planning in Finland have not been estimated previously. Based on previous studies and different datasets, we tentatively estimated that the annual tax losses in Finland are between €430 million and €1.4 billion, which represents between 10 percent and 31 percent of the total of €4.5 billion of corporate income tax revenue in the year 2015.

The estimate is based on the most credible methods and the most comprehensive and publicly available datasets. Estimates based on different methods indicate the same order of magnitude. However, we should treat this estimates with caution. The calculations are based on rough assumptions, and studies to back them up have severe limitations.

The problem is that there are no comprehensive and reliable databases to estimate the extent of aggressive tax planning and, therefore, its impact can only be estimated indirectly. For instance, public country-by-country tax reporting, if implemented in a comprehensive manner, would change the situation in a considerable way. Information concerning tax planning mechanisms and the extent of their usage is necessary as it would allow tackling tax avoidance in an effective way.

Based on the existing information from different databases, it is possible to gain a more valid picture of the extent of the phenomenon. For instance, the confidential tax information administered by the Tax Administration could provide a basis for research efforts, if this data were made accessible for research purposes.

4. Conclusions
5. Recommendations

**RECOMMENDATIONS FOR DECISION MAKERS**

- Large multinational corporations should have the obligation to publish their key company accounting information on a country-by-country basis. This would allow studying the extent, forms and impacts of aggressive tax planning. More effective anti-tax avoidance legislation could be developed on the basis of this research.

- Public country-by-country reporting should be implemented in such a way that the parent company of a corporate group would report on a country-by-country basis, at least the number of employees, total wage bill, turnover, profit, paid and accrued tax, and central finance and asset information. Alternatively, the parent company could be mandated to publish the separate company accounts of all of its subsidiaries and permanent establishments. In this way the company accounts would also be made public in jurisdictions where they are not already made public through regulation. Majority state owned companies should be front-runners in the country-by-country reporting, and they should be mandated in the first instance to publicly report the country-by-country information recommended by the OECD BEPS project.

- Finland should exercise influence via the OECD Global Forum to the effect that developing countries’ participation in multilateral automatic exchange of tax information is assisted through transition periods. Developing countries should be given the country-by-country information concerning large multinational corporations without the need for reciprocity of providing information themselves until their tax administrative capacity has been sufficiently strengthened so as to allow for collecting such information.

- Finland should pressure together with other countries the tax havens to increase the availability of publicly available company information. Tax havens should collect both company ownership information and company accounts in public registries, and participate in international tax co-operation aiming at increased tax transparency.

- An independent assessment should be made on the impact of tax legislation on aggressive tax planning. The impact study should also assess whether Finland’s tax laws and treaties weaken tax collection capacity of developing countries.

- The results of such an impact assessment should be utilised among other areas in legislative processes, so that deficiencies that hamper efforts to tackle aggressive tax planning are amended.

- Finland should make use of all information that different authorities have in estimating the impact of aggressive tax planning. For instance, the Tax Administration should be mandated, based on its available data, to study the extent of aggressive tax planning. The resources of the Tax Administration in researching the issue should be increased if necessary.

- The confidential tax information collected and administered by the Tax Administration should also be provided for the purpose of tax policy research. Authorities should also complement the data arising from tax returns with confidential company surveys for the purpose of research into aggressive tax planning.
RECOMMENDATIONS FOR COMPANIES

• Multinational corporations should voluntarily publish their corporate structures, and the company accounts of their subsidiaries, even in jurisdictions where the law may not require them to do so. Public company accounts are a norm in Europe, and similar level of transparency should also be required for subsidiaries operating elsewhere in the world. A tax-responsible company should also have a publicly available tax strategy, which sets the boundaries for acceptable tax planning and where it refrains from aggressive tax planning.

• A responsible company provides researchers, journalists and non-governmental organisations the opportunity to better understand their tax planning models and arrangements.

RECOMMENDATIONS FOR CITIZENS

• Citizens should continue to ask companies more information concerning their tax payments, and whether their practices are responsible. Consumers should favour companies that consider taxation a corporate responsibility issue, and companies that are not known to benefit from aggressive tax planning.

• Citizens should demand decision makers to enact initiatives that enhance greater transparency of taxation, as well as decisions and regulation that tackles aggressive tax planning.
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