Increasing cross-border ownership of real estate: Evidence from Norway*

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Abstract

This paper is the first to estimate the full extent of foreign-owned commercial and residential real estate in a country, including both direct and indirect ownership. We utilise unique Norwegian administrative data with reliable market value estimates and country-level ownership information. Overall, 2 percent of Norwegian real estate assets were foreign-owned in 2017, while this share amounts to 10 percent for assets owned by Norwegian corporations. Foreign ownership has increased over the last decade, and ownership from tax havens even more rapidly. Ownership from neighbouring countries and Luxembourg is especially large.

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1 Introduction

Globalisation has opened real estate markets to foreign investors, but little is known of the full magnitude of or the anatomy of foreign ownership in real estate markets. NGOs and news organisations have documented purchases of expensive real estate by foreign buyers. However, it is unclear whether these eye-catching stories are representative for the total foreign ownership. Recent research is just starting to shed light on the anatomy and country distribution of offshore real estate ownership, either through shell companies as documented in London (Bomare and Le Guern Herry (2022)), of residential real estate as documented in France (Morel and Uri 2021), or in tax havens like Dubai (Alstadsæter, Planterose, Zucman, and Økland 2022).

We provide the first comprehensive overview of the stock and development of foreign-owned real estate in a country, utilising de-identified, administrative data on Norwegian real estate for the period of 2011-2017, both corporate-owned and individually owned. We combine tax administration's annual estimates of the market value of real estate, both residential and commercial, with detailed ownership information on both individual and firm level, and with country-level information on foreign ownership. We find that overall, 2 percent of the value of Norwegian privately held real estate are owned by foreign individuals and corporations at year-end 2017, while this share amounts to 10 percent when we zoom in at real estate owned through corporations. Further, we find that foreign share of corporate-owned real estate has been increasing over the last decade.[1] Ownership from tax havens has increased even more rapidly.

Insight into the magnitude and structure of foreign ownership of real estate is of great importance to tax administrations, policymakers, and society. First, there are indications that inflow of foreign capital may increase prices in property markets (Sá and Wieladek (2015); Sá (2016)). Second, ownership transparency is obfuscated for both government

[1] We restrict the analysis across time to corporate-owned real estate, as the estimates of corporate-owned and personally owned real estate are retrieved from different sources. 78 percent of foreign-owned real estate in 2017 was corporate-owned.

authorities and local communities when the ownership chain involves a foreign corporation. This means that owners that are unknown to stakeholders, either because of distance or secrecy, might wield influence over important infrastructure and development of urban areas and rural communities without being held accountable, which is in a particular worry in times of political instability. The obfuscation also makes foreign ownership of real estate a red flag for those monitoring money laundering risk (OECD (2019); FATF (2007); European Parliamentary Research Service (2019)). Real estate is a well-known tool for tax fraud and money laundering (Collin, Hollenbach, and Szakonyi 2022). Lastly, increasing international automatic exchange of financial information between tax administrations has made it harder to hide true ownership of offshore financial assets over the last years. However, this information exchange does not include real estate, making real estate investments an even more attractive tool for obfuscating true ownership of wealth (Bomare and Le Guern Herry 2022).

The existence of a centralised property register and annual estimates of the market value of real estate for tax purposes[2] makes Norway an ideal laboratory to get a more complete overview of foreign ownership of real estate in Western countries. More importantly, the tax administration collects detailed information on the owners of shares in Norwegian corporations, including their residence country. The shareholder register covers all shareholders of all corporations and enables us to look through domestic group structures and the invisibility cloak that the domestic shell companies usually represents. We are thus able to single out all real estate owned by either foreign corporations and individuals, and attribute most of the privately owned real estate to the first country of location after crossing the Norwegian border. [3]

[2]The Norwegian wealth tax covers a broad range of assets, including all real estate located in Norway (even real estate owned by non-residents). This requires annual value estimates of properties to calculate the tax base, which is reported in the tax returns of individuals and corporations not listed on the stock exchange (henceforth non-listed corporations). These self-reported data by the non-listed corporations are audited by the Norwegian Tax Administration, which disposes vast third-party reported information. This includes central registers that strive to record all owners of properties.

[3]However, our insights in ownership structures stops in the first foreign country. This means that if the ultimate owner of for instance a Luxembourg company that holds Norwegian property is a Norwegian, we would then over-estimate foreign ownership. Our analysis documents a substantial share of real estate ownership from well-known tax havens, highlighting how this type of ownership obfuscates the identity and

In our analysis, we utilise the same precisely imputed market values as used by the tax administration for wealth tax assessments. This is complemented with the financial statements of listed corporate groups, which are not subject to report imputed market values for wealth tax purposes. We estimate the total value of privately owned real estate to USD 1,057 billion in 2017.

The data reveal sizeable foreign ownership. 2 percent (USD 24 billion) of the Norwegian real estate owned by corporations and individuals at year-end 2017 is traced to foreign owners. Foreign ownership is most prevalent in the real estate owned by corporations. The total value of real estate owned by foreign individuals and corporations through Norwegian corporations is more than three times larger than the total value of the real estate owned directly by foreign individuals — 18.8 billion vs. 5.3 billion, even though most Norwegian real estate is owned directly by individuals and reported in the personal tax return. The foreign ownership share is thus 10.5 percent and 0.6 percent among corporations and individuals respectively. Although not all foreign ownership is problematic, our estimates illustrate the scope of the potential negative consequences of foreign ownership of real estate.

We zoom in on the sample owned by corporations and uncover two underlying trends: First, foreign individuals and corporations own an increasing share of the Norwegian real estate owned through corporations. More than 10 percent of corporate owned real estate was foreign-owned in 2017, a marked increase from around 6-7 percent in the years from 2011 to 2014. Second, the share owned from tax havens is growing even more rapidly. In 2011, 31 percent of the foreign-owned real estate was owned through tax havens. This increased in the following years, to 38 percent in 2017. Luxembourg ownership accounts for 3/4 of this increase.

Only Norway's neighbouring country Sweden was a larger owner than Luxembourg in 2017, when we look at all real estate ownership, both personal and through corporations.

the country of origin of the true owners of Norwegian real estate. Bomare and Le Guern Herry (2022) find that 19.5 percent of real estate in England and Wales owned by foreign corporations are really owned by UK nationals. But we, along with domestic tax auditors, are not in the position to identify this.

The United Kingdom, Finland, and the United States then followed. Half of the top 20 jurisdictions are well-known tax havens. The ownership through tax havens becomes even more apparent when the real estate ownership is scaled by the GDP of the owners' home countries. The British Virgin Islands is the top jurisdiction by this measure, with ownership equal to more than 25 percent of GDP. The four jurisdictions Bermuda, Guernsey, Luxembourg, and Jersey are next, all with ownership equivalent to approximately 4 to 5 percent of GDP. Then follows Cyprus, with 2.5 percent of GDP. Remaining countries have ownership below 1 percent of GDP.

Our estimates can serve as a useful benchmark for future studies of foreign ownership in other comparable real estate markets, especially for those that only have imperfect information about property values. Norway is an open, medium-sized economy which ranks 19 out of 38 OECD countries in terms of GDP. There are no strong factors that points to either especially high (like a high number of tourists or many bordering countries) or especially low (like foreign ownership restrictions) foreign ownership shares in the property market. The foreign-owned real estate in Norway amounts to 7 percent of GDP, which for the European Union would mean foreign ownership of EUR 1,012 billion in 2021, with for instance EUR 250 billion in Germany and EUR 174 billion in France.

The remainder of this paper is organised as follows. The next section outlines the current literature on foreign owned real estate. Section three describes the data we use and how we use it to construct our estimates. Section four presents the estimates, while section five concludes.

2 Current literature

The true extent of foreign ownership of real estate has not yet been quantified for any country or major city, with a few notable exceptions. Morel and Uri (2021) find that 1.5 percent of French residential real estate – worth USD 140 billion – was owned by non-residents at the end of 2019. This is higher than our estimate for Norwegian housing, which is 0.5 percent. Morel and Uri (2021) also note that almost no French residential real estate is owned by non-residents through corporations.

This type of ownership is evidently more prevalent in the UK, where the government also publishes lists of properties owned by UK and foreign companies. Bomare and Le Guern Herry (2022) calculate that the value of real estate in England and Wales (both commercial and residential) owned directly by either foreign individuals or foreign companies was at least USD 359 billion in January 2018. To reach this number, they among other things use information from the Panama Papers and related leaks to impute the country background of the ultimate owners of property-owning corporations registered in tax haven. This effort shows that 19.5 percent – USD 28 billion out of USD 144 billion — of the real estate owned by foreign companies was in the end owned by UK nationals.

The most significant progress in mapping of country-by country ownership of real estate located in tax havens is in a companion project (Alstadsæter, Planterose, Zucman, and Økland 2022), where we estimate that USD 146 billion of foreign capital is invested in Dubai real estate. The estimates build on several leaks of detailed information on more than 800,000 Dubai properties, compiled and shared by the US-based Center for Advanced Defense Studies (C4ADS). The results show that more than 70 percent of the Dubai properties owned by Norwegian taxpayers were not duly reported to the Norwegian Tax Administration.

The literature on foreign real estate investments is larger than the literature on real estate ownership, as the flows are easier to observe than stocks. Devaney, Scofield, and Zhang (2019) find foreign buyers in 4.1 percent of the transactions (representing 13.4 percent of the value) in a sample of high-value transactions in large US cities, with Canada, UK, Germany, and China as the major buyer countries. Cvijanović and Spaenjers (2021), in a paper that investigate foreign buyers in the Paris property market, observe that 4.6 percent of buyers were resident foreigners, while 2.8 percent were non-resident foreigners. Most foreign purchases were made by nationals of Italy, Great Britain, the United States, Portugal, and

China.

3 Data and methodology

This section first outlines how **tax returns** let us construct the Norwegian real estate stock, complete with market values and covering real estate owned by both individuals and corporations. It then outlines how the **shareholder register** let us assign this stock to owners and countries. At last we discuss how sensitive our estimates are to adjusting the definition of ownership.

3.1 Real estate wealth from tax returns

Our data lets us analyse the ownership of the complete, private-owned Norwegian real estate stock.[4] The data cover the full universe of de-identified Norwegian tax returns for persons and corporations for the years 2011 to 2017, provided by Statistics Norway. Foreigners that own Norwegian real estate directly and foreign corporations (both if those that are incorporated or are fully owned from abroad) are also subject to submitting these tax returns. The data return data consists of three separate data sources, all made available to us by Statistics Norway and the Norwegian Tax Administration:

- **Individuals' tax returns.** The tax returns for individuals include the aggregate market value of real estate owned directly by individuals, disaggregated by type.
- **Corporations' tax returns.** The Tax return for corporations and other non-personal taxpayers (RF-1028) include the aggregate market value of real estate owned directly by the submitting corporation, disaggregated by type (housing, commercial, other).
- **Income statement 2.** This is an attachment to the corporate tax returns, and includes the balance sheet of the submitting corporation. We use this to impute the real

[4] This includes all real estate that is not fully owned by the public sector (state, regions or municipalities).

estate wealth of corporate groups listed on the stock exchange (see more in subsection 3.3). [5]

The imputed real estate wealth is aggregated on the tax record-level in our data. This means that the unit of observation for the real estate wealth are not the value of each property, but the total value of properties owned directly by each corporation or individual, observed at the corporation- or individual-level. For instance, if a corporation is registered in the public land registry as the sole owner of a car park worth USD 3 million and as one of two equal owners of an office building worth USD 50 million, we observe a real estate holding of USD 28 million for this corporation. The real estate wealth are in most instances reported after tax rebates. We scale up the taxable real estate wealth in the tax returns to correct for the tax rebates, which is something we can do as the real estate wealth is reported by type.[6]

This data is available because the estimates of real estate wealth are, directly or indirectly, a part of the wealth tax base. The annual monitoring of wealth makes Norway one out of a few international exceptions. Assets either owned by Norwegians or located in Norway are reported to the tax administration in order to assess each individual's payable wealth tax. The Norwegian wealth tax is levied on all types of wealth, including real estate, shares in listed and non-listed corporations, bank deposits, etc., although with different tax rebates and valuation rules applied to the different asset classes. (See Alstadsæter, Bjørneby, Kopczuk, Markussen, and Røed (2022) for more.)

The wealth tax is a personal tax, paid by individuals that are tax-resident in Norway and non-residents that own real estate directly in Norway. The real estate wealth owned directly

[5]Corporations listed at the Oslo Stock Exchange (including corporations fully owned by these), are not subject to report their real estate wealth. It is evident in our data that some of the publicly listed corporations report real estate wealth despite this. For those that do not, we impute the real estate assets reported in the financial statements (see subsection 3.3).

[6]The rebates that applied to the wealth in the individuals' tax returns in 2017 (the only year we use the individual tax returns) were: Primary housing: 75 %; Secondary housing: 10 %; Leisure homes: 70 %; Commercial real estate: 20 %; Other: 10 %. The only type of real estate that is reported after rebate in the corporate tax returns is housing. The rebates for secondary housing were: 2011 and 2012: 60 %; 2013: 50 %; 2014: 40 %; 2015: 30 %; 2016: 20 %; 2017: 10 %.

by individuals are reported in the individuals' tax returns.[7] In addition, all corporations have to report the estimated market value of their real estate holdings annually. The reason is that the taxable value of shares are set proportional to the value of the assets in the underlying corporation.[8]

The real estate values in the tax returns are estimated market values. This has clear benefits. They are calculated annually by the tax administration, which applies standardised and objective valuation methods. This process means that corporations are not able to manipulate the reported values of their real estate by choosing a specific assessment agency or assessment technique or by the use of base erosion and profit shifting techniques. The methods used are outlined below:

Valuation of commercial real estate. The Tax Administration's valuation method for commercial real estate has three main components: The reported rental income from the property, a discount rate which is updated yearly, and a fixed discount of 10 percent for depreciation.[9] This gives a relatively precise and objective estimate of real estate wealth.[10] An imputed rental income based on municipality, type of property (hotel, industrial plant, storage facility, store etc.), and size of the property is calculated and used if the real estate is not rented out.

Valuation of housing. Market values of housing properties are calculated by the Tax Administration in cooperation with Statistics Norway. They use maintain a hedonic model that uses information on type of house (detached house, rowhouse or flat), the size of the

[7]Real estate owned by corporations are reported as an underlying value component of the shares owned by the person submitting the tax return. This means that it should not be reported as real estate in the individual's tax return.

[8]The exception is shares in listed corporations. The taxable value of listed shares is set equal to the market value of the shares at the end of the year. Listed corporations should not report their real estate holding for this reasons, although some do.

[9]To illustrate: A building with an annual rental income of USD 1 million would be valued at USD 13.6 million in 2017, when the discount rate was 6.6 percent, following from this calculation: $\frac{1{,}000{,}000 \cdot 0.9}{0.066} = 13,636,364$.

[10]See Dahl and Fougner (2019) for discussion of geographical bias in discount rates and more background on valuation methods

property, the geographical region, and age of the house. It is based on up to date transaction data that cover most of the Norwegian property market.

3.2 Assigning real estate wealth to owners and countries

The Norwegian shareholder register contains information on all Norwegian and foreign shareholders of Norwegian corporations. We utilise the full universe of de-identified Norwegian shareholder statements for individuals and corporations for the years 2011 to 2017 with two purposes in mind.[11] First, we use it to attribute ownership of real estate owned by corporations to the different direct and indirect owners of the corporations. The full coverage of shareholders in Norwegian corporations makes it possible to map ownership by ownership share and to see through group structures and chains of holding and shell companies. This is a common obstacle, as corporate ownership often goes through several layers of corporations. The methodology to impute ownership through group structures has previously been described and utilised by Alstadsæter, Jacob, Kopczuk, and Telle (2021).

Then, we use the shareholder register to attribute the correct country background to each owner. The attribution of the owner-country for real estate wealth reported in the personal tax return is straight-forward. The tax return submitter is the ultimate beneficial owner of the real estate. These submitters have unique identifiers in the data, which makes it possible to connect them to their reported country of residence if they appear in the shareholder register (which depends on them owning shares in a Norwegian corporation). We complement this with information from the National Population Register if the owner does not appear in the shareholder register. This register classifies the tax return submitters as either "resident" or "emigrated" for the year in question. If the tax return submitter is registered as "resident", we assign the owner Norwegian residency. If the tax return

[11] This is the is underlying material for the Norwegian Shareholder register. Every Norwegian corporation is obliged to submit the yearly Shareholder register statement (RF-1086) to the tax administration. This is the foundation for the Shareholder's tax report (RF-1088). This report presents a summary of individuals' and organisations' shares in Norwegian limited companies. The population of the shareholder register is thus nearly the same as for the tax returns. Still, there will be a non-response rate, especially when the owner is a foreign corporation that does not have a tax incentive to report ownership.

submitter is registered as "emigrated", we assign the country that the owner emigrated to from Norway.[12]

The attribution of the correct country background to each owner is more complicated for corporations. The shareholder register only includes the residence countries of the immediate owners of Norwegian corporations. This limits our information about the ultimate beneficial owner in the case where the ownership chain involve a foreign corporation. To illustrate, take the case of a Swedish investor that owns shares in a Norwegian real estate corporation through a holding corporation in Luxembourg. The shareholder in the Norwegian corporation will be registered as from Luxembourg in our data, even though the ultimate owner is Swedish. We only observe the immediate foreign owner, who is not necessarily the ultimate owner of the cross-border chain of corporations. This means that that the analysis does not show the real country distribution of the ultimate owners.[13] Instead, we show the country distribution of ownership that is visible to Norwegian authorities and to the general public. In the case an owner of a foreign corporation is ultimately a Norwegian resident, most of the negative consequences associated with foreign ownership, like potential tax evasion, secrecy and money laundering, remain relevant.

3.3 Real estate wealth owned by listed corporations

Corporations listed on the Oslo Stock Exchange and their underlying corporations are exempted from reporting their real estate wealth in their tax returns.[14] We use a three-

[12]We assign the collective term "Unknown, emigrated" if the country the owner emigrated to is not registered. In the few instances where the tax return submitter is not registered in the population register, and does not appear with a residence country in the shareholder register, we assign the owner country "Unknown, other foreign".

[13]The ultimate ownership of real estate by foreign residents may thus be lower than estimates of foreign ownership presented in this paper. Bomare and Le Guern Herry (2022) show that 19.5 percent of the real estate in England and Wales owned by foreign shell companies was ultimately owned by UK nationals. We can use this to illustrate the potential magnitude of this in the Norwegian setting. If 19.5 percent of the corporate-owned real estate owned from tax havens was really owned by Norwegians, that would amount to USD 1.4 billion in 2017. Accounting for this would reduce the foreign share in the total real estate stock from 2.2 to 2.1 percent, and reduce the foreign share of corporate owned real estate from 10.5 percent to 9.7 percent.

[14]Although it is evident in our data that some of the listed corporations report real estate wealth in spite of this. For those, we use the wealth reported for tax purposes. This means that if one of the corporations in

step procedure to impute the real estate wealth of these corporate groups.

First, we use the identifier of listed corporations in the corporate tax returns to find and select the listed corporations. We then run the algorithm to impute ownership through group structures to find all corporations that are solely owned by one of these listed corporations. Second, we us financial statement data from the Income statement 2, an attachment to the corporate tax returns, where the corporations are obliged to report their balance sheets. For the listed corporate groups, these balance sheets are reported in accordance with the IFRS framework. We aggregate the real estate reported in the balance sheets for each corporate group. Lastly, we assign the real estate wealth in these balance sheets to the registered shareholders of the listed corporation.

The Norwegian real estate wealth owned by corporate groups listed on the Oslo Stock Exchange accumulate to approximately 10 percent of the real estate wealth owned by non-listed corporations.

3.4 Sensitivity

The implementation of the ownership imputation through layers of corporations, as detailed in subsection 3.2, excludes ownership that is smaller than 0.001 percent in one of the links in the ownership chain (we assign this real estate wealth to Norway). This cut-off is only due to computational constraints and has a very small effect on the estimates. This means that the ownership is proportionally apportioned to the different owners and their background country based on ownership share in the cases where the corporations owning the real estate have more than one owner. And that there is almost no lower bound for how small these ownership stakes may be. A study with a different objective could choose a narrower definition of foreign ownership, for instance one that only includes corporations that are fully or majority owned from abroad.

Figure 1 illustrates how sensitive the foreign ownership and ownership share are to a

a corporate group reports real estate wealth in the corporate tax returns, we do not values from the financial statement for the group.

narrower definitions of foreign ownership. Panel (a) shows that the real estate wealth (in corporations) that is traced to foreign owners falls when the cut-off is tightened. Still, almost half of foreign-owned real estate is fully owned by a single foreign (immediate) owner. And almost two-thirds of the foreign-owned real estate is owned by owners that own at least three quarters of the owning corporation. The downward gradient is mechanical, as a tougher criteria for being counted as an owner is enacted. Panel (b) shows the fraction of the real estate wealth held by foreign owners compared to Norwegian owners, applying the cut-off for both foreign and Norwegian owners. This fraction is relatively stable. The fraction owned from abroad increases somewhat with the cut-off.

This implies that the results presented in this paper are not driven by a large number of small, foreign owners, but a smaller number of foreign investors with the purpose of buying Norwegian real estate or corporations with sizeable real estate positions in Norway. It also confirms that the foreign owners wield considerable control over the real estate they own in Norway.

4 The Norwegian real estate market in numbers

4.1 The real estate stock

Table 1 summarises the total value of the stock of privately owned Norwegian real estate in 2017. It shows that the foreign ownership of Norwegian real estate is concentrated in the corporate sector. USD 18.8 billion (10.5 percent) of the USD 179 billion reported in the tax returns of corporations is owned from outside of Norway, while only USD 5.3 billion (0.6 percent) of the 879 billion booked in individuals' tax returns are owned by non-residents. In total, 2.3 percent, USD 24.1 billion of the USD 1,057 billion, of real estate wealth is traced to foreign owners. This corresponds to 7 percent of GDP, as Norwegian mainland GDP was USD 337.9 billion in 2017.[15]

[15]It is not surprising that the foreign ownership is concentrated in corporations. Ownership of real estate through companies is more advantageous in most cases where the owner is not living permanently at the

The table also shows how real estate in Norway, like in most countries, is primarily housing. But the foreign ownership is primarily in commercial real estate, in the same manner as it is also concentrated in the corporate sector. USD 15.9 billion out of USD 151.6 billon (10.5 percent) of commercial real estate is foreign-owned. Only USD 5.2 billion out of USD 841 billion (0.5 percent) of housing real estate is foreign-owned.[16] 3.0 out of 64.5 billion (4.6 percent) of other real estate (leisure home etc.) is foreign-owned.

4.2 Development over time

We proceed by analysing how the foreign ownership has developed over time. We limit the scope of this analysis to real estate owned by corporations, as this is where most of the foreign ownership is. The total value of the real estate owned by corporations has increased during the period from 2011 to 2017. The total corporate owned real estate wealth was valued at USD 68.2 billion in 2011, a number that increased steadily to USD 190 billion in 2016, before it fell to USD 179 billion in 2017. The foreign ownership of this real estate increased over this period, with a marked increase starting in 2015. Panel (a) of figure 2 shows how the foreign share varied around 6-7 percent in the years 2011 to 2014, before it increased to 9.2 percent in 2015, 9.7 percent in 2016 and 10.5 percent in 2017.

The foreign share in panel (a) is broken down into ownership from Luxembourg, other tax havens and non-havens in panel (b). In total, 37.7 percent of foreign-owned real estate was owned from tax havens in 2017. This share increased by 6.9 percentage points from 2011 to 2017, an increase which was mainly driven by ownership from Luxembourg. Luxembourg ownership was 10.3 percent in 2011, while ownership from other tax havens was 20.5 percent. In 2017, ownership from Luxembourg had risen to 15.6 percent, while the ownership share

property. Corporate ownership does for instance give an exemption from stamp duty when property is sold, and incorporation is relatively cheap in Norway. Thus, it has become widespread to own large real estate projects through special purpose companies.

[16] This may be explained by the high homeownership rate and small rental property market in Norway. It may also be partly explained by measurement error, if some corporations report rental housing as commercial real estate. Given the relative high concentration of foreign ownership through corporations, this would lead to an underestimation of foreign ownership in the Norwegian housing sector, and an overestimation of foreign ownership in commercial real estate.

from other tax havens had increased to 22.1 percent. Ownership from Luxembourg as share of foreign ownership peaked in 2016 at 18.2 percent.

4.3 Country-by-country ownership

The foreign ownership in 2017 is broken down on individual countries in figure 3. This includes all privately owned real estate, also real estate owned directly by individuals. Panel (a) shows that the top six countries are Sweden (USD 4.6 billion), Luxembourg (USD 3.0 billion), the United Kingdom (USD 2.6 billion), Finland (USD 1.8 billion), the United States (USD 1.4 billion) and the Netherlands (USD 1.3 billion). Sweden and Finland, and to some extent the United Kingdom, are Norway's neighbouring countries. The last close neighbour, Denmark (USD 0.8 billion), is ranked eighth among the countries. Luxembourg and the Netherlands are well-known tax havens. But they are not the only tax havens among the top ownership countries. Half of the top 20 countries are well-known tax havens. United Kingdom and Switzerland (7th, USD 0.8 billion) are also popular destinations for rich, Norwegian emigrants.[17] Luxembourg is, based on anecdotal evidence, a popular tax haven among Norwegians, especially those holding real estate.[18] It is also popular among global real estate funds and investors (for instance, Norges Bank Investment Management, the Norwegian sovereign wealth fund, established their European real estate investment arm in Luxembourg).

The ownership from tax havens becomes even more visible when real estate ownership is ranked by share of GDP, as it is in panel (b) of figure 3. This places the British Virgin Islands as the top country, with ownership equal to more than 25 percent of GDP. The four countries Bermuda, Guernsey, Jersey, and Luxembourg are all in the range 4 to 5 percent of GDP. Cyprus then follows with ownership equivalent to 2.5 percent of GDP. The remaining countries has ownership below 1 percent of GDP.

[17]See for instance: https://kapital.no/reportasjer/naeringsliv/2021/10/09/7746183/eksilmilliardaerene

[18]See for instance: https://www.dn.no/magasinet/eiendom/luxembourg/skatteparadiser/endre-rosjo/1350-norske-eiendommer-eies-fra-luxembourg-skjulte-eiere-bak-milliardverdier/2-1-1150470

5 Conclusion

The last decade has brought us a lot closer to grasping the size of the fortunes that are hidden in offshore bank accounts. But non-financial asset classes are a gap in our understanding of the size and distribution of offshore wealth. We contribute with the first comprehensive overview of the stock and development of foreign-owned commercial and residential real estate in a country, including both direct and indirect ownership. We combine the real estate wealth reported by individuals and corporations for the purpose of serving the Norwegian wealth tax with the comprehensive shareholder register, which lists the shareholders of Norwegian corporations. This makes it possible to assign the real estate wealth to the ultimate Norwegian owner or the immediate foreign owner.

We find that 2 percent of Norwegian real estate is owned from abroad at the end of 2017. The share increases to 10 percent when we only look at real estate owned by corporations. The foreign-owned real estate amounts to 7 percent of GDP, which for the European Union would mean foreign ownership of EUR 1,012 billion in 2021, with EUR 250 billion in Germany and EUR 174 billion in France. There has been a noticeable increase in the foreign ownership share among corporations between 2011 and 2017. The tax haven ownership as share of the foreign ownership among corporations increased from 31 to 38 percent between 2011 and 2017, driven by more ownership from Luxembourg. Both trends seem to have been induced or amplified around the same time as Norway and 43 other countries in 2014 committed to introduce the automatic exchange of financial information under the Common Reporting Standard, which made real estate increasingly attractive for those who seek to obfuscate their true wealth.

The sizeable ownership from major secrecy suppliers highlights the need for more comprehensive ownership registries and the extension of automatic exchange of information agreements to cover real estate. The consequences of such deficiencies in ownership mapping became visible in the aftermath of the Russian invasion of Ukraine in February 2022. Economic sanctions were put in place for a long list of individuals across Western economies. But enforcement soon proved challenging, as complex corporate structures and the use of trusts and tax havens hid true beneficial ownership of assets, enabling assets to be hidden in plain sight.

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Tables

Table 1: Top real estate owning sectors, share of foreign/domestic owned real estate (2017)

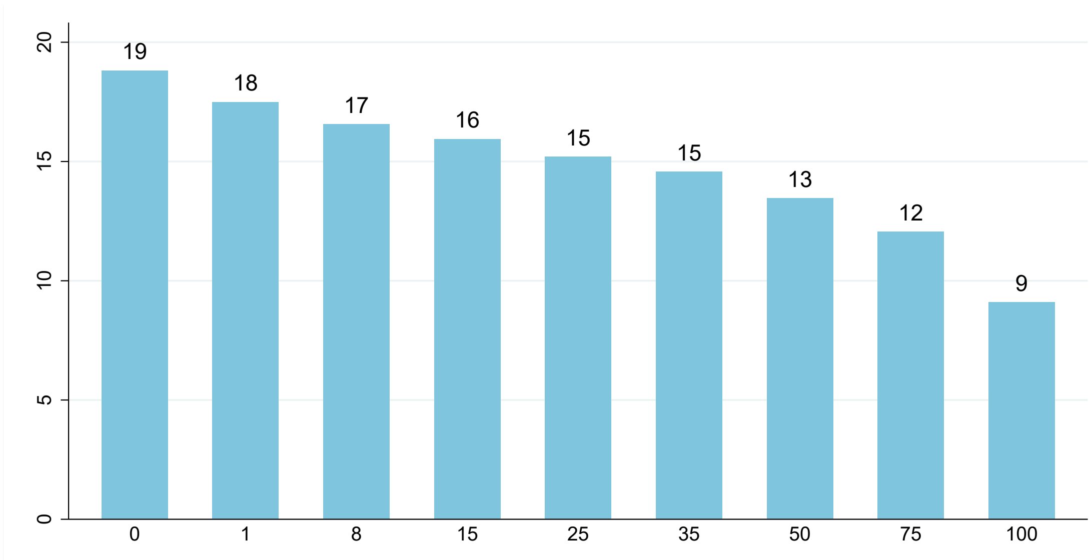
	Individual	Corporate	Housing	Commercial	Other	Total
Total real estate	878.8	178.5	841.3	151.6	64.5	1,057.3
Foreign owned	*5.3*	*18.8*	*5.2*	*15.9*	*3.0*	*24.1*
Tax haven	*0.5*	*7.1*	*0.5*	*6.4*	*0.7*	*7.5*
Foreign owned share	0.6 %	10.5 %	0.6 %	10.5 %	4.7 %	2.3 %
Tax haven share	0.1 %	4.0 %	0.1 %	4.2 %	1.0 %	0.7 %

Notes: Billions of USD. This table shows the total value of privately owned Norwegian real estate at the end of 2017, how this is distributed among Norwegian and foreign owners, and how it is distributed between different types of ownership and types of real estate. Other real estate include leisure homes, land, etc. The list of tax havens is reported in appendix A. Average USDNOK conversion rate for 2017 (8.2630) used.

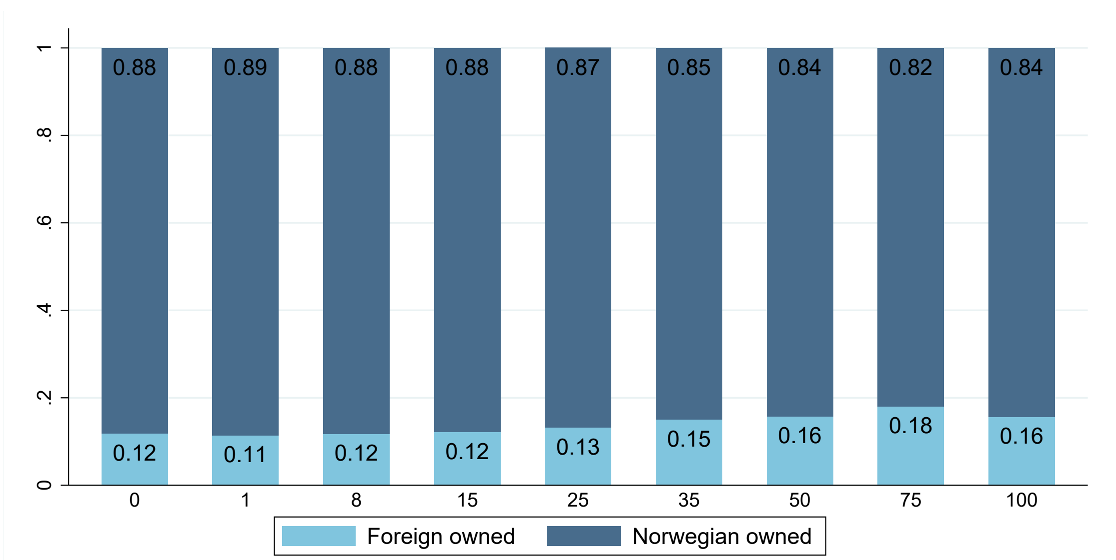
Figures

Figure 1: Sensitivity to cut-offs of ownership share

(a) Total value



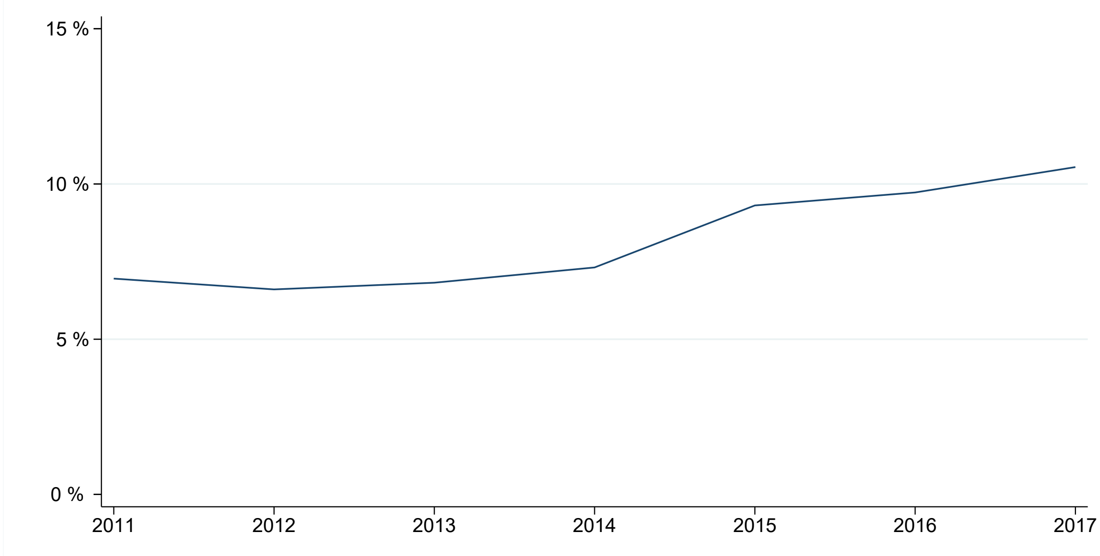
(b) Shares



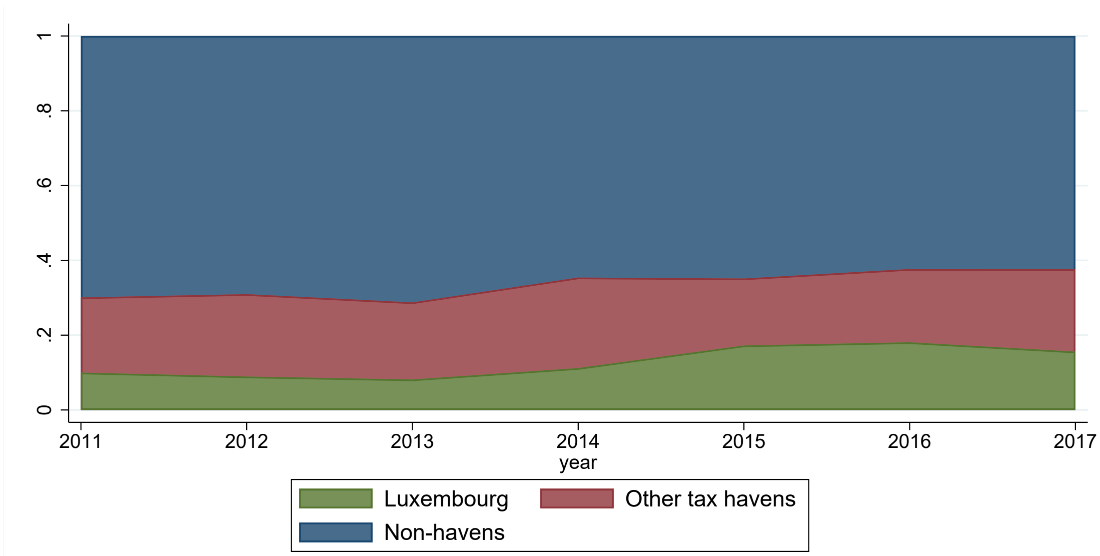
Notes: Panel (a) shows the foreign ownership of real estate owned through corporations, for different ownership thresholds to be considered an owner, denoted in billions of USD. 100 considers real estate wealth in companies with only one owner, 25 considers real estate held by owners that owns at least 25 percent of the shares in the corporation (directly or indirectly) that owns the real estate. Panel (b) shows the relationship between foreign owned and domestically owned real estate values when the different ownership thresholds are imposed to all owners.

Figure 2: Corporate owned real estate (2011-2017)

(a) Foreign share of total



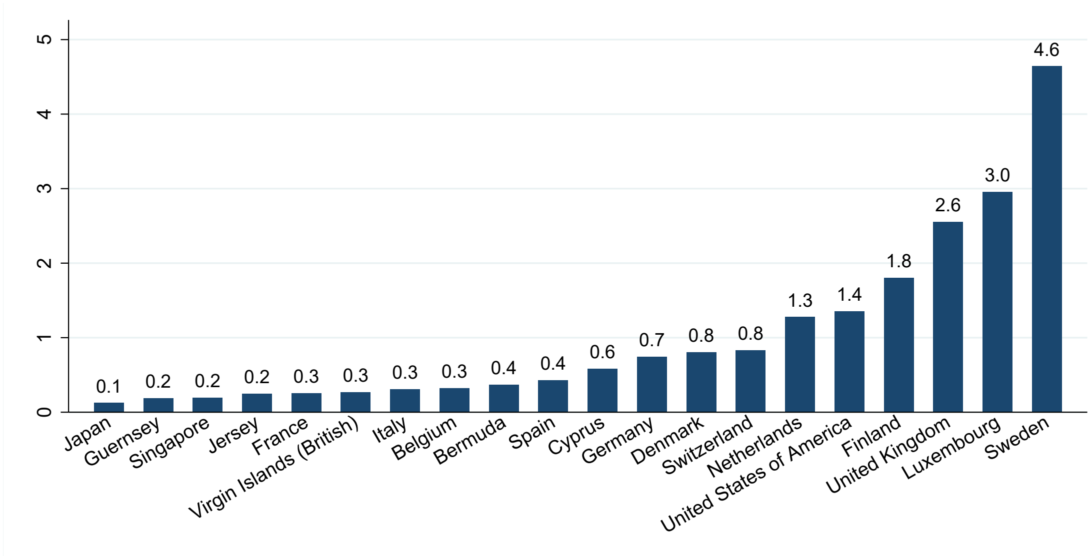
(b) Tax haven share of foreign owned



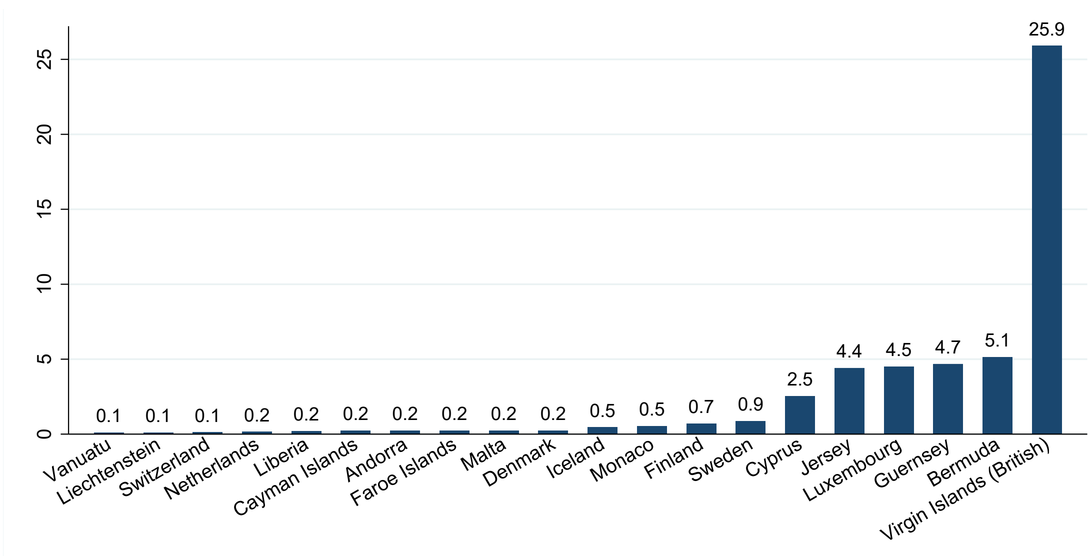
Notes: This figure shows the foreign ownership of Norwegian real estate owned by corporations. Panel (a) shows the foreign ownership share. Panel (b) shows how the foreign ownership shares are distributed among owners from Luxembourg, other tax havens and non-havens. The list of tax havens is supplied in appendix.

Figure 3: Top foreign countries, real estate wealth (2017)

(a) Total value



(b) Compared to GDP



Notes: This figure shows the foreign ownership of privately owned real estate wealth in Norway at the end of 2017. Panel (a) shows the total values for each country, denoted in billions of USD. Average USDNOK conversion rate for 2017 (8.2630) used. USD 1.8 billion is assigned to the category "Unknown, emigrated", owners that have lived in Norway, but emigrated, and is not registered with a residence country in the shareholder register. USD 0.6 billion is assigned to the category "Unknown, other foreign", owners that are not registered in the demographic registry, and does not appear with a residence country in the shareholder registry. Panel (b) shows the total values for each country, scaled to the GDP of the home country.

Appendix

A Tax haven list

We base our list of tax havens on Menkhoff and Miethe (2019), with the following modification: We include the Netherlands and the United Arab Emirates. There are no observations in our data for Antigua & Barbuda, Dominica, Grenada, Saint Lucia, Saint Vincent & The Grenadines, San Marino, Maldives, Cook Islands, Samoa, Anguilla, Aruba, Curacao, Montserrat, Nauru, Niue, Tonga, Sint Maarten. Thus, we do not consider these.

The final list we use: Bahamas, Barbados, British Virgin Islands, Cayman Islands, Saint Kitts And Nevis, Turks And Caicos Islands, Belize, Costa Rica, Panama, Hong Kong, Macao, Singapore, Andorra, Guernsey, Jersey, Cyprus, Gibraltar, Isle Of Man, Liechtenstein, Luxembourg, Malta, Monaco, Switzerland, Mauritius, Seychelles, Bahrain, Bermuda, Vanuatu, Liberia, Malaysia, Chile, Trinidad & Tobago, Uruguay, Marshall Islands, Netherland Antilles, Virgin Islands (US), Lebanon, Jordan, the Netherlands, Austria, Belgium, Ireland

B Sectoral breakdown

Table 2 shows how the real estate wealth owned by corporations is distributed among the different corporate sectors, and how this sectoral breakdown looks for the foreign-owned real estate or of domestically-owned real estate separately. It shows that the real estate activities sector is by far the largest real estate owner, followed by the construction sector, the oil and gas sector, the retail trade sector and the food products sector in terms of total value. The chemicals sector and the oil and gas sector notably have a sizeable foreign ownership presence, while they have a smaller share of the real estate owned by Norwegians. The sectors real estate activities and construction of buildings holds a larger share of the domestically-owned real estate than of the foreign-owned.

Table 2: Top real estate owning sectors, share of foreign/domestic owned real estate

Sector	Domestically owned (%)	Owned from abroad (%)	*Memo:* Total Value
Real estate activities	75.3	66.8	118.1 billion
Construction of buildings	7.3	4.6	11.1 billion
Extraction of oil and natural gas	1.3	4.9	2.7 billion
Retail trade	1.7	0.1	2.4 billion
Food products	1.4	1.6	2.2 billion
Electricity, gas and steam	1.1	1.9	2.0 billion
Chemicals, chemical products	0.2	6.9	1.6 billion
Wholesale trade	1.0	1.1	1.5 billion
Insurance, pension funding	0.9	0.1	1.2 billion
Accommodation	0.8	0.2	1.2 billion

Notes: This table shows the share of total real estate wealth, either foreign or domestic, held by each corporate sector. These are the top 10 corporate sectors, ranked by real estate ownership. The total value of real estate in each sector is reported in the memo column.